



OIL & GAS DEVELOPMENT COMPANY LTD.

TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018

TENDER DOCUMENTS

FOR

**HIRING THE SERVICES OF PCC CONTRACTOR FOR
SUPPLY / INSTALLATION / CIVIL FOUNDATIONS FOR
MISCELLANEOUS EQUIPMENTS & PLANT BUILDING
WORKS FOR MELA DEVELOPMENT PROJECT (PCC)**

(VOLUME – I)



Consultant:



Zishan Engineers (Pvt.) Ltd.

An ISO 9001-2015, 14001-2004 & 18001-2007 certified company

47/F, Block 6, PECHS, Karachi-Pakistan.

Tel: (92-21) 34393045-48, & 34310151-54 Fax: (92-21) 34533430 & 34310156

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JUNE – 2018

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OIL & GAS DEVELOPMENT COMPANY LTD.

TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018

(SECTION – I)

BACKGROUND & INTRODUCTION

FOR

HIRING THE SERVICES OF PCC CONTRACTOR FOR
SUPPLY / INSTALLATION / CIVIL FOUNDATIONS FOR
MISCELLANEOUS EQUIPMENTS & PLANT BUILDING
WORKS FOR MELA DEVELOPMENT PROJECT (PCC)

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1.0 **BACKGROUND AND INTRODUCTION**

Oil & Gas Development Company Limited (OGDCL) is operating oil/gas fields in various parts of Islamic Republic of Pakistan. OGDCL intends to undertake procurement (supply) and Installation of Compressors, Slug Catcher and Allied Utilities at MELA Field.

Existing MELA facility consist of gathering manifold, Separation System, Dehydration Unit, Condensate Storage, Condensate Loading System, Off Gas Compressors, Produced Water Treatment System etc.

As Mela is depleting field, therefore, front end Gas Compression System is required to be installed at Mela Plant. The gas from Mela field will be transported to Nashpa Plant for processing.

Mela Gas Processing Plant is intended to normally process 10.5 MMSCFD of feed gas from Mela wells with a design margin of 10%.

The anticipated production capacity of the facility is as under:

- i) 11.67 MMSCFD (Separators gas and Stabilizer column top gas)
- ii) 2,251 Barrel/day of Condensate

Company is procuring following equipments / packages, which will be provided by Company as free issue to the Contractor, when desired by Company, for installation/ field erection/storage by Contractor. The details of these equipments / packages are given below:

- Gas Engine Driven Reciprocating Gas Compressors (3 Nos.)
- Instrument Air System
- Firewater Pumps

For procurement (supply) of equipment / material & packages, installation / erection, testing and completion of all the Civil, Mechanical, Electrical, Instrumentation & Structural works and pre-commissioning, commissioning/commissioning assistance services required for Mela Development Project, OGDCL intends to engage a PCC Contractor to carry out the required Works on complete responsibility basis.

This tender document has been prepared as per Public Procurement Regulatory Authority (PPRA) requirements and provides the basis For procurement (supply) of equipment / material and packages, installation / erection, testing and completion of all the Civil, Mechanical, Electrical, Instrumentation & Structural works and pre-commissioning, commissioning/commissioning assistance services required for Mela Development Project.

The prospective bidders are required to carefully review the document and send the enclosed letters of Intention to Bid or Declining the Bid and Secrecy declaration two (02) weeks before the bid submission date mentioned in tender notice.

Sealed bids are hereby invited under single stage two (02) envelope bidding system (i.e. Technical & Financial Bids in separate envelopes) from eligible bidders. The prices shall be quoted on FOR basis (as required in the BOQs/Bid Price Schedule of Supply & Works (**Annexure-XVI** of ITB, Section-III).

Both the bids shall be submitted simultaneously in separate sealed inner and outer envelopes. The envelope containing Technical Bid must be marked clearly “Technical Bid” and containing Financial Bid must be marked clearly “Financial Bid” along with indication on the envelopes as “ORIGINAL” and “COPY”. No copy is required for financial bid.

Under this procedure, the technical bids will be opened first on the date of mentioned in Tender Notice. The financial bids of the technically qualified bidder (s) will be opened publicly. The Technical Evaluation Report will be placed on OGDCL’s website before financial bid opening.

The details of the procedure are given in Clause 18.0 of ITB (Section-III).

The tender document comprises of two (2) volumes as detailed below:

VOLUME-I

- Background & Introduction (Section-I)
- Invitation to Bid (Section-II)
- Instruction to Bidders (Section-III)
- Forms & Conditions of Contract (Section-IV)

VOLUME-II

- Scope of Work and Services for procurement (Supply) of various packages, equipments & material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipments & packages for Mela Development Project (PCC).

- Supplementary Technical Documents

The bidders will prepare and submit their bids, as per instructions given in the ITB (Section-III) and Scope of Supply & Works Specifications (Section-V, Volume-II) of this tender document. The Form and Conditions of the Contract are given in Section-IV while supplementary technical documentation is given in Volume-II of Tender Document.

OGDCL has engaged M/s Zishan Engineers (Pvt.) Limited (ZEL) as Consultant. ZEL is responsible for providing design engineering and project management services (including procurement assistance).



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OIL & GAS DEVELOPMENT COMPANY LTD.

TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018

(SECTION – II)

INVITATION TO BID

FOR

HIRING THE SERVICES OF PCC CONTRACTOR FOR
SUPPLY / INSTALLATION / CIVIL FOUNDATIONS FOR
MISCELLANEOUS EQUIPMENTS & PLANT BUILDING
WORKS FOR MELA DEVELOPMENT PROJECT (PCC)



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1.0 **INVITATION TO BID**

Oil & Gas Development Company Limited (OGDCL) is operating oil/gas fields in various parts of Islamic Republic of Pakistan. OGDCL intends to undertake procurement (supply) and Installation of Compressors, Slug Catcher and Allied Utilities at MELA Field.

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The prospective bidders are required to carefully review the document and send the enclosed letters of Intention to Bid or Declining the Bid and Secrecy declaration two (02) weeks before the bid submission date mentioned in tender notice.

Sealed bids are hereby invited under single stage two (02) envelope bidding system (i.e. Technical & Financial Bids in separate envelopes) from eligible bidders. The prices shall be quoted on FOR basis (as required in the BOQs/Bid Price Schedule of Supply & Works (**Annexure-XVI** of ITB, Section-III).

Both the bids shall be submitted simultaneously in separate sealed inner and outer envelopes. The envelope containing Technical Bid must be marked clearly “Technical Bid” and containing Financial Bid must be marked clearly “Financial Bid” along with indication on the envelopes as “ORIGINAL” and “COPY”. No copy is required for financial bid.

Under this procedure, the technical bids will be opened first on the date of mentioned in Tender Notice. The financial bids of the technically qualified bidder (s) will be opened publicly. The Technical Evaluation Report will be placed on OGDCL’s website before financial bid opening.

The details of the procedure are given in Clause 18.0 of ITB (Section-III).

The bids are required to be submitted at OGDCL’s Office on Bid Closing Date & Time as per OGDCL’s Tender Notice published in newspaper. Each bid shall be valid for minimum 250 days from the date of opening of technical bids and should be accompanied with an upfront Bid Bond in the form of pay order/demand draft or bank guarantee issued by a scheduled bank of Pakistan operating in Pakistan for an amount of _____ mentioned in the tender notice as Bid Bond with technical bid and valid for 280 days from the date of opening of technical bids. Bid Bond through telex / fax shall not be acceptable. Bid Bond must be issued in accordance with the format as per **Annexure-I**, Section – III, ITB, of the tender documents.

OGDCL does not take any responsibility for collecting the bids from any Agency. Bidder's authorized representative may attend the Tender opening if desired. The tender received after closing time or date shall be returned to Bidder unopened.

The OGDCL reserves the right to have the material & equipment items (to be supplied by PC Contractor) inspected by its own representatives or through third party at its own cost.

It shall be indicated in the offer that the bid fully conforms to Technical Details and Terms & Conditions of the Tender Document.

The bid shall be evaluated in accordance with the evaluation criteria as indicated in the tender document.

The award will be made in favor of lowest evaluated and technically responsive bidder at the sole discretion of OGDCL.

On acceptance of the bid by the OGDCL, the successful bidder shall be required to furnish Performance Bond / Bank Guarantee issued by scheduled Bank of Pakistan operating in Pakistan for an amount equivalent to 10 % of the value of Contract excluding of GST as per **Annexure-XIV**, Section – III, ITB, of the tender document.

OGDCL reserves the right to increase or decrease the quantity, accept or reject any bid or part of a bid and or to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for OGDCL's action.

Unsolicited advice/clarifications and personal approaches by the bidder(s) at any stage of evaluation are strictly prohibited and shall lead to disqualification.

The bidder(s) are expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to Bidding Documents in all respect will result in the rejection of the bid(s).

Black listing procedure of the Company is available at OGDCL website. The bidders, suppliers, agents, consultants or firms shall be dealt accordingly.

Bids must be delivered / dropped in the tender box until (as mentioned in the tender notice) hours Pakistan Standard Time (PST) on (As mentioned in the tender notice) following address:-

Manager (Foreign)-Procurement

Oil & Gas Development Company Limited

Supply Chain Management Department

OGDCL House, Plot No. 3 (New No. 3013) F-6/G-6,

Jinnah Avenue, Islamabad (Pakistan)

Phone No: 92-51-920022144

Email: irshad_muhammad@ogdcl.com

Bids will be opened at (as mentioned in the tender notice) hours (PST) at the place noted above.

(On Bidders Letter Head)

LETTER OF INTENTION TO BID

General Manager SCM
Oil & Gas Development Company Limited
1st Floor, OGDCL House, Blue Area,
Islamabad (Pakistan)

**SUBJECT: TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018 FOR SUPPLY /
INSTALLATION / CIVIL FOUNDATIONS FOR MISCELLANEOUS
EQUIPMENTS & PLANT BUILDING WORKS FOR MELA DEVELOPMENT
PROJECT (PCC)**

Dear Sir,

We have obtained the subject tender document and hereby confirm that we shall be submitting our bid on or before the deadline of bid submission as per OGDCL's requirement.

Yours Truly,

Signature: _____

Name: _____

Designation: _____

(On Bidders Letter Head)

LETTER OF DECLINING TO BID

General Manager SCM
Oil & Gas Development Company Limited
1st Floor, OGDCL House, Blue Area,
Islamabad (Pakistan)

**SUBJECT: TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018 FOR SUPPLY /
INSTALLATION / CIVIL FOUNDATIONS FOR MISCELLANEOUS
EQUIPMENTS & PLANT BUILDING WORKS FOR MELA DEVELOPMENT
PROJECT (PCC)**

Dear Sir,

We have obtained the subject tender document and regret that at this instance we shall not be submitting the bid. We are hereby returning the complete tender document together with secrecy declaration for OGDCL's record.

Yours Truly,

Signature: _____

Name: _____

Designation: _____

SECRECY DECLARATION

Oil & Gas Development Company Limited
1st Floor, OGDCL House, Jinnah Avenue
Islamabad (Pakistan)

**SUBJECT: HIRING THE SERVICES OF PCC CONTRACTOR FOR SUPPLY /
INSTALLATION / CIVIL FOUNDATIONS FOR MISCELLANEOUS
EQUIPMENTS & PLANT BUILDING WORKS FOR MELA DEVELOPMENT
PROJECT (PCC)**

Tender Enquiry No: PROC-FC/CB/PROJ/MELA-3368/2018

We the undersigned _____ having our principal office at _____ (hereinafter referred to as the Bidder) hereby declare to Oil & Gas Development Company Limited, Islamabad – Pakistan (hereinafter referred to as OGDCL) to accept the following terms and conditions on which OGDCL is prepared to communicate to the Bidder certain Confidential Information as hereinafter defined:

1.0 DEFINITIONS

- 1.1 The “Facility” shall mean KPD Gas Processing Facility.
- 1.2 “Confidential Information” shall mean any knowledge and information in connection with the Facility at any time disclosed to the Bidder by or on behalf of the OGDCL in writing, in drawing or in any other form or acquired by the Bidder from the OGDCL, as well as all data derived from such knowledge and information at the time of such disclosure or acquisition is not:
 - In the free and lawful possession of the Bidder or
 - Part of public knowledge or literature
- 1.3 “Confidential Report” shall mean all manuals, specifications, drawings, letters, faxes, emails and any other material containing Confidential Information. For the purpose of Clauses 2 and 5 Confidential Information shall include Confidential Record.
- 1.4 The confidential record shall be such information as may be given by OGDCL.

2.0 **CONFIDENTIALITY**

2.1 **The Bidder**

- Shall preserve and cause its employees to preserve the secrecy of all Confidential Information.
- Shall not use or disclose the confidential information except with the prior written consent of OGDCL and subject to the conditions contained in Clause 5, for any purpose other than the performance of the contract for the Facility or the preparation and submission of a Bid for the Facility.
 - i) Disclose to any third party or enable any third party to note that fact that the Bidder has been invited to submit a bid for the Facility and / or, if applicable, the fact that the Facility has been entrusted to the Bidder.
 - ii) Reproduce, copy or use, or disclose to, place at the disposal of or use on behalf of any third party or enable any third party to peruse, copy or use, any Confidential Information.

2.2 The undertakings under 2.1 above shall continue in so far as the Confidential Information in question has not:

- Become a part of public knowledge or literature, or
- Been disclosed to the Bidder by a third party (other than one disclosing on behalf of OGDCL) whose possession of such information is lawful and who is under no secrecy obligation with respect to the same.

3.0 **COPYRIGHT**

The copyright of the Confidential Record shall, in the absence of any express provision to the contrary be vested in OGDCL.

4.0 **RETURN OF CONFIDENTIAL RECORD**

Upon completion of the Facility, or if it is decided that the Facility will not be entrusted to the Bidder, upon notification to the Bidder of such decision, the Bidder shall return to OGDCL all Confidential Record.

5.0 **THIRD PARTY**

The Bidder shall ensure that under the terms of this Secrecy Declaration any of the Confidential Information comes to the knowledge and/or in the possession of any third party, the Bidder shall require from such third party that it shall abide by stipulations equivalent to those contained in this Secrecy Declaration.

Agreed and accepted this _____ day of _____.

Signature: _____

Name: _____

Position: _____



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TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018

(SECTION – III)

INSTRUCTIONS TO BIDDERS

FOR

HIRING THE SERVICES OF PCC CONTRACTOR FOR
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1.0 **GENERAL**

Oil & Gas Development Company Limited (OGDCL) is operating oil/gas fields in various parts of Islamic Republic of Pakistan. OGDCL intends to undertake procurement (supply) and Installation of Compressors, Slug Catcher and Allied Utilities at MELA Field.

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- Instrument Air System
- Firewater Pumps

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2.0 **PC CONTRACTOR'S SUPPLY & WORKS RESPONSIBILITIES**

The PCC Contractor shall be responsible for supply of equipment/material items and packages, construction, installation / erection, testing and completion of all the Civil, Mechanical, Electrical, Instrumentation & Structural works and provides Pre-Commissioning and Commissioning/ Commissioning Assistance services required for Mela Development Project. The PCC Contractor shall also carry out all QA/QC and project management activities.

The overview of PCC Contractor's scope and responsibilities shall include but not limited to the following:

- Procurement of Equipment/Material Items and Packages
- Inland transportation, handing over / taking over of free supplied equipment from Company's warehouse / storage / lay down area within Mela Site.

AND

Offloading from truck / low bed trailer directly at Mela site.

- Fabrication, Erection and Construction of all Contractor's supplied and free issued equipment / material.
- Pre-shipment 3rd party Inspection for equipment / material supply of which is in Contractor's scope of foreign origin from OGDCL approved third party inspection agencies only.
- Shipment, delivery, inland transportation and offloading at site for equipment/ material supply of which is in PCC Contractor's scope.
- Pre-commissioning, Commissioning and Startup of all Contractor's supplied / installed equipment, systems and packages.
- Site Supervision, Management, Planning and Control of this project from contract award to final acceptance by the Company.
- Security, Safety and Environment.
- Hand Over of project on successful start-up.
- The PCC Contractor shall procure and maintain a construction (erection) all risk policy including sabotage and terrorism for sum assured value of not less than contract value. The policy will cover all physical loss or damage caused or done to permanent and temporary works (if any) completed or in progress, construction, commissioning and start-up phases of work with extended coverage for PC Contractor's own equipment/material and Company supplied (free-issued) equipment / material stored at the Site / PCC Contractor's warehouse and OGDCL's existing facilities .
- Arrange all approvals from the local, provincial and Federal government authorities/departments, which may be required for performing the works includes supplying of all certificates (as necessary), qualifications, calculations.
- Site supervision, planning and Project management and control of the project from award to final acceptance by the Company.

- Carryout testing, checking, completion of detailed check lists, pre-commissioning, commissioning and start-up of the plant, supply of consumables and any incidental matters relating to the satisfactory completion and operation of the complete plant facilities.
- Construction and maintenance of temporary site facilities, warehouses & security arrangements (if required)
- Quality Assurance in procurement of all materials, construction and commissioning activities.
- Security and Health Safety and Environment (HSE) Manual and Policy are attached in **Attachment-I** for reference.
- Arrange provision of commissioning spares and two (02) years spares for the equipment supplied by the PC Contractor, initial fill of consumables, lubricants and chemicals.
- Preparation of all documentation (including as built drawings/documents and operations/maintenance manuals etc.) and their submission to OGDCL in both hard & soft form.
- Approvals from OGDCL/Consultant for engineering and procurement documents project materials, equipment & consumables.
- Liaison and Coordination with OGDCL/Consultant & relevant local authorities other PC Contractors working on Mela Project Site.

The PCC Contractor shall be responsible for liaison and coordination with OGDCL and other Contractors through Company / Consultant Representative working in the Mela Development Plant.

PCC Contractor shall provide all management, services, construction equipment, vehicles, ordinary and special tools, test equipment, transport, labor, supervision and all other necessary arrangements regarding the execution of the specified work and arrangements for the security of personnel, materials and equipment, comes under the Contractor's scope of work. Contractor shall furnish materials and equipment, construction materials and consumable supplies required for the project and shall make the complete installation of the project covered in this scope of work. The project when handed over to OGDCL shall be successfully commissioned

The PCC Contractor shall not be relieved of any of its obligations under the Contract as a result of any inspection, examination, review, instruction, approval, consent or certificate given/issued by OGDCL/Consultant.

The PCC Contractor shall comply with all applicable laws/regulations including environmental regulations, OGDCL's HSE & Security requirements in the performance of the Contract and shall ensure that the Project is fully compliant with all applicable laws/regulations.

The responsibilities and scope of PCC Contractor are more explicitly described in the Overall Scope of Supply and Works Specifications given in Section-V (Volume-II) of this document.

3.0 **CONSULTANT'S ROLE**

OGDCL has appointed M/s. Zishan Engineers (Pvt.) Ltd. (ZEL) as Consultant for providing consultancy services to ensure timely project completion complying with quality specifications and performance requirements. ZEL responsibilities shall include:

- Preparation of tender document for execution of project and required procurement support & assistance in Contract formulation & negotiations.
- Design and timely review and approval of all documentation and procedures from Contractor.
- Inspection & Testing supervision of main equipment & material items.
- Supervision during construction, fabrication, installation/erection, commissioning and performance testing.

4.0 **OGDCL RESPONSIBILITIES**

OGDCL shall be responsible for providing the Contractor the following:

- Design data/documents as stipulated in the Contract Document
- Providing facilitation letters only for permits and approvals which Contractor may require for the execution of the Project Works but it is the sole responsibility of the contractor to obtain timely permits and approvals any delay in this regard shall be on contractor's account. However, the Contractor shall timely submit the list of required permits/approvals.
- Provide various equipment/packages procured by OGDCL to the contractor as a free issue.
- Timely review and approvals of documents.
- Access of Contractor to Project site.

5.0 **OGDCL'S SUPPLIED EQUIPMENTS/ MATERIAL ITEMS & PACKAGES**

OGDCL is procuring various equipments, material items & packages. The following items shall be provided by OGDCL as free issue to the Contractor for installation/field erection by the Contractor.

PCC Contractor shall be responsible for installation of owner supplied items complete in all respects including, but not limited to, all tie-ins with existing and /or Contractor works, installation of any loose supplied items within these packages, integration of the overall system, etc. In addition, Contractor shall also provide Commissioning services / commissioning assistance as further detailed in SOW document # 165-2-SPG-130).

- 3 Nos. Gas Engine Driven Reciprocating Gas Compressors along with Control System, electrical panels, associated skid piping, etc. as per drawings / data attached with Tender Documents.
- Instrument Air System (including Instrument Air Compressors (2 Nos.), Wet Air Receiver (1 No), Air Dryers (2 Nos), Air Pre-Filter (2 Nos.), Air Post-Filter (2 Nos.), along with its instrumentation, Controllers, piping etc.).
- Firewater Pumps
 - a. 1 No. 1500 GPM Diesel Engine Driven Firewater Pumps
 - b. 2 Nos. 750 GPM Diesel Engine Driven Firewater Pumps
 - c. 2 Nos. 75 GPM Motor Driven Firewater Jockey Pumps

The PCC Contractor shall inspect OGDCL supplied equipments, material items & packages prior to taking custody, the Contractor shall inform OGDCL in writing of any deficiencies or shortages after taking their possession of the materials and equipment. Any delay caused to the Contractor's schedule as a result of Contractor failure to inform OGDCL in a timely manner of any deficiency/shortage shall be on Contractor's account.

Equipments, material items & packages received by the Contractor shall be deemed to be in his custody from the time of receipt until OGDCL accepts the Work. The Contractor shall make good from any loss or damage which may occur to equipment, material items & packages after taking custody.

6.0 **PROJECT COMPLETION PERIOD**

The timely completion of the Project activities by the PCC Contractor shall be the essence of the Contract, as OGDCL has to meet its obligations for completion of the Project. Accordingly, the PCC Contractor (Successful Bidder) is required to complete the procurement (supply) of equipment/material & packages, construction, installation/erection, pre-commissioning, commissioning & start-up activities of various equipment & packages required for Mela Development Project within Eight (08) months from the date of establishment of Supply Letter of credit. Non compliance with the completion period of Eight (08) months shall result in rejection of bid.

The Bidders are required to provide break-up of all of the above sub-categories in the detailed (level – 3) project schedule (as per item of Clause 17.2.1 of this document) with the Technical Proposal (Bid). The project completion time of Eight (08) months shall be split into the following sub-categories:

- Procurement (supply) of equipment/material items& packages and their delivery at Project Site.
- Construction, Installation/Erection
- Pre-Commissioning, Commissioning & Start-up Activities.

7.0 **SCOPE OF BID**

The bid pertains to procurement (Supply) of equipments/material and packages, construction (i.e. civil works & buildings), installation, pre-commissioning and commissioning of various equipments & packages required for Mela Development Project.

8.0 **BIDDING PROCESS**

OGDCL is adopting the two stage two envelope bidding system as outlined below:

- The bidders shall submit one original and one copy of their Technical bid whereas the financial bid is required in original only. No copy is required for financial bid.
- Tender Annexure to be added in both the bids; UN-Priced BOQs/Bid Price Schedule of Supply & Works with technical Bids & Priced Schedule with Financial Bids.

- Both the bids shall be submitted simultaneously in separate sealed inner and outer envelopes. The envelope containing Technical Bid must be marked clearly “**Technical Bid**” and containing Financial Bid must be marked clearly “**Financial Bid**” along with indication on the envelopes as “ORIGINAL” and “COPY”.
- Bid Bond shall be submitted along with Technical Bid. The Technical Bid will be opened at first and evaluated.
- The technical proposal shall be discussed with the bidders with reference to the technical requirements; those bidders willing to meet the requirements of the procuring agency shall be allowed to revise their technical proposals following these discussions;
- After agreement of the bidders on the technical requirements, bidders who are willing to conform to the revised technical specifications and whose bids have not already been rejected shall submit a revised technical proposal and supplementary financial proposal (if required), according to the technical requirement. The Financial Bid of only those bidders will be opened who are declared technically Responsive.

9.0 **COST OF BIDDING**

The bidder shall bear all costs associated with the preparation and submission of its bid including submission of Bid Bond and OGDCL will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10.0 **ELIGIBILITY REQUIREMENTS**

Bidder must meet the following eligibility requirements:

- 10.1 The Bidders must have at least ten (10) years experience of Procurement (Supply), Construction, Installation, Erection, Pre-Commissioning and Start-up and commissioning of Oil & Gas Processing / Petro Chemical Plants and similar projects.
- 10.2 The bidder must have successfully executed two (02) project of at least 600 million Pak Rupees (each Project) in the country of origin or Pakistan or other countries during last five (05) years. The documentary evidence in the form of Copies of Contracts and Performance/Completion/Acceptance Certificates should be provided as a mandatory requirement with the bid. Only those Projects whose complete information and documentary evidence (including performance / completion / acceptance certificates) have been submitted will be considered in the evaluation.

- 10.3 The Bidders and its engineering staff shall meet all the requirements of Pakistan Engineering Council (PEC) Act 1976, its bye-laws and amendments (including amendments in 2017 & 2018 and posted at PEC website) with respect to registration as PC Contractor C-2 and above category and provide documents to this effect.
- 10.4 The Project must be completed within eight (08) months from date of establishment of supply letter of credit.
- 10.5 OGDCL reserves the right to disqualify a bidder / PC Contractor / manufacturer if it finds, at any time, that the information submitted by him concerning, his qualification as bidder / PC Contractor / manufacturer was false and materially inaccurate or incomplete. Providing false information or violating the bidding requirements shall result in black-listing of Bidder / PC Contractor / Manufacturer for three (03) years.
- 10.6 The Offshore companies registered at places e.g. Virgin Cayman, Nausa, Jersey and Bohaman Islands shall not be eligible nor entertained and bids if submitted shall be rejected
- 10.7 Applicant must not be black listed with any agency or organization or/ and applicant has never indulged in corrupt, fraudulent or collusive practices for procuring contracts. An affidavit confirming this shall be provided with the proposal

11.0 **BIDS OF JOINT VENTURES/CONSORTIUM**

The bids submitted by a Joint Venture/Consortium comprising of two or more firms as partners shall comply with the requirements given below:

- a) The Joint Venture/Consortium shall nominate one of the partners as Partner In charge/Lead Partner and this authorization shall be evidenced by submitting a power of attorney signed by partners themselves or legally their authorized signatories. The power of attorney shall be certified by Notary Public.
- b) The Partner In charge/Lead Partner shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture/consortium and the entire execution of the contract (including release of payment) shall be made with the Partner Incharge/Lead Partner.
- c) All partners of the joint venture/consortium shall be liable jointly and severally for executing and fulfilling the obligations stipulated in the contract document. A relevant statement to this effect shall be incorporated in the authorization mentioned under clause (a) above as well as Form of Bid and the Form and Conditions of Contract in case of successful bid.

- d) The bidder shall submit a copy of Memorandum of Understanding (MOU) entered into by the joint venture/consortium partners giving the relationship and responsibilities of the partners with respect to this project. (A format of Responsibility Matrix is given as **Annexure-III**).
- e) The bid, and in case of a successful bid the form and conditions of contract shall be signed so as to be legally binding on all partners
- f) The bidder, if successful shall within ten (10) days of receiving the notification of award from OGDCL shall furnish a copy of contract entered into by joint venture/consortium partners.

12.0 **AGENT / REPRESENTATIVES**

The agent / representatives for the bidder can download the tender document from OGDCL website and submit the bid (including the Earnest Money) on behalf of their principals. However, they shall be required to submit agency / distributorship / representation letter (On Principal's letter head) duly signed and stamped with authorization for the subject tender. Moreover, the Principal Bidder(s) as designated by Local Agent during confirmation of Bid participation could not be changed at any later stage of bidding.

13.0 **PREFERRED VENDORS**

The Bidder shall envisage procurement of the required packages/equipments from OGDCL's Preferred Vendors list given in **Volume-II** of this Tender Document. However, the bidder can propose other reputable equivalent vendors for OGDCL's approval. Bidder shall submit documentary evidence to prove equivalency such as client list, past experience etc. for evaluation by OGDCL / CONSULTANT. The decision by OGDCL / CONSULTANT regarding the equivalency of the other proposed vendor shall be binding on the selected Bidder.

14.0 **SITE VISIT**

The Bidders are required to visit the Site of the Project at their expense. During the visit the bidders will examine the site and its surrounding area. The Bidder should verify the information present in the Tender Document assess and obtain on its own responsibility all required information for preparing the bid proposal. OGDCL/CONSULTANT will coordinate the visit and bidders will be informed about the exact date and timing of the visit. The visit is expected to take place not later than two (02) weeks from the date of bid opening.

In order to visit the site of proposed facilities the prospective bidders should send to OGDCL the Performa for Site Visit & Pre-Bid Meeting enclosed with Invitation to Bid in a timely manner.

The Bidder and any of its personnel or Agents/Consultants will be granted permission by OGDCL to enter upon its facilities for the purpose of such visit, but only upon the express condition that the Bidders, its personnel or Agents/Consultants will release and indemnify OGDCL its personnel Agents/Consultants form and against all liability in respect thereof including personal injury (whether fatal or otherwise) and any other loss, damage, costs and expenses.

15.0 **PRE-BID MEETING**

OGDCL may organize a pre-bid meeting, the venue, date, timing of the pre-bid meeting will be notified to all the prospective bidders. The Bidders representatives should attend the meeting to obtain clarifications and any other information required for preparation of the bid at their own expense. The pre-bid meeting is expected to take place not later than two (02) weeks from the date of bid opening.

16.0 **TENDER DOCUMENT**

16.1 **Contents**

As stated earlier, the tender document comprises of following together with any addenda that may be issued from time to time:

Volume-I

- Project Background & Introduction (Section-I)
- Invitation to Bid (Section-II)
- Instruction to Bidders (Section-III)
- Forms & Conditions of Contract (Section-IV)

Volume-II

- Scope of Work and Services For procurement (Supply) of equipments/ material and packages, construction (i.e. Civil works & buildings), installation and pre-commissioning, commissioning of various equipments & packages required for Mela Development Project (PCC)
- Supplementary Technical Documents (P&IDs, Datasheets; Specifications, Drawings).

16.2 The prospective bidders shall carefully study and examine all sections of the document and shall comply with the stipulated requirements. Failure to furnish all information required by the tender document or submission of bid not substantially responsive to the tender requirement in every respect will be at Bidders risk and may result in the rejection of the Bid.

16.3 **Clarifications**

A prospective bidder requiring any clarification of the Tender document or requiring any data may notify Consultant in writing by fax or email with copy (c.c) to OGDCL at given below addresses however, only such clarifications shall be entertained which have been received before ten (10) days of technical bid submission after this time no clarifications shall be entertained:

▪ **CONSULTANT**

- Project Manager
Zishan Engineers (Pvt) Limited
47/F, Block 6,
P.E.C.H.S.
Karachi-Pakistan.
Tel: 92-21-34393045-48
Fax: 92-21-34533430
Email: ishaq.hashmi@zishanengineers.com
salman.khan@zishanengineers.com

▪ **OGDCL**

- **Manager (Foreign)-Procurement**
Oil & Gas Development Company Limited
Supply Chain Management Department
OGDCL House, Plot No. 3 (New No. 3013) F-6/G-6,
Jinnah Avenue, Islamabad (Pakistan)
Phone No: 92-51-920022144
Email: irshad_muhammad@ogdcl.com
- Manager MELA Project
9th Floor, Tower-C,
OGDCL House, Jinnah Avenue,
Blue Area, Islamabad.
Pakistan.
Tel: (92-51)-920023796, 9209783
Email: zaheer_mirza@ogdcl.com

OGDCL/ Consultant will respond in writing to any request for clarifications from the bidders which it receives before ten (10) days prior to deadline for the submission of technical bids prescribed in the Tender Document, after this time no clarifications shall be entertained. The clarifications reply will also be uploaded on OGDCL website, if required.

16.4 **Amendment**

Any time prior to the deadline for submission of bids, OGDCL for any reason whether at its own initiative or in response to clarification requested by a prospective bidder, may modify the tender document by issuing addenda/amendment.

Any addendum/amendment shall form part of the tender document and shall be notified on OGDCL website available to all prospective bidders and shall be binding on them.

In order to allow prospective bidders reasonable time to take the addenda/amendment into account in preparing their bids OGDCL at its discretion may extend the deadline for submission of bids.

17.0 **PREPARATION OF BIDS**

17.1 **Language of Bids**

The Bids prepared by the Bidder and all correspondence and documents relating to the Bid exchanged between the Bidder and OGDCL's Consultant, shall be written in English language. Any supporting printed literature furnished by the Bidder written in another language should be accompanied by an English translation of its pertinent pages in which case, for purposes of interpretation of the Bid, the English translation shall govern.

Certificates from other parties such as Experience/Completion certificates for the bidder from other clients and letters of confirmation from Manufacturer/Supplier agreeing to supply equipment/material for the project shall be in English, on the issuing company's letter head and duly signed and stamped by the company issuing the certificate/letter.

17.2 **Documents Comprising the Bid**

The Bid to be submitted by the Bidder shall comprise Technical Bid and Financial Bid:

17.2.1 **Technical (Proposal) Bid**

The Technical (Proposal) Bid shall consist of the following:

- a) Original Bid Bond in the form of Pay Order/Bank Draft or Bank Guarantee for an amount of PKR Fifteen (15) millions per format given in **Annexure – I**. The Bid Bond/Bank Guarantee shall only be provided from banks listed in **(Attachment-V)**
- b) An un-priced copy of **BOQs/Bid Price Schedule of Supply/Works (Annexure-XVI)** along with a statement confirming the bid validity period as per tender requirement.
- c) Documentary evidence established in accordance with Instructions Clause 10 that the bidder is eligible to bid and is qualified to perform the Contract.
- d) Documentary evidence established in accordance with Instructions Clause 10 and 17.2.1 that the required equipment/material to be supplied, installed & commissioned by the bidder are eligible material and conform to the Tender Document.
- e) PCC Contractor profile as per details given in **Annexure-II**.
- f) Memorandum of Understanding (MOU) executed by joint venture partners with respective responsibilities for each package as per format of Responsibility Matrix is given as **Annexure-III**.
- g) Detailed Project Execution Plan covering all components including Procurement (Supply), Installation, Construction, Start-up Activities, Pre-Commissioning and Commissioning of all the equipments & packages included in the scope of the bidder.

This document is a mandatory requirement and must be comprehensive in all respects and provides clear understanding about how the bidder plans to execute the project.

- h) Experience of Procurement (supply), Installation, Erection, Pre-Commissioning and commissioning of Oil & Gas Processing / Chemical Plants and similar projects during last ten (10) years as per format given in **Annexure-IV**.

The bidder must have successfully executed two (02) projects of at least 600 million Pak Rupees (each Project) in the country of origin or Pakistan or other countries during last five (05) years. The documentary evidence in the form of copies of contracts, technical details about the projects and performance/completion/acceptance certificates should be provided. Only those projects whose complete information and documentary evidence (including performance / completion / acceptance certificates) have been submitted will be considered in the evaluation as it is a mandatory requirement with the bid.

- i) Bidder's proposed project organization plan and resources (i.e. physical and human resources) to be deployed. The details of physical resources and curriculum vitae of key personnel are required to be provided as per format given in **Annexure-V**. Curriculum Vitas (CVs) of commissioning personnel and Installation & experts to be provided by the PC Contractor for Company/Consultant approval. Commissioning plan with responsibilities of individual team members to be also provided. The curriculum vitae (CV) shall include the proposed position, qualification, experience and age of the person. The key personnel, if accepted by OGDCL, shall be nominated in the final Contract.
- j) Proposed master and level-3 project schedule with CPM network of project execution covering all components i.e. Design, Supply, Construction, Installation, Construction & Commissioning of various packages/equipment.
- k) List of computer softwares and hardwares available with the Bidder and its joint venture partner as mandatory requirement. Also specify the software(s) to be used in:
- Procurement of material/inventory management
 - Construction
 - Project Planning & Control
- l) Copies of ISO, API and other certifications/accreditation.

- m) Bidders plan for co-ordination with OGDCL Consultant and relevant government agencies and departments (as applicable).
- n) Detailed procedure of how physical progress and percent completion will be measured, tracked and reported for each component of the Contract i.e. Procurement (Supply), Construction including Civil Works & Buildings), Installation/Erection & Commissioning/Pre-Commissioning of various equipments & packages for Mela Development Project. This detailed procedure shall take into account and incorporate the milestones described in Clause 17.6.3 of this document titled “Payment Terms”.
- o) Detailed description of project management system and Quality Assurance and Quality Control procedures and safety, QA/QC organization which the Bidder intends to adopt/follow for this project (These procedures should be Project specific).
- p) The Bidders and its engineering staff shall meet all the requirements of Pakistan Engineering Council (PEC) Act 1976, its bye-laws and amendments with respect to registration as PC Contractor C-2 and above category and provide documents to this effect.
- q) Health, Safety and Environment (HSE) project specific plan and procedures. The plan and procedures should be in line with OGDCL’s HSE policy and procedures as per **Attachment-I**.
- r) Areas of the work proposed to be sub-contracted with names, address, capabilities and other details of Sub-Contractors and their written consent for entering into an agreement with the bidder for the specified work of the Project.
- s) Authority Letter in the name of representative signing the Bid.
- t) Duly initialed & stamped copy of complete Scope of Supply/Works and Form & Conditions of Contract as well as Integrity and Ethics Undertaking as per format given in **Annexure-VI-A & B** and an affidavit as per format given in **Annexure-VII**.
- u) Deviations to tender document in Deviation Form given in **Annexure-VIII**. Non compliance with eight (08) months project completion shall be rejection of bid.
- v) Statement that apart from the deviations listed in the Deviation Form (as per format given in **Annexure-VIII**) the bid complies with tender documents complete in all respects.

- w) Un-priced Bidding Form as per format given in **Annexure-X**.
- x) Statement that the goods supplied by the PCC Contractor shall be "Brand New".
- y) Data Summary Sheet (Technical) as per format given in **Annexure-IX**.

17.2.2 **Financial Bid**

- a) Bidding Form as per **Annexure – X**.
- b) Photocopy of Bid Bond in the form of Pay Order/Bank Draft or Bank Guarantee for an amount of PKR Fifteen (15) millions per format given in **Annexure – I**.
- c) BOQs/Bid Price Schedule of Supply & Works as per **Annexure-XVI**.
- d) Item-wise (unit/system-wise) price list of Start-up & Commissioning Spares of packages/equipment to be supplied by the PCC Contractor.
- e) Item-wise (unit/system-wise) price list of spare parts for two (02) years operation of equipment/material to be supplied by the PCC Contractor.
- f) Pre-Shipment Inspection Charges supported by verified quotation of approved OGDCL Inspection Agencies.
- g) Data Summary Sheet (Financial) as per format given in **Annexure-XI**.

17.3 **Bid Form and Price Schedule**

The Bidder shall complete the Bid Form (**Annexure- X**) and BOQs/Bid Price Schedule for Supply & Works (**Annexure-XVI**) furnished in the Tender Document.

17.4 **Deviation/Exceptions**

The Bid shall clearly state, in a section explicitly devoted for this purpose, any or all deviation/exceptions to the requirements of these Instructions to Bidders including Conditions of Contract, also list of any departures or deviation from specifications contained in Technical Documents given in Volume-II. The Deviation form is given as **Annexure-VIII**.

17.5 **Bid Bond**

17.5.1 The bidder(s) shall furnish, as part of his bid, a Bank Draft/Call Deposit/Pay order/ Bank Guarantee (as per **Annexure-I**), bank guarantee only issued by the banks listed in **Attachment-V** are acceptable. Any Bid not accompanied by Bid Bond with Technical Bid shall be rejected without any right of appeal.

17.5.2 Short Bid Bond or Crossed Cheque as Bid Bond is not acceptable. Bid shall be rejected without any right of appeal

17.5.3 The Bid Bond of un-successful bidder(s) will be returned after award of Contract to successful bidder(s). The Bid Bond of successful bidder(s) will be discharged / returned upon bidder(s) furnishing the required Bank Guarantee/ Performance Bond and executing the contract. Performance Bank Guarantee only issued by the banks listed in **Attachment-V** are acceptable

17.5.4 The Bid Bond of bidder(s) whose bid is rejected under Clause 20.3 will be returned

17.5.5 The Bid Bond shall be forfeited:

- If a bidder withdraws its bid during the period of bid validity.
- In case the successful bidder(s) fails to furnish Performance Bond as per Clause 22.5.
- Any document/information provided by the bidder is found forged/fake.

17.6 **Bid Prices & Payment Terms**

17.6.1 **Bid Prices**

- i. The Contract shall be on fixed lump sum price with complete responsibility basis. This concept entails that the Contractor shall be fully responsible for complete execution of the Project as defined in the tender document meeting the technical specifications, applicable standards and OGDCL's objectives.

- ii. The bidder shall fill in prices of equipment/material items and packages to be procured (supplied) and rates for Works i.e. civil, mechanical and electrical/instrumentation for installation & Commissioning and Start-up services required for Mela Development Projects described in BOQ / Bid Price Schedule for Supply & Works given in **Annexure-XVI**.
- iii. The quoted item-wise equipment & material prices and unit rates for Works shall be firm and fixed during the contract performance period and shall not be subject to escalation on any account regardless of any circumstances whatsoever unforeseen at present.
- iv. The bidders are encouraged to maximize local supply and services on FOR Basis. The prices / rates for all supplies & services shall be quoted by bidder in Pak Rupees. The prices/rate shall be on Ex-Mela Project Site delivery basis
- v. The price for additional equipment/material supplied and Works carried out under the change order shall be paid to PCC Contractor based on BOQ price/unit rates for Supply & Works Schedule.
- vi. PCC Contractor shall also be responsible for shipment clearance payment of custom duties taxes etc and transportation from Karachi Port to Project Site. The contractor shall also be responsible for shipment clearance payment of custom duties taxes etc and transportation from Karachi Port to Project Site. However, the bidder shall take into account the provisions of relevant SROs applicable to OGDCL. For reference the SRO 678 is enclosed as **Annexure-XV**. The SRO 678 specifies the custom duty as applicable on imports of equipments and packages by E & P companies. OGDCL shall assist the contractor in obtaining required duty concessions from relevant Government Departments.
- vii. The pre-shipment inspection charges of equipment & packages to be supplied by the Contractor. OGDCL approved third party inspection agencies include SGS, Velosi, TUV Austria, TUV Rheinland & Bureau Veritas. The complete addresses of OGDCL approved inspection agencies are given in **Annexure-XII**. The scope of Pre-shipment inspection is given below:

- Review the complete list of equipment, spare parts, commissioning and start-up spares, systems/ auxiliaries etc. being supplied and compare it with the relevant purchase document. Presence of all items shall be verified.
- Dimensional Inspection.
- Review the available inspection and testing reports.
- Verification of name plate sizing rating model numbers, port numbers, tag numbers.
- Packing and marking check.
- Check that all manuals, instructions, guidelines and procedures are included.
- Verification of number of packing cases and marking against contractual specifications.
- Checking for appropriate handling during loading.
- Checking the stowing, fastening and wedging on the means of transport.
- Compilation & submission of Pre-Shipment inspection report to OGDCL

If quote of third party inspector is not acceptable to OGDCL, it will appoint its own inspector.

- viii. Inspections of Materials / Equipment / Items supplied will be carried out at Mela Project site. Materials will be accepted / rejected based on inspection as mentioned in Scope of Work, Standards, Codes, Specification, Datasheets and bid price schedule under Contract.
- ix. The PCC Contractor shall be responsible for start-up, pre-commissioning and commissioning of equipment/packages/ materials supplied by it and Company supplied materials/equipment (provided to Contractor as free issue).

- x. As far as equipment/packages supplied by OGDCL to the contractor as a free issue is concerned the PCC Contractor shall be responsible to provide start-up, pre-commissioning and commissioning support. The support shall be provided by the contractor through a team of experienced professionals and technical personnel. The vendor's representatives of respective equipment and packages shall also be present at the time of commissioning. Commissioning of gas compressors is the sole responsibility of the vendor.

17.6.2 **Taxes and Duties**

- 17.6.2.1 All taxes on the income or payments to the PCC Contractor arising, accruing or resulting under the contract, whether present or future, assessed or payable inside or outside Pakistan shall be the exclusive responsibility of the PCC Contractor or its sub-contractor(s). Company, in order to discharge its responsibilities as withholding agent shall withhold income tax from the payments to the contractor within the contract value at the rates applicable at the time of payments.
- 17.6.2.2 Sales tax on goods as well as services is applicable in Pakistan under federal/provincial sales tax laws. The PCC Contractor being registered with respective federal/provincial revenue authority of Pakistan is entitled to charge applicable sales tax over and above its bid price and will be responsible for the payment of such sales tax to the respective revenue authority as per the prevailing federal/provincial sales tax laws. OGDCL being the withholding agent shall withhold sales tax from the PCC Contractor (whether registered or unregistered), as per respective sales tax withholding rules.
- 17.6.2.3 Any indirect tax including value added tax, sales tax etc. present or future, applicable outside Pakistan shall be exclusive responsibility of the PCC Contractor.
- 17.6.2.4 The PCC Contractor shall be responsible for income tax and all other taxes levied on the Contractor's and its sub-contractor's expatriate personnel, their social security obligations and contributions regardless of whether such contributions are levied on employer or employee or both in Pakistan or outside Pakistan
- 17.6.2.5 The PCC Contractor shall keep OGDCL informed of the steps taken by it to discharge the tax obligations under the Contract and provide supporting documents whenever required by the OGDCL.

- 17.6.2.6 The PCC Contractor shall indemnify OGDCL against any claim which might occur due to non-compliance by Contractor of any legal obligation regarding taxes, duties, fees, levies, or other charges, including taxes on income and sales tax in Pakistan and any other payments due to the Federal or Provincial Governments, their agencies or any other relevant authority.
- 17.6.2.7 All clearing and brokerage charges incurred shall be to the account of PCC Contractor.
- 17.6.2.8 PCC Contractor agrees not to sell, transfer or dispose any of its machinery, equipment, spare parts or material imported under this contract within the country without prior written approval from Company and without payment of taxes (including custom duties etc) due to the Government.
- 17.6.2.9 PCC Contractor is responsible to settle all Company obligations or guarantees with the customs authorities and to clear Company of all such responsibilities.
- 17.6.2.10 PCC Contractor is responsible to obtain all customs approvals and other documentations. Company will endeavor to assist PCC Contractor in obtaining such approvals and documentation.
- 17.6.2.11 The above clauses relating to payment of taxes would prevail notwithstanding a contrary expression reflected in any other clause of the contract.

17.6.3 **Payment Terms**

The payment for supply of equipment/material items & packages and Works (Services) of BOQs/Bid Price shall be made by OGDCL, through irrevocable Inland Letter of Credit (L/C) in Pak Rupees to be established through a scheduled bank operating in Pakistan. The Inland L/C shall be established in accordance with the requirements of State Bank of Pakistan. The terms and conditions of Inland Letter of Credit (L/C) to be established by OGDCL in favour of selected Bidder for Supply and Services are given in **Attachment-II-A/B**.

All payments shall be made according to the terms of payment milestones and invoicing procedures which are described in detail in the Conditions of Contract.

➤ **Payment Terms- Supply**

The payment for supply of equipment & material items shall be made by OGDCL to the PCC Contractor as per following schedule:

- Twenty percent (20%) shall be paid on placement of equipment & packages order(s) by Contractor evidenced by un-priced copy of purchase order duly acknowledged by the Supplier and Contractor's invoice duly verified by OGDCL/Consultant.
- Sixty percent (60%) shall be paid on delivery/Inspection of equipment & packages at project site on submission of Acceptance Certificate by OGDCL and verified Contractor's invoice.

The payment under the L/C shall be effected upon submission of following documents upon each shipment of equipment/material:

- Clean Truck Receipt/Carrier Receipt showing freight paid & indicating Contract / Inland LC details.
- Original detailed invoice showing material description, quantity unit price and total price strictly in line with the Contract and verified by OGDCL
- Copy of applicable GST Invoice
- Copy of NTN Certificate
- Packing list
- Certificate and list of measurements and weight gross/net.
- Mill Inspection/Quality Certificates.
- Third Party Inspection Certificate (if required)
- Duly signed and stamped delivery note
- Warranty Certificate
- Certificate of origin
- Certificate issued by OGDCL that ordered equipment/material has been received at delivery location and inspected and accepted.

- Twenty percent (20%) shall be paid by OGDCL to PCC Contractor within thirty (30) days of issuance of Provisional Acceptance Certificate by OGDCL after successful commissioning of Mela Project.

➤ **Services Payment**

The payments for services under Inland LC shall be made through inland issued in favor of the PCC Contractor.

Ten Percent (10%) of the total Contract Price shall be paid by OGDCL to PCC Contractor as advance for Services. The Mobilization Advance shall be paid to the PCC Contractor on submission of Advance Payment Guarantee from any bank listed in **Attachment-V** of equivalent amount issued as per format given in **Attachment-III**. No advance shall be paid before the submission of Performance Bond / Mobilization Advance Bank Guarantee required as per relevant clause of Conditions of Contract. The amount of advance payment shall be deducted proportionately from PC Contractor's each invoice.

- **Works (Covering Construction, Installation & Erection, Pre-Commissioning, Commissioning & Start-up**

OGDCL shall make progressive payments to PCC Contractor on monthly basis against Contractor's invoices giving details of that specific work and its completion status. The payment shall be made considering the Bid Price Schedule and verified percentage completion of work. The measurement/verification mechanism for progressive payments is detailed in **Annexure-XIII**. The measurement/verification of work will be made by OGDCL/Consultant based on progress reports submitted by the Consultant and actual at site.

The progressive payment shall be made after deducting ten (10) percent amount for adjustment on account of advance till the total amount of advance is recovered and ten (10) percent for retention money. The retention money shall be released by OGDCL to the Contractor within thirty (30) days of issuance of Provisional Acceptance Certificate by OGDCL.

- **Transportation Loading & Un-loading Services**

Transportation, loading and un-loading charges shall be paid by OGDCL to the PCC Contractor on submission of invoice duly verified by OGDCL/Consultant and accompanied with certificate that the equipment/material and packages have been delivered at Project Site and duly inspected/accepted by OGDCL/Consultant

- **Invoicing Procedure**

For progressive payment of works on a day in each month, to be agreed between the OGDCL's representative and the PC Contractor's representative the Contractor shall in respect of all amounts owing to him submit an invoice with relevant supporting documents, in three copies, to the OGDCL's Representative with a Work progress report for OGDCL's approval and signature. OGDCL's Representative shall authorize in writing payment to the Contractor as ascertained in accordance with the above clause.

- **Timing for Payment**

The Payment of undisputed invoices shall be made in full within estimated thirty (30) days after OGDCL has authorized such payment in writing, provided OGDCL/Consultant representative has first certified such invoice and Contractor has fulfilled all requirements for the release of payment, OGDCL shall pay the amount due less applicable taxes and any amounts which may be due to OGDCL.

- **Disputed Invoices**

If any invoice or an amount of invoice is disputed, OGDCL shall within ten (10) days of receipt of invoice inform the Contractor the grounds on which payment of the invoice or an amount is disputed. Efforts shall be made by both parties to resolve the dispute within a period of thirty (30) days.

18.0 **WARRANTIES**

PC Contractor shall warrant that the equipment/material supplied under the Contract shall be new, having good title and fit for the use intended, The PC Contractor further warrants that:

- a) Equipment & Material supplied by PC Contractor against the Contract conforms in all respects with the specifications and requirements contained in contract document.
- b) Equipment & Material supplied by PC Contractor under this Contract shall be of good quality and free from all defects arising from design, materials or workmanship.

PC Contractor shall also obtain and provide to OGDCL/Consultant original manufacturer's warranty of the equipment supplied by it from vendors and manufacturers. The warranties shall be obtained in the name of OGDCL.

PC Contractor warrants that the installation, erection and other Works shall be of good quality, free from faults or defects and shall perform so as to comply with the specifications contained in the contract documents or with any revisions thereof pursuant to any changes. PC Contractor further warrants that all work performed under the Contract shall be in accordance with industry's recognized codes and standards.

The foregoing warranties shall remain valid for a period of twelve (12) months from the date of Provisional Acceptance Certificate.

If the supplied equipment & material installation/erection and related works fail to meet the warranty conditions set. OGDCL shall promptly notify the PC Contractor in writing about the defects and claims under the warranty. Upon receipt of such notice the PC Contractor shall within the time specified by OGDCL/Consultant repair/replace the defective equipment, material and or portion of works, with no cost or expense to OGDCL. The repaired or replaced equipment, material or works shall be warranted by PC Contractor for twelve (12) months from the date of repair(s) or replacement(s).

If the PC Contractor having been notified, fails to remedy the defect(s) within the specified time, OGDCL shall proceed to take remedial actions as may be necessary, at the PC Contractor's risk and cost. All costs thereof shall be charged to the PC Contractor or recovered from retention money/performance bond. The PC Contractor shall have no objection to the above and he hereby acknowledges the rights of OGDCL to recover such sums as a debt due to OGDCL from defaulting PC Contractor. It is understood that in this case the PC Contractor shall not be relieved from the provided warranties and contractual obligations.

19.0 **FORMAT AND SIGNING OF BID**

- 19.1 The bidder shall prepare one (01) original & one (01) copy of technical bid and one (01) original financial bid, clearly marking "Original Bid" and "Copy of Bid" as appropriate. In the event of any discrepancy between them, the original shall govern.
- 19.2 The original and copy of Bid shall be typed or written in indelible ink. Bids must be properly signed by the Bidder or, and shall contain the full name and address of the Bidder. Each page of the Bid and its Annexures must be initialed and stamped by the person or persons signing the Bid. The name of all persons signing the Bid shall be typed or printed below their signatures. Bidders shall be deemed to warrant that the signatories have the necessary delegated authority to sign the Bid and to bind the Bidder.
- 19.3 The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.
- 19.4 All copies of the bid shall be signed by the Bidder or a person (s) duly authorized to bind the Bidder to the Contract. Proof of the authorization shall be furnished in the form of a written Power of Attorney which shall accompany the bid. All pages of the bid, where entries are made, shall be initialed by the person (s) signing the bid.

20.0 **SUBMISSION OF BIDS**

20.1 **Sealing and Marking of Bids**

- 20.1.1 As stated earlier, OGDCL is following two stages two envelop bidding process. Accordingly, bid to be submitted shall comprise of a single package containing two separate envelopes. Each envelope shall contain separately the technical (proposal) bid and financial (proposal) bid. The bidders shall submit two (02) copies of the technical bid, one of which shall be marked the "Original" and the other "Copy" and one (01) soft copy of technical bid should be enclosed in the envelope marked as "Original" "Financial Bid is required in original only.
- 20.1.2 Technical and financial (proposal) bids shall be submitted in separate envelopes.

- 20.1.3 Original Bid Bonds mentioned in Press Tender Notice must be enclosed with Technical Bid.
- 20.1.4 Only Financial Bid(s) of technically responsive bidder(s) will be opened publicly.
- 20.1.5 Financial Bids of technically non responsive bidder(s) will be returned unopened.
- 20.1.6 Each bid shall be sealed in inner and outer envelopes with the outer envelope marked as follows: -

Manager (SCM)
Supply Chain Management Department
Oil & Gas Development Company Limited
OGDCL House, 1st Floor, G-6/F-6,
Jinnah Avenue, Islamabad (Pakistan)

- 20.1.7 The envelope shall also bear the word “CONFIDENTIAL” and following identifications:-

TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018

**HIRING THE SERVICES OF PC CONTRACTOR FOR SUPPLY /
INSTALLATION / CIVIL FOUNDATIONS FOR
MISCELLANEOUS EQUIPMENTS & PLANT BUILDING WORKS
FOR MELA DEVELOPMENT PROJECT (PC-1)**

**DON'T OPEN BEFORE (AS PER SCHEDULE MENTIONED IN
THE TENDER NOTICE/SOR)**

**TECHNICAL/FINANCIAL BID(s) (INDICATE ONE ON EACH
ENVELOPE)**

- 20.1.8 If the envelope is not marked, as instructed above, the OGDCL will assume no responsibility for the misplacement or premature opening of bid(s)

20.2 **Deadline for Submission of Bids**

The bids must be delivered at the Reception of OGDCL House, Jinnah Avenue, Islamabad on or before as per schedule mentioned in Press Tender Notice and the same will be opened accordingly.

20.3 **Late Bids**

Any Bid received after the prescribed date and time for submission of Bids, shall be rejected and returned unopened to the Bidder.

20.4 **Modifications and Withdrawal of Bids**

20.4.1 The Bidder may modify or withdraw its Bid after the bid's submission, provided that written notice of the modification or withdrawal is received by OGDCL prior to deadline prescribed for submission of the Bids.

20.4.2 The Bidder's modifications or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of Instruction 20.1. A withdrawal notice may also be sent by fax or e-mail but followed by a signed confirmation copy, postmarked not later than the deadline for submission of the Bids.

20.4.3 No Bid can be modified subsequent to the deadline for submission of the Bids.

20.4.4 No Bid may be withdrawn in the interval between the date for submission of Bids and the expiry of the period of Bid validity specified by the Bidder on the Bid Form. Withdrawal of a Bid during this interval may result in encashment of Bid Bond under Instruction 17.5.5.

21.0 **BID OPENING AND EVALUATION**

21.1 **Bid Opening**

The OGDCL will open the Technical Bid, in the presence of bidder's representative(s) who may chose to attend on date, time and location mentioned above.

The bidder(s) names, bid prices including bid price modification and bid withdrawals, if any, will be announced at the time of financial bid opening.

The OGDCL will examine the bids to determine whether they are complete, no computational errors have been made, the required sureties have been furnished, documents have been properly signed, and the bids are generally in order.

Arithmetical errors found will be corrected as follows:

- Where there is a discrepancy between amount in figures and word, the amount in word will prevail.
- Where there is a discrepancy between the unit price and the total amount derive from the multiplication of the unit price and the quantity, the unit price as quoted will govern, unless there is an obvious gross arithmetical error in unit price, in which event, the extended amount quoted would prevail.
- In case the due date of bids opening falls on a holiday, the bids shall be opened on the next working day.

21.2 **Criteria for Summary Rejection of Bid**

The Bids are not meeting the following mandatory criteria shall be summarily rejected without right of appeal:

- Bid must be prepared in English Language.
- Bid must be valid for “250” days from the Date of Technical Bid Opening.
- Technical Bid must be accompanied by Affidavit (**Annexure-VII**) for Non-Black Listing on Non-Judicial Stamp Paper of Rs.100/-.
- Technical Bid must be un-priced at Mela Project Site.
- Shareholders/Owners information along with name, address and CNIC number should be enclosed with the technical bid.
- Bid bonds in form of cheque, swift message or of short amount are not acceptable and bid is liable for rejection.
- Bid must reach at the specified OGDCL address on or before time mentioned in the tender notice.
- Compliance certificate of all the tender terms and conditions should be enclosed with the technical bid.
- Bid must not be submitted in form of fax or email OR telegram/telefax/direct to the purchaser.

- Bid must be submitted on Bidder's original letter head/pad. Bid must be quoted for complete project as per scope of work given in the tender document.
- Data Summary Sheet (Technical Bid) as per **Annexure-IX** must be filled in and submitted along with the bid.
- Bidding form as per **Annexure-X** and BOQs/Bid Price Schedule as per **Annexure-XVI** duly completed in accordance with Sub-clause 14.2.1 must be part of the Bid submitted. For this purpose, Bidder may either use the photo copies of the format provided as **Annexure-XVI&X** of the Tender Documents or may reproduce the same on his own letter head filling in blanks and signing and stamping them in original.

21.3 **Determination of Responsiveness**

- 21.3.1 After opening the bids, the OGDCL will determine whether each bid is substantially responsive to the requirements of Bidding Documents.
- 21.3.2 For the purpose of this clause, a substantially responsive bid is one which conforms to all the terms and conditions of the Bidding Documents without material deviation. A material deviation is one which being inconsistent with the Bidding Documents, affects in any substantial way to scope, quality or prescribed delivery schedule or which limits in any substantial way, the OGDCL's right or the Bidders' obligation under the contract.
- 21.3.3 A bid determined to be non-responsive will be rejected by the OGDCL and shall not subsequently be made responsive by the Bidder by correction of the non conformity.
- 21.3.4 The OGDCL may waive any minor deviation non-conformity or irregularity in a bid which does not constitute a material deviation, provided that the waiver does not prejudice or affect the relative standing order of any Bidder.
- 21.3.5 To assist in determining a bid's responsiveness the bidder(s) may be asked for a clarification of his bid. The bidder(s) is not permitted, however, to change bid price or substance of his bid.
- 21.3.6 The bidder(s) may lodge a written complaint for redressal of their grievances and disputes to Dispute Resolution Committee within fifteen days of the placement of the Technical Evaluation report on the web.

21.4 **Clarification of Bids**

To assist in determining a bid's responsiveness the Bidder may be asked for a clarification of his bid. The Bidder is not permitted, however, to change bid price or substance of his bid.

21.5 **Technical Evaluation**

The technical bids will be examined and evaluated with the objective of assessing their eligibility, compliance, completeness, conformity to the specifications, guarantee/warranty requirements and responsiveness to the requirements stipulated in the Tender Document. Following factors will be considered for evaluation:

- Bid must be prepared as instructed vide Clause 17.0 hereof.
- Bid must be quoted for complete scope of work given in Section-V of this tender document.
- Technical Details/Experience to be provided as instructed in Clause 17.2.1 as a mandatory requirement.
- Technical qualification, experience and capabilities of the bidder.
- Contractor's Profile & list of clients.

The bidders shall furnish as part of the bid documents establishing bidders eligibility to bid and qualifications to perform the contract if his bid is accepted by OGDCL.

- Copies of valid API Q1 Certification and ISO 9001 and other accreditation.
- Capability of the Bidder to undertake the Projects within the timeframe envisaged by OGDCL.
- Quality of the Project execution plan, organization resources to be deployed both human and physical.
- Detailed Project Execution Schedule.
- Quality of Project specific QA/QC & HSE procedures proposed to be adopted.
- Submission of PEC registration as instructed in Clause 10.3 of this document.

- ISO and other certification/accreditation is mandatory.
- Pre-Shipment Inspection
- Contractor Scope supply delivery schedule
- Warranty/Guarantee
- Financial Strength

Bid determined to be substantially non-responsive will be rejected. During evaluation certain clarifications may be sought from the Bidders or discussions may be held with them for the purpose of Bid conditioning/evaluation. The final technical evaluation shall be carried out considering the submitted technical proposal and responses received from the bidder against clarifications/queries.

Only those bids which qualify this stage will undergo the financial evaluation. OGDCL reserves the right to disqualify a bidder if it finds, at any time, that the information submitted by him concerning, his qualification as bidder was false and materially inaccurate or incomplete. Providing false information or violating the bidding requirements shall result in black-listing of Bidder / Manufacturer.

21.6 **Financial Evaluation**

The financial bids (both original and supplementary) of technically responsive and acceptable bids will be opened.

The evaluation of financial bids will involve:

- Check and confirm the amount of Bid Bond.
- Conversion to Pak Rupees of foreign currency amount based on National Bank currency exchange rate prevailing on the date of commercial bid opening.
- Arithmetic errors in computation and summation shall be checked. The errors shall be corrected in the following manner:
 - a) Where there is a discrepancy between amounts in figures and in words, the amount in words shall govern and
 - b) Where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit rate and the quantity, the unit rate as quoted shall govern.

- Calculation of financial effect of :
- Project completion period beyond the stipulated period.
- Deviation in payment terms
- Any other minor exception/deviation which has financial implications.

The effect of payment terms asked by the Bidder other than those spelled out in ITB, Conditions of Contract (with exception to completion period of Project) shall be calculated @ 1.0 percent per month and shall be added to the respective Bidders price.

The effect of any other minor exception/deviation which has financial implications shall be calculated by OGDCL as considered appropriate.

With the addition of above effects to each Bidder's total quoted price the evaluated price shall be arrived.

The award will be recommended in favor of bidder whose evaluated price is lowest.

21.7 **Contacting OGDCL or CONSULTANT**

21.7.1 No Bidder or his agent shall contact OGDCL or CONSULTANT on any matter relating to its Bid, from the time of the Bid opening to the time the Contract is awarded.

21.7.2 Any effort by Bidder to influence OGDCL or CONSULTANT in its Bid evaluation, Bid comparison or Contract award decisions may result in the rejection of the Bidder's Bid.

21.7.3 All correspondence technical/financial shall be made with authorized representative of Supplier.

21.7.4 All correspondence relating to technical matters before bid submission or clarifications during evaluation etc. will be directed to OGDCL/Consultant.

22.0 **AWARD OF CONTRACT**

22.1 **OGDCL's Right to Accept any Bid and to Reject any or all Bids**

OGDCL reserves the right to accept or reject any bid or part of a bid and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for OGDCL's action.

22.2 **OGDCL's Right to Vary the Scope of Contract**

OGDCL reserves the right at the time of award of Contract to make addition and deletions in any component of scope of work or vary the scope of work given in the Tender Document.

22.3 **Notification of Intent to Award**

22.3.1 Prior to the expiration of the period of bid validity, OGDCL will notify the successful Bidder in writing by courier service or email its intent to award the contract. The Contract will be executed subject to satisfactory negotiation of the terms and conditions of the Contract.

22.3.2 Upon the successful bidder's furnishing of Performance Bond pursuant to Instruction 22.5, OGDCL will promptly notify each unsuccessful bidder and will discharge its Bid Bond accordingly.

22.4 **Signing of Contract**

22.4.1 At the same time as OGDCL notifies the successful Bidder of its intent to award the Contract, OGDCL will send the Bidder the Form and Conditions of Contract (Section-IV) provided in the Tender Document, incorporating all agreements between the parties.

22.4.2 Within ten (10) days of receipt of the Form and Conditions of Contract the successful bidder will be required to sign the Contract and return it to OGDCL.

22.4.3 PCC Contractor will place order for procurement of balance of material within one month time period after award of contract/opening of L/C

22.5 **Performance Bond**

22.5.1 Within fifteen (15) days of the receipt of notification of intent to award the Contract from OGDCL, the successful Bidder shall furnish a Performance Bond in the Form of Bank Guarantee/Pay Order only from banks listed in **Attachment-V** and as per format given in **Annexure – XIV** for an amount of ten percent (10%) of the Contract Price as a guarantee for the due and faithful performance of the Contract. The said Performance Bond shall be valid up to twelve (12) months from the date of the Provisional Acceptance Certificate issued by OGDCL. The performance Bond shall be issued by a Pakistani Scheduled Bank or an International Bank operating in Pakistan and acceptable to OGDCL.

22.5.2 Failure of the successful Bidder to comply with the requirements of Instruction 22.4 or 22.5 shall constitute sufficient grounds for the annulment of the award and confiscation of bid bond, in which event OGDCL may make the award to the next lowest evaluated Bidder or call for new Bids.

ANNEXURE – I

BID BOND

ANNEXURE – I**BID BOND****(To be submitted with Technical Bid)**

Oil & Gas Development Company Limited,
OGDCL House, Jinnah Avenue, Blue Area,
Islamabad.

Dear Sir,

In consideration of M/S _____ herein after called “THE BIDDER” having submitted the accompanying Bid and in consideration of value received form (the Bidder above), we hereby agree to under take as follows:-

1. To make unconditional, immediate and forthwith payment of the sum of Pak.Rs. ____-/
(Pak.Rs. _____ Only) upon your FIRST and SIMPLE written demand without further recourse, question, query, deferment, contestation or reference to the bidder, account party or any other person in the event of the withdrawal of the aforesaid bid by the BIDDER before the end of the period specified in the Bid after the opening of the same for the validity thereof or if no such period be specified, within 280 days after the said opening or if the Bidder, having been notified of the acceptance of his bid by the Company during the period of bid validity:
 - a. Fails or refuses to execute the Contract in accordance with the instructions to the Bidders,
or
 - b. Fails or refuses to furnish Performance Bond in accordance with the instructions to Bidders.
2. To accept written intimation(s) from you as conclusive, sufficient and final evidence of the existence of a default of non-compliance, breach or default as aforesaid on the part of the BIDDER and to make payment immediately and forthwith upon receipt of your FIRST and SIMPLE written intimation.
3. No grant of time or other indulgence to, or composition or arrangement with the BIDDER in respect of the aforesaid Bid with or without notice to us shall affect this Guarantee and our liabilities and commitments hereunder.
4. This is an independent and direct obligations guarantee and shall be binding on us and our successor in-interest and shall be irrevocable.
5. The Guarantor Bank warrants and represents that it is fully authorized, empowered and competent to issue this guarantee.

Yours faithfully,

(B A N K E R S)

ANNEXURE – II

PCC CONTRACTOR'S PROFILE

ANNEXURE – II**PCC CONTRACTOR'S PROFILE**

The PCC Contractor For procurement (supply) of equipment / material items and packages, installation / erection, testing and completion of all the Civil, Mechanical, Electrical, Instrumentation & Structural works, pre-commissioning, commissioning services & start-up required for Mela Development Project are required to provide the information / details given in this document separately.

- 1) Name of Company (including Fax, Telephone, email, website) complete address of the corporate/Head Office as well as office dealing with sales to Pakistan and adjoining region.
- 2) Certified copy of Certificate of Incorporation (in case of companies) or Registration Certificate (in case of firms).
- 3) Details of company's core business.
- 4) Details of Manufacturing facilities covering:
 - Shop space, three dimensional rolling machines and their capacity
 - Nos. of automatic welding machines
 - Show overhead cranes
 - Any other major machine
 - List of customers/buyers with their complete address and contact person's telephone / fax nos. & email address.
- 5) Production / sales of the various material, equipments & packages / equipment (of the type range) required by OGDCL during last five (05) years.
- 6) Certified copies of financial statements/annual reports for the last three (3) years (for companies & firms) or certified copies of Tax Returns for the last three (3) years for local individuals.
- 7) Certified Copies for Statement of Bank Accounts for the last twelve (12) months containing name, phone no. of Bank Manager.
- 8) Litigation Details (if any) with customers during last ten (10) years.

ANNEXURE – III

RESPONSIBILITY MATRIX

ANNEXURE-III**FORMAT OF RESPONSIBILITY MATRIX**

S. No.	Responsibilities¹	(Lead JV Partner)²	(JV Partner 1)*
1			
2			
3			
4			
5			
6			
7			

* As many number of columns can be inserted as the partners in JV/Consortium.

1. No deletion in the responsibilities column shall be made.

ANNEXURE – IV

DETAILS OF SIMILAR PROJECTS (WORK)
EXECUTED

ANNEXURE-IV**DETAILS OF SIMILAR PROJECTS (WORK) EXECUTED**

Sr. No.	Owners' "Name , Description & Capacity of the Project	Name & Address of Client	Country & Year	Project Completion Period	Total Contract Value			Detailed Description of Work, Scope & Responsibilities **	Details of Equipment Procured (Including nature/type of equipment, its value* and origin/source)	Details of Qualification of Man-power Employed	Name of Sub-Contractors/ Consultants and their Work Scope	Whether the Project is on Schedule? If no, specify reasons for delay and give expediting plans
					Foreign Currency	Local Currency	Total					

(*) Please indicate name and unit of currencies

(**) For example design, engineering, procurement, construction and commissioning.

NOTE:

Please also provide a list of current Contracts for Engineering, Procurement (Supply), & Commissioning of the Projects on the above pattern.

ANNEXURE – V

**CV's OF NOMINATED COMMISSIONING
KEY PERSONNEL**

ANNEXURE – V**Format of Curriculum Vitae (CV) of Nominated Installation & Commissioning Personnel and Training Experts**

Proposed Position: _____

Name of Firm: _____

Name of Staff: _____

Profession: _____

Date of Birth: _____

Years with Firm: _____ Nationality: _____

Membership in Professional Societies: _____

Nominated Position & Tasks Assigned: _____

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to supply installation & commissioning of the Projects executed. Also describe *degree of responsibility held* by staff member.]

Education:

[Summarize college/university and other specialized education of staff member, giving names of schools, dates attended and degrees obtained. Use up to a quarter page.]

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organization, title of positions held and location of assignments. For experience in *last ten years*, also give types of activities performed and client references, where appropriate. Use up to three-quarters of a page.]

Languages:

[Indicate proficiency in speaking, reading and writing of each language: excellent, good, fair, or poor.]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these bio-data correctly describe myself, my qualifications and my experience.

Signature of Staff Member or authorized official of Manufacturer/Packager

Date: _____
Day/Month/Yr

ANNEXURE – VI-A

INTEGRITY AND ETHICS UNDERTAKING

ANNEXURE-VI-A

(On official letter-head of the bidder)
To be signed by the
Chief Executive of the
bidding company or a representative duly
authorized by abroad resolution.

Integrity and Ethics Undertaking

We hereby commit and undertake to observe the following principles during our participation in the tender process and during the contract execution.

- a) That we will not directly or through any other person or firm, offer promise or give to any of the employees of OGDCL involved in the tender process or execution of the contract any gain, pecuniary benefit or facilitation payment in order to obtain in exchange any advantage of any kind whatsoever during the process or during the execution of contract.
- b) That we have not and will not enter with other bidders into any undisclosed agreement or understanding either formal or informal to restrict competitiveness or to cartelise in the bidding process.
- c) That we will ensure that the remuneration of agents (if engaged) is appropriate and for legitimate service only.
- d) That we will not use subcontracts, purchase orders or consulting agreements as means of channeling payments to employees of OGDCL.
- e) That we will not commit any offence under the Pakistan Penal Code, Prevention of Corruption Act or National Accountability Ordinance to achieve any exchange, gain or benefit during the tender process or the execution of contract.

We further understand and acknowledge that any violation or transgression of the above mentioned principles will attract disqualification from the tender process and may also result in permanent exclusion from further contract award processes.

We also accept and understand to respect and uphold OGDCL's absolute right to resort to and impose such disqualification, debarment or execution.

For and on behalf of _____

Tender No. _____

ANNEXURE – VI-B

INTEGRITY AND ETHICS UNDERTAKING

ANNEXURE-VI-B

(On official letter-head of the bidder)
To be signed by the
Chief Executive of the
bidding company or a representative duly
authorized by abroad resolution.

Integrity and Ethics Undertaking

We hereby commit and undertake to observe the following principles during our participation in the contract execution.

- a) That we will not directly or through any other person or firm, offer promise or give to any of the employees of OGDCL involved in or relevant to the execution of the contract any gain, pecuniary benefit or facilitation payment in order to obtain in exchange any advantage of any kind whatsoever during the execution of contract or at any stage thereafter.
- b) That we did not enter with any bidder into any undisclosed agreement or understanding either formal or informal to restrict competitiveness or to cartelise in the bidding process.
- c) That we will ensure that the remuneration of agents (if engaged) is appropriate and for legitimate services only.
- d) That we will not use subcontracts, purchase orders or consulting agreements as means of channeling payments to employees of OGDCL.
- e) That we will not and have not committed any offence under the Pakistan Panel Code, Prevention of Corruption Act or National Accountability Ordinance to achieve any advantage, gain or benefit during the tender process or the execution of contract.

We further understand and acknowledge that any violation or transgression of the above mentioned principles will attract disqualification from doing business with OGDCL and may also result in permanent exclusion from further contract award processes.

We also accept and understand to respect and uphold OGDCL's absolute right to resort to and impose such disqualification, debarment or execution.

For and on behalf of _____

Tender No. _____

Contract No. _____

ANNEXURE – VII

AFFIDAVIT FORM

ANNEXURE-VII

AFFIDAVIT

We M/s. _____ a firm/company established/incorporated under the laws of Pakistan having its offices at _____
_____ are bidding for the Supply & Work to be undertaken for the KPD Project hereby solemnly declare that we have carefully studied and examined the complete Tender Document No. _____ including ITB and attachments. Further we hereby commit to sign and stamp the earlier referred document (if we are determined as a successful bidder) prior to award of contract.

Name: _____

Designation: _____

Signature: _____

ANNEXURE – VIII
DEVIATION FORM

ANNEXURE – VIII**DEVIATION FORM**

Bidder: _____

Date: _____

List of Deviations:

Sr. No.	Title/Description of Deviation	Tender Document Reference	Proposed Change	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Bidder's Signature: _____

Affix seal of Bidder's company:

ANNEXURE – IX

DATA SUMMARY SHEET (TECHNICAL BID)

ANNEXURE –IX

DATA SUMMARY SHEET
(To be Submitted in Technical Bid)

Following information regarding equipment/materials/procurement being procured must be stated categorically:

COMPLETE NAME AND ADDRESS OF PCC CONTRACTOR

COMPLETE NAME AND ADDRESS OF SUPPLIER

VALIDITY OF BID

PROJECT COMPLETION PERIOD

BANK GUARANTEE AS EARNEST MONEY
TECHNICAL BID

Yes No

AMOUNT OF BANGUARANTEE

COMPLETE NAME AND ADDRESS OF
BENEFICIARY/LEAD PARTNER OF BANKER WITH ACCOUNT NO.

Sign & Seal

ANNEXURE – X
BIDDING FORM FORMAT

ANNEXURE – X**BIDDING FORM**
(To be typed on Bidder's Letterhead)

Dated : _____

To: General Manager SCM
Oil & Gas Development Company Limited
OGDCL House, Jinnah Avenue,
Blue Area,
Islamabad - Pakistan
Tel: +92-51-920023652

Dear Sirs,

Having examined your bidding document comprising of:

VOLUME-I

- Background & Introduction (Section-I)
- Invitation to Bid (Section-II)
- Instruction to Bidders (Section-III)
- Forms & Conditions of Contract (Section-IV)

VOLUME-II

- Overall Scope of Supply and Works Specifications (Section-V)
- Supplementary Technical Documents

We, the undersigned, offer to supply and deliver _____ (description of goods _____) in conformity with the requirements of the above documents for the sum of _____ (Total bid amount in words and figures) _____ or such other sum as be ascertained in accordance with the 'Prices Schedule' attached herewith and made part of this bid.

We undertake, if our bid is accepted, to commence delivery within _____ days and to complete delivery of all the items specified in the Contract within _____ days calculated from the date of issuance of letter of credit.

If our bid is accepted we will obtain the guarantee of a Bank for a sum not exceeding (10%) of the Contract sums for the due performance of the Contract.

We agree to abide by this bid for a period of 180 days after the date fixed for financial bid opening under Instructions of I.T.B. and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

We agree to submit the Bid Bond for an amount equivalent to _____ along with the Technical Bid.

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Our bid proposal do not contain any deviation or exception from the conditions of contract given in the above referred tender document.

Dated this _____ day of _____, _____.

Stamp & Signatures

(In capacity of)

Duly authorized to sign bid for and on behalf of _____

WITNESS:

Signature

Address _____

ANNEXURE – XI

DATA SUMMARY SHEET (FINANCIAL BID)

ANNEXURE –XI

DATA SUMMARY SHEET
(To be Submitted in Financial Bid)

Following information regarding Equipment/Materials being procured must be stated categorically:

NAME AND ADDRESS OF MANUFACTURER/SUPPLIER

COUNTRY OF ORIGIN

VALIDITY OF BID

PROJECT COMPLETION PERIOD

BANK GUARANTEE ATTACHED WITH
 TECHNICAL BID

Yes No

LOCAL SUPPLY :

TOTAL FOR PRICE:
 (INCLUSIVE OFGST)

TOTAL FOR PRICE:
 (INCLUSIVE OF ALL TAXES EXCEPT GST)

SERVICES :

TOTAL PRICE:
 (INCLUSIVE OFGST)

TOTAL PRICE:
 (INCLUSIVE OF ALL TAXES EXCEPT GST)

GST REGISTRATION NO.:

COMPLETE NAME AND ADDRESS OF
 BENEFICIARY OF BANKER WITH ACCOUNT NO.

CONFIRMATION THAT QUOTED PRICED IS FIRM/FIXED AND NOT BASED ON ANY PRICE ADJUSTABLE
 FORMULA/ANY ESCALATION

YES NO

CHECK LIST:

HAVE YOU COMPLETED THE BID PRICE SCHEDULE

YES NO

Sign & Seal

ANNEXURE – XII

ADDRESSES OF THIRD PARTY

INSPECTION AGENCIES

ANNEXURE-XII**ADDRESSES OF THIRD PARTY INSPECTION AGENCIES****1. M/s SGS Pakistan (Pvt.) Ltd**

H-3/3, Sector 5,
Korangi Industrial Area,
Karachi-74900. Pakistan.
Phone # 021-35121388-97 (Ext:192)
Attn : Mr. Abdul Razzak Lakhani
Director Operations

2. M/s Lloyd's Register

3rd Floor, State Life Building No. 11, Abdullah Haroon Road,
Karachi 74400
Phone # 021-35686397, 35683852 and 35683501
Attn : Mr. Bazlur Rahman
Country Manager.

3. M/s VELOSI

Off 401, 4th Floor, Business Centre PECHS Society, Block No. 6
Karachi.
Phone # 021-34549503/4
Attn : Mr. Liaqat Hussain

4. M/s TUV AUSTRIA (FORMERLY MOODY INTERNATIONAL)

Suite # 117, 1st Floor, the Forum G-20, Block-9,
Khayabane-e-Jami, Clifton
Karachi.
Phone # 021-111-284-284
Attn : Mr. Ahmad Rafiq
Area Manager-South

ANNEXURE – XIII

MEASUREMENT / VERIFICATION MECHANISM OF

PROGRESSIVE PAYMENTS

ANNEXURE – XIII**MEASUREMENT/VERIFICATION MECHANISM FOR
PROGRESSIVE PAYMENTS****1.0 MECHANICAL WORKS****1.1. Static Equipment Erection / Installation (tonnage basis) (e.g. Vessels, Tanks, Company Supplied Packages etc.)****1.1.1. Pre-Fabricated Vessels / Equipment / Company Supplied Packages**

i.	After erection / Installation at foundation	40%
ii.	After fitting of internals (where required)	10%
iii.	After leveling and alignment	15%
iv.	After hydrotesting	10%
v.	After punch list clearance, mechanical acceptance, pre-commissioning, commissioning & start-up (including performance testing)	20%
vi.	As built information with red marked drawing and material reconciliation	5%

1.1.2. Site Erected Tanks / Vessels

i.	After Pre-fabrication	10%
ii.	After Erection	20%
iii.	After Welding	30%
iv.	After NDT	10%
v.	After Hydrotesting	15%
vi.	After punch list clearance, mechanical acceptance, pre-commissioning, commissioning & start-up (including performance testing)	10%
vii.	As built information with red marked drawing and material reconciliation	5%

1.2. **Rotary Equipment Erection (e.g. Pumps, Compressors etc).**

i.	After installation/erection	40%
ii.	After alignment	20%
iii.	After mechanical run test	20%
iv.	After punch list clearance, mechanical acceptance, pre-commissioning, commissioning & start-up (including performance testing)	20%

1.3. **Misc. Piping / Slug Catchers Fabrication, Installation & Erection**

i.	After laying / installation on supports	20%
ii.	After Welding	30%
iii.	After Radiography / Stress Relieving (where required)	15%
iv.	After hydrotesting	10%
v.	After cleaning, flushing & drying	5%
iv.	After punch list clearance, pre-commissioning, commissioning & start-up (including performance testing)	15%
v.	After submission of as-built drawing with red marked drawing and material reconciliation	5%

2.0 **CIVIL & STRUCTURAL WORKS**

i.	Grading	10%
ii.	Earthworks	10%
iii.	R.C.C. works	40%
iv.	Finishing works	5%
v.	Steel Structure works	15%
iv.	Road	15%
v.	Storm water drain	5%

3.0 **ELECTRICAL WORKS**

3.1 **LV Switchgear**

i.	After Placement, assembling, fixing / securing	40%
ii.	After External / Internal wiring connections including earthing	20%
iii.	After site testing, punch list clearance, installation acceptance & pre-commissioning.	20%
iv.	After successful commissioning & start-up	15%
v.	As built information with red marked drawing and material reconciliation	5%

3.2 **Cables (to be charged at following stage and based on per Running meter completion basis)**

i.	After Cable laying in designated cable ways.	60%
ii.	After cable termination at either end	20%
iii.	After site testing, punch list clearance, installation acceptance and pre-commissioning.	10%
iv.	After successful commissioning and start-up	5%
v.	As built information with red marked drawing and material reconciliation	5%

3.3 **Cable trenches in natural strata (to be charged progressively based on %age Cubic meter completion)**

i.	After excavation, cable laying, backfilling, finishing complete with markers including acceptance.	95%
ii.	After submission of as-built drawing with red marked drawing and material reconciliation	5%

3.4 **Cable Tray / Ladder / Conduits**

i.	After installation of tray / ladder / conduit including completion of supports works.	70%
ii.	After completion of cable laying and acceptance of works.	25%
ii.	As built information with red marked drawing and material reconciliation	5%

3.5 **Cable Pits / Manholes / Hand holes**

i.	After completion of civil construction.	80%
ii.	After cable laying completion and work acceptance.	15%
iii.	As built information with red marked drawing and material reconciliation	5%

3.6 **Light fixtures, LCS, JB, Sockets etc.**

i.	After installation of mounting structure / supports and civil works.	15%
ii.	After installation of fixture / device including supports and cable terminations.	55%
iii.	After energizing, testing, work acceptance and pre-commissioning.	20%
iv.	After successful commissioning & start-up	5%
v.	As built information with red marked drawing and material reconciliation	5%

3.7 **Cable road crossing**

i.	After completion of civil construction.	80%
ii.	After cable laying completion and work acceptance.	15%
iii.	As built information with red marked drawing and material reconciliation	5%

3.8 **Earth rods / pits**

i.	After completion of civil construction and installation of earth rods.	65%
ii.	After successful earth tests of system, earth cable termination and installation acceptance.	15%
iii.	After commissioning of overall earthing system	15%
iv.	As built information with red marked drawing and material reconciliation	5%

3.9 **Earth Plates**

i.	After installation of earth plates including mounting arrangement.	65%
ii.	After cable termination, earth test, installation acceptance.	15%
iii.	After commissioning of overall earthing system	15%
iv.	As built information with red marked drawing and material reconciliation	5%

3.10 **Earthing Cable (to be charged progressively as per following breakup based on per running meter completion)**

i.	After laying and termination of earth cable.	70%
ii.	After earthing test, installation acceptance.	15%
iii.	After commissioning of complete earthing system	10%
iv.	As built information with red marked drawing and material reconciliation	5%

3.11 **Fire Alarm & Suppression System**

i.	After installation of all detectors / devices.	20%
ii.	After completion of wiring system including terminations.	10%
iii.	After installation of all outlet nozzles, piping system, cylinders etc	20%
iv.	After installation of Fire alarm / Suppression panel	10%
v.	After system integration, testing, punch list clearance, installation acceptance and pre-commissioning	15%
vi.	After successful commissioning & start-up	20%
vii.	As built information with red marked drawing and material reconciliation	5%

4.0 **INSTRUMENTATION WORKS**

4.1 **Field instruments / F&G device / ESD switches etc**

i.	After complete installation and hook up.	60%
ii.	After cable termination, loop testing, calibration.	15%
iii.	After installation acceptance and pre-commissioning	10%
iv.	After PLC commissioning and plant start up	10%
v.	As built information with red marked drawing and material reconciliation	5%

4.2 **Junctions Boxes**

i.	After installation of mounting structure / supports and civil works.	15%
ii.	After installation of fixture / device including supports and cable terminations.	55%
iii.	After energizing, testing, work acceptance and pre-commissioning.	20%
iv.	After successful commissioning & start-up	5%
v.	As built information with red marked drawing and material reconciliation	5%

4.3 **Instrument Cabling (to be charged at following stage and based on per Running meter completion basis)**

i.	After Cable laying in designated cable ways.	60%
ii.	After cable termination at either end	20%
iii.	After site testing, punch list clearance, installation acceptance and pre-commissioning.	10%
iv.	After successful commissioning and start-up	5%
v.	As built information with red marked drawing and material reconciliation	5%

4.4 **Control Panels installation**

i.	After placement, fixing and securing.	50%
ii.	After external / internal wiring connections including earthing.	20%
iii.	After punch list clearance, installation acceptance.	20%
iv.	After successful commissioning and start-up	10%

4.5 **Control Valves, BDVs, ESDVs, Orifice etc.**

i.	After tubing / fitting hook up completion and cabling termination.	60%
ii.	After installation acceptance, punch list clearance and pre-commissioning.	15%
iii.	After successful commissioning and start-up	20%
iv.	As built information with red marked drawing and material reconciliation	5%

4.6 **PLC System**

i.	After installation of control room equipment	30%
ii.	After complete cabling, termination, loop test & integration.	30%
iii.	After on-site testing, punch list clearance, installation acceptance and pre-commissioning.	15%
iv.	After commissioning & start-up	20%
v.	As built information with red marked drawing and material reconciliation	5%

ANNEXURE – XIV

FORMAT OF PERFORMANCE BOND

ANNEXURE – XIV**PERFORMANCE BANK GUARANTEE**

Oil & Gas Development Company Limited
OGDCL House, Jinnah Avenue, Blue Area,
Islamabad, (Pakistan)

Dear Sir,

Ref; our Bank Guarantee No. _____ in the sum of
_____ Account _____ in consideration of
you having entered into Contract
No. _____ Dated _____ with _____
_____ Called Supplier and in consideration for value received from Supplier & Services. We
hereby agree and undertake as followings:

1. To make unconditional payment to you as called upon of (10%) ten percent of the Contract value of the contract price mentioned in the said contract, on your written FIRST and SIMPLE demand without further recourse, question or reference to SUPPLIER or any other person in the event of default, non-performance or non-fulfillment by SUPPLIER of his obligations, liabilities, responsibilities under the said contract of which you shall be the sole judge.
2. The accept written intimation from you as conclusive and sufficient evidence of the existence of the default or breach as aforesaid on the part of SUPPLIER and to make payment immediately and forthwith upon receipt of your FIRST and SIMPLE written demand.
3. This Performance Bond shall remain valid and in full force and effect upto _____ or issue of statement of discharge by your authorized representative or return of original guarantee whichever is earlier.
4. That no grant of time or other indulgence to, amendment in the terms of the Contract by Agreement between the parties, or imposition or Agreement with SUPPLIER in respect of the performance of his obligations under the said Agreement, with or without notice to us, shall in any manner discharge or otherwise affect this Guarantee and our liabilities and commitments there under.

5. This is an independent and direct obligation guarantee and shall be binding on us and our successors interest and shall be Irrevocable.
6. This guarantee shall not be affected by any change in the constitution of the Guarantor Bank or the constitution of the SUPPLIER.
7. The Guarantor Bank Warrants and represents that it is fully authorized, empowered and competent to issue this guarantee.

(B A N K E R S)

ANNEXURE – XV

COPY OF SRO 678 (1) 2007

ANNEXURE-XV

COPY OF SRO 678(1)/2007

GOVERNMENT OF PAKISTAN
MINISTRY OF FINANCE, ECONOMIC AFFAIRS,
STATISTICS & REVENUE
(REVENUE DIVISION)

Islamabad, the 6th July, 2007.

NOTIFICATION
(SALES TAX)

S.R.O. 678(I)/2007.— In exercise of the powers conferred by section 71 of the Sales Tax Act, 1990, read with clauses (9) and (46) of section 2, sections 3 and 4, sub-section (2) of section 6, section 7, section 7A, clause (b) of sub-section (1) of section 8, clause (a) of sub-section (2) of section 13, sub-sections (2A) and (3) of section 22, sections 23 and 60 thereof, the Federal Government is pleased to direct that in the Sales Tax Special Procedures Rules, 2007, the following further amendment shall be made which shall take effect on the 1st day of July, 2007, namely:—

In the aforesaid Rules, —

(1) In rule 3,—

- (a) the brackets and figure “(1)” shall be omitted; and
- (b) in second proviso, for the full stop at the end, a colon shall be substituted and thereafter the following new proviso shall be added, namely:—

“Provided also that the provisions of section 73 of the Act shall not affect the admissibility of input tax adjustment where the wholesale-*cum*-retailer receives consideration in cash against the supplies made by him.”;

- (2) in rule 5, in the first proviso, for the full stop, at the end, a colon shall be substituted and thereafter the following, further proviso shall be added, namely:—

“Provided further that the traders dealing in retail of mild steel products shall pay retail tax at the rates specified under subsection (1) of section 3 of the Act on a value addition of not less than thirteen hundred and thirty rupees per metric ton.”;

- (3) in rule 35, for the figure “2”, the figure “3” shall be substituted;
- (4) in Chapter VI, after rule 39, the following shall be added, namely:—

“PART.- 3

SERVICES PROVIDED BY STEVEDORES

39A. Tax liability of stevedores.— (1) The persons registered as stevedores, shall charge and pay tax on the basis of volume of cargo loaded on or discharged from the vessel, as per rates specified in the Table below namely:—

TABLE

S. No.	Nature of cargo	Rate of sales tax
(1)	Loading and discharge of laden containers at Karachi Port and Port Qasim.	Rs.220 per move
(2)	Dry bulk or break bulk cargo handled at Karachi Port and Port Qasim.	Rs.25 per metric ton
(3)	Liquid bulk cargo handled by commercial tank and bulk terminals at Karachi Port and Port Qasim.	Rs.6.50 per metric ton

- (2) Where the cargo is handled by stevedores without involving container terminal operators, tax shall be paid by the stevedores, while in case of containerized cargo passing through container terminals, the liability to pay tax shall be of the container terminal operators and in case of bulk cargo, the liability to pay tax shall be of the concerned commercial tank terminal operators, or as the case may be, of the bulk terminal operator.
- (3) The stevedores shall not be entitled to any input tax adjustment or refund on any account, whatsoever.
- (4) A stevedore shall issue serially numbered sales tax invoice as required under section 23 of the Act.
- (5) Every person registered as stevedore shall file monthly sales tax return in the manner as prescribed in Chapter II of the Sales Tax Rules, 2006.
- (6) The cases or disputes relating to the stevedores operating under these rules shall be dealt with in the Large Taxpayers Unit, Karachi.”;
- (5) after rule 58, the following chapters shall be inserted, namely:-

“CHAPTER X

SPECIAL PROCEDURE FOR PAYMENT OF SALES TAX BY COMMERCIAL IMPORTERS.

58A. Application.— The provisions of this Chapter shall apply to the commercial importers i.e. the persons who are not registered as manufacturers and who import goods for subsequent supply to other persons in the same state.

58B. Payment of sales tax by commercial importers.—(1) A commercial importer shall pay sales tax only at import stage in the manner as prescribed under a notification issued by the Federal Government in exercise of the powers conferred by sub-section (5) of section 3 of the Act, 1990 read with section 7A thereof.

(2) In case of supply of locally purchased goods, other than the goods in respect of which value addition is already fixed through a separate notification issued under the Act, if made by a commercial importer, sales tax shall be paid at the rate specified under sub-section (1) of section 3 of the Act and subject to other provisions of the Act.

(3) The sales tax leviable, as aforesaid, shall be paid by the commercial importer in the same manner and at the same time as if it were a duty of customs payable under the Customs Act, 1969 (IV of 1969).

(4) The sales tax so charged shall be recorded on the Goods Declaration against the following respective heads of accounts:

(a) In case of Goods also liable to duties of excise:

“B02332 Sales Tax on Goods Liable to Federal Excise-Other Collections”

(b) In case of Goods not liable to duties of excise

“B02342 Sales Tax on Goods not Liable to Federal Excise-Other Collections”

58C. Invoices and records.— A commercial importer shall issue a serially numbered tax invoice for each supply, as required under section 23 of the Act and shall maintain such records as are prescribed under section 22 of the said Act:

Provided that the tax charged through invoices shall not exceed the amount of sales tax paid by the commercial importer at import stage.

58D. Exemption from payment of tax on supply of imported goods and exemption from audit.— (1) Upon payment of sales tax as prescribed under these rules at import stage, the commercial importer shall be exempt from payment of sales tax on further supply of imported goods in respect of which he has paid sales tax at import stage and there upon shall be exempt from the requirements of audit.

(2) Exemption from payment of tax and audit under this rule shall not be available if the Collector of Sales Tax is satisfied that a commercial importer has issued invoices showing amount of sales tax in excess of that actually paid at import stage.

58E. Filing of return.— A commercial importer shall file sales tax return on quarterly basis in the manner prescribed in Chapter II of the Sales Tax Rules, 2006, according to the schedule herein below, namely:-

- (a) the tax return for the quarter ending on 30th September shall be filed by the 15th day of October;
- (b) the tax return for the quarter ending on 31st December shall be filed by the 15th day of January;
- (c) the tax return for the quarter ending on 31st March shall be filed by the 15th day of April; and
- (d) the tax return for the quarter ending on 30th June shall be filed by the 15th day of July.

CHAPTER XI

SPECIAL PROCEDURE FOR PAYMENT OF SALES TAX BY STEEL-MELTERS, RE-ROLLERS AND SHIP BREAKERS

58F. Application.— The provisions of this Chapter shall apply to all steel melting, steel re-rolling, ship breaking units and to Pakistan Steel Mills and Peoples Steel Mills, wherever applicable.

58G. Registration.— Every steel-melter, steel re-roller and ship breaker, if not already registered, shall obtain registration in the manner prescribed in Chapter I of the Sales Tax Rules, 2007.

58H. Payment of tax.— (1) Every steel-melter, steel re-roller and composite unit of steel melting and re-rolling (having a single electricity meter), shall pay sales tax at the rate of four rupees and seventy five paise per unit of electricity consumed for the production of steel billets, ingots and mild steel (MS) products which will be considered as their final discharge of sales tax liability.

- (2) Payment of tax by steel melters, re-rollers and composite units of melting and re-rolling shall be made through electricity bills alongwith electricity charges.
- (3) In case of default in payment of sales tax by the due date mentioned on the electricity bill, besides other legal action by the concerned Sales Tax Collectorate, the concerned electric supply company shall disconnect the electricity connection of the unit.
- (4) Ship breakers shall pay sales tax at the rate of thirty five hundred rupees per metric tonne of re-rollable scrap supplied by them. The quantity of re-rollable scrap shall constitute 70.5% of the total LDT of the ship imported for breaking. The ship-breakers shall clear their sales tax liabilities in respect of ships weighing up to ten thousand LDT within four months, while in case of ships weighing more than ten thousand LDT, within eight months from the date of filing of Goods Declaration. The sales tax liability shall be discharged by the

ship-breaker either on completion of clearance of goods obtained from breaking of vessel or within the maximum time period allowed as aforesaid, whichever is earlier:

- (5) Pakistan Steel Mills, Karachi and Peoples Steel Mills, Karachi shall pay sales tax on their products under sub-section (1) of section 3 of the Sales Tax Act, 1990 read with section 7 and section 8B of the Act.
- (6) Steel melters and re-rollers, except Pakistan Steel Mills and Peoples Steel Mills, paying sales tax on fixed rates through electricity bills shall not be entitled to any input tax adjustment.

58I. Invoices and returns.— (1) Sales tax invoices shall be issued by steel melters to re-rollers showing sales tax amount of forty one hundred rupees per metric tonne.

- (2) For downstream steel industry (the industry using steel products as raw materials for value addition purposes), sales tax invoices shall be issued by steel re-rollers using ingots/billets of steel melters showing sales tax amount of forty seven hundred and seventeen rupees per metric tonne.
- (3) Re-rollers using billets of Pakistan Steel Mills or imported billets shall issue sales tax invoices to downstream industry showing sales tax of fifty four hundred and sixty rupees per metric tonne.
- (4) For buyers other than downstream industry, steel re-rollers shall issue invoices showing sales tax of six hundred seventeen rupees per metric tonne.

- (5) Sales tax invoices in respect of supplies of billets shall be issued by Pakistan Steel Mills and Peoples Steel Mills showing sales tax amount of forty eight hundred and forty five rupees per metric tonne.
- (6) Persons supplying imported MS products shall issue invoices showing sales tax of fifty four hundred and sixty rupees per metric tonne.
- (7) Ship breakers shall issue invoices of re-rollable scrap supplied by them showing sales tax of thirty six hundred rupees per metric tonne. The remeltable scrap supplied by ship breakers shall be zero-rated.
- (8) Every steel-melter and steel re-roller paying sales tax under these rules shall submit a copy of electricity bill duly authenticated by the concerned Association along with sales tax return in the format set out at annex-1.
- (9) The due date for filing of return shall be the 28th day of the month following the tax period to which the electricity bill relates.

58J. Records.— Every steel-melter, re-roller and ship breaker shall be required to maintain records specified under section 22 of the Act.

58K. Values of steel products.— The items specified in column (2) of the Table below shall be assessed for the purpose of sales tax on the values fixed in column (4) thereof:

TABLE

S. No.	Description	HS Code	Value
(1)	(2)	(3)	(4)

1.	Billets supplied by Pakistan Steel Mills and Peoples Steel Mills	Respective heading	Rs. PMT	32,300/-
2.	Imported billets	-do-	US\$ 500 PMT	
3.	Imported re-rollable scrap	72.04	US\$ 400 PMT	
4.	Re-rollable scrap supplied by ship breakers	-do-	Rs. PMT	24,000/-
5.	Ingots and billets supplied by other steel melters.	Respect heading	Rs. PMT	27,335/-

58L. Responsibility of All Pakistan Steel Melters' and All Pakistan Steel Re-rollers Associations.— The All Pakistan Steel Melters' Association and All Pakistan Steel Re-rollers' Association shall be responsible to ensure that the steel melters and re-rollers pay sales tax in the manner specified in these rules, and in case of non-compliance, the Association shall actively assist the concerned Collectorate for enforcement and recovery of sales tax due along with default surcharge calculated thereon, besides any other proceedings that may be initiated against the defaulting steel-melter or steel re-roller under the Act. All Pakistan Steel Melters Association and All Pakistan Steel Re-rolling Mills Association shall be authorized to authenticate the paid electricity bills of steel melters and steel re-rollers paying sales tax under these rules. The Associations shall be responsible to maintain unit-wise record of sales tax paid by all steel-melters and re-rollers on monthly basis. Every case of default in payment of sales tax shall be reported by the President of the concerned Association to the concerned Collector of Sales Tax or any other officer nominated by the Board within seven days after the due date for payment of electricity bill.

58M. Monitoring Committee.— A monitoring committee comprising of officers of Sales Tax, representatives of concerned Associations and any other person as may be nominated by the Board shall be constituted through a General Order to monitor the collection of sales tax under these rules on monthly basis.

CHAPTER XII

SPECIAL PROCEDURE FOR PAYMENT OF SALES TAX BY MANUFACTURERS OF BISCUITS, CONFECTIONERY AND SNACKS

58N. Application.— The provisions of this Chapter shall apply to the manufacturers of biscuits, confectionery and snacks who are required to pay sales tax on printed retail price in terms of clause (a) of sub-section (2) of section 3 of the Act, read with the Third Schedule thereto.

Explanation.— The expression “snacks” includes potato chips and sticks falling in PCT heading No. 20.05 and cheese balls falling in PCT heading No. 19.04.

58O. Mode and manner of payment of tax.— All the registered manufacturers of biscuits, confectionery and snacks shall, in addition to the sales tax payable at the rate of fifteen percent of the value at which the goods are cleared or supplied from the factory (ex-factory price), pay sales tax on a value addition of twelve per cent in lieu of sales tax payable on the basis of printed retail price, as illustrated below:—

Illustration:

(a)	Actual value of supply (ex factory price excluding sales tax)	Rs. 100.00
(b)	Sales tax on ex factory price [15% of (a)]	Rs. 15.00
(c)	Value addition at 12% [12% of (a)]	Rs. 12.00
(d)	Sales tax on value addition [15% of (c)]	Rs. 1.80
(e)	Total value added assessable value for manufacturer [(a) + (c)]	Rs. 112.00

- (f) Sales tax on value added assessable value payable Rs. 16.80.
by the manufacturer [(b) + (d)] or [15% of (e)]

58P. Determination of tax liability.— While determining his tax liability, a manufacturer shall be entitled to claim input tax credit for the tax paid on account of taxable purchases or imports made by him and utilities like gas or electricity consumed for furtherance of taxable activity, against his output tax liability, subject to the conditions, limitations, and restrictions prescribed under section 7 and 8 of the Act and the rules or notifications issued thereunder and subject to fulfillment of the conditions laid down under section 73 of the Act.

58Q. Printing of retail price.— The retail price inclusive of sales tax shall be legibly, prominently and indelibly printed or embossed by a manufacturer on each article, packet, container, package, cover or label, as the case may be. The manufacturer, who for any reason cannot have the retail price printed, shall declare to the Collector of Sales Tax having jurisdiction the retail price, at which the item would be sold to the general body of consumers, along with the reasons or justification for not printing the retail price.

58R. Distributors and wholesalers to be exempted. — The distributors and wholesalers shall be exempted from payment of sales tax on biscuits, confectionary and chips on which the manufacturer has charged sales tax in the manner prescribed in this chapter.”.

[C. No. 3(3)/ST-L&P/07(Pt)]

(Musarrat Jabeen)
Additional Secretary

GOVERNMENT OF PAKISTAN
MINISTRY OF FINANCE, REVENUE AND ECONOMIC AFFAIRS
(REVENUE DIVISION)

Islamabad, the 7th August, 2004.

NOTIFICATION
(CUSTOMS/SALES TAX)

S.R.O. 678(I)/2004. - In exercise of the powers conferred by section 19 of the Customs Act, 1969 (IV of 1969), and clause (a) of sub-section (2) of section 3 of the Sales Tax Act, 1990, and in supersession of its Notification No. S.R.O. 448(I)/2004, dated the 12th June, 2004, the Federal Government is pleased to exempt, --

- (1) machinery, equipment, materials, specialized vehicles or vessels, picks-ups (4x4), helicopters, aircraft, accessories, spares, chemicals and consumables, as are not manufactured locally, imported by the Exploration and Production (E&P) Companies, their contractors, sub-contractors and service companies, from customs- duty in excess of five per cent ad valorem leviable under the First Schedule to the Customs Act, 1969 (IV of 1969), and the whole of sales tax leviable under the Sales Tax Act, 1990, on their import and subsequent supply, subject to the conditions specified under the caption "CONDITIONS WITH REFERENCE TO CLAUSES (1), (2) ²[AND (2a)]";
- (2) machinery and equipment, as are not manufactured locally, imported by companies other than Exploration and Production Companies, from custom duty in excess of five per cent ad valorem leviable under the First Schedule to the Customs Act, 1969 (IV of 1969), subject to the conditions specified under the caption "CONDITIONS WITH REFERENCE TO CLAUSES (1), (2) ³[AND (2a)]";
- ³[(2a) plant, machinery and equipment, as are not manufactured locally, imported by LNG developers or LNG TO/O, from customs-duty as is in excess of 5% ad valorem, leviable under the First Schedule to the Customs Act, 1969 (IV of 1969), and the whole of sales tax, subject to the conditions specified under the caption "CONDITIONS WITH REFERENCE TO CLAUSES (1), (2) and (2a)";];
- (3) goods as mentioned in CLAUSES (1) and (2) above, as are manufactured locally, imported by Exploration and Production Companies, their contractors, sub-contractors and service companies, other petroleum and public sector companies as is in excess of ten per cent ad valorem leviable under the First Schedule to the Customs Act, 1969 (IV of 1969), except X-mass trees, well-head and integral components and parts thereof which shall be exempted from so much of the customs-duty as is in excess of fifteen per cent ad valorem; imported by E&P Companies their contractors, sub-contractors and service companies, provided that goods imported by public sector companies shall be subject to provisions of Notification No. S.R.O. 827(I)/2001, dated the 3rd December, 2001, except for projects wherein an investor or multinational company has a blocking vote. Components and parts of wellhead and X-mass tree if imported for their otherwise utilization will be allowed on payment of 10% customs duty on the basis of certification of respective E&P Company. However, items not manufactured locally shall remain subject to 5% customs duty. All items falling under this serial No. (3) shall also be exempt from whole of the sales tax if these are plant, machinery, equipment and proprietary spares of parent equipment ¹[provided such spares are] not manufactured locally.

- (4) raw materials and components, as are not manufactured locally, and are imported for use in the manufacture of goods specified in clauses (1) and (2), to be supplied to the petroleum sector companies as specified in the said Notification from whole of customs duty leviable under the First Schedule to the Customs Act, 1969 (IV of 1969), ¹[and the whole of sales tax leviable under the Sales Tax Act, 1990] subject to the conditions specified under the caption "CONDITIONS WITH REFERENCE TO CLAUSE (4)".

- ¹[(5) Two vehicles (Pajero/Toyota Land Cruiser etc), imported by Exploration and Production (E&P) Companies shall be exempt from whole of customs- duty while the 3rd and 4th vehicle shall be exempt from duty as is in excess of 10% and 25% respectively. Similarly one vehicle imported by Service Company shall be exempt from the whole of customs duty and their 2nd vehicle shall be exempt from duty as is in excess of 10% *ad valorem*; subject to the following conditions, namely:-

- (a) Life of the vehicle shall be five years unless sooner it is damaged to the extent that it cannot be used; and
- (b) for claiming replacement of any vehicle the vehicle required to be replaced shall be surrendered to the customs authority free of cost.;"

CONDITIONS WITH REFERENCE TO CLAUSES (1), (2)³[AND (2a)].

- (i) Only such goods shall be entitled to the exemption under this notification as have been certified, for clause (1), by an E&P Company, and for clause (2), by a company other than an E&P company, for its own use or its contractors, sub-contractors and service companies for its projects of oil and gas exploration and production, refinery, oil and gas pipeline, liquefied petroleum gas (LPG), compressed natural gas (CNG),³[Liquefied Natural Gas (LNG)] petroleum terminals, energy conservation, environment and safety controls;
- (ii) the exemption available to E&P companies shall be admissible only to such E&P companies who hold permits, or licences, or leases or concession or production sharing agreement and who enter into supplemental agreements with Government of Pakistan;
- (iii) the importers shall maintain an account of all imports alongwith the relevant record as prescribed by the Customs Rules, 2001 and Sales Tax Act, 1990;
- (iv) in the event a dispute arises whether any item is entitled to exemption under this notification, the item will be immediately released by the Customs Department against a corporate guarantee valid for a period of nine months, extendable by the concerned Collector of Customs on time to time basis. A certificate from the relevant Regulatory Authority that the item is covered under this notification shall be given due consideration by the Customs Department towards finally resolving the dispute. Disputes regarding the local manufacturing only shall be resolved through the Engineering Development Board;
- (v) in the event that an emergency condition occurs in connection with operations by a petroleum sector company which seriously endangers life or property of the operations of the project, the relevant Regulatory Authority shall declare an emergency and the operating company shall be allowed to import any item or items considered necessary by the said company to deal with the emergency under intimation to the Regulatory Authority without fulfilling such formalities as are likely to cause delay. Payment of duties and taxes, if any, will be paid upfront based on the calculations by the respective E&P Company of the declared value. Such payment can be made at the time of clearance in cash or by opening a current account with customs or by pay order or by a cheque issued by the respective E&P company.
- (vi) items imported at concessionary rates which become surplus, scrap, junk, obsolete or otherwise shall be disposed of in the following manner, namely:-

- (a) in the event an item other than vehicles, is sold to another company in the petroleum sector no import duties shall be levied or charged. Otherwise, it shall be sold through a public tender and duties shall be recovered at the rate of ten per cent ad valorem of the sale proceeds;
 - (b) for vehicles there would be a minimum retention period of five years after which the vehicles may be disposed of in the manner provided in (a) above except that the full rate of import duties, net of any import duties already paid, shall be charged subject to an adjustment of depreciation at the rate of two per cent per month up to a maximum of twenty four months;
 - (c) vehicles can be surrendered at any time to the Government of Pakistan without payment of any import duties under intimation to the ⁶[Federal Board of Revenue]; and
 - (d) items imported on payment of 5% customs duty ad valorem or above, which have been rendered scrap, with change in their physical status, composition or condition and PCT classification, will be dealt with as scrap and shall be chargeable to customs-duties and sales tax accordingly, at standard rates;
- (vii) all petroleum sector companies, corporations and organizations including their contractors and sub-contractors and service companies shall be entitled to import machinery, equipment, helicopters, aircrafts, drilling bits, drilling and seismic (on shore or off shore) vessels, drilling rigs, ⁵[6 X 6 trucks which fall under PCT heading 87.04] specialized vehicles which fall under PCT heading 87.05 including accessories and spares, ¹[excluding those for current use] that are part of such vehicles and vessels ³[omitted] for the purpose of construction, erection, exploration and production of petroleum projects on an import-cum-export basis without payment of duties and taxes against a corporate guarantee valid for a period of two years equal to the value of import duties and taxes exempted, extendable by the Collector of Customs on time to time basis, if the importer has a definite contract. Should the goods etc., not be exported on the expiry of the project or transferred with the approval of the Collector of Customs to another petroleum project, or the period of stay has been extended by the Collector of Customs, then the company or their contractors or sub-contractors or service companies, as the case may be, shall be liable to pay duties and taxes chargeable at the time of import as per clauses (1), (2) and (3) above.
- (viii) each importer or E&P company shall develop a software within a period of one year from the date of issuance of said Notification and shall establish an online connection with the customs authorities for regulating the imports made under this notification.
- (ix) any item imported under this notification may be exported for replacement or otherwise, repair, modification or renovation and may be re-imported by paying concessionary duty and taxes only as per serial (1) on the actual cost of repair, renovation or modification of the respective item(s).

CONDITIONS WITH REFERENCE TO CLAUSE (4) ABOVE

- (i) The manufacturer has suitable in-house facilities and registration with the Sales Tax Department for manufacture of such goods or the importer-cum-manufacturer is in possession of a firm contract for the manufacture of such goods with any other manufacturer having suitable in-house facilities and registered with Sales Tax Department for the manufacture of such goods;
- (ii) the manufacturer-cum-importer shall furnish to the Collector of Customs and Collector of Sales Tax the list of such goods that he is manufacturing or intends to manufacture alongwith the details of raw materials and components required for the manufacture of each item and the total ¹[anticipated] annual requirement of all such inputs;
- (iii) ¹[Omitted;]

- (iv) the clearance of inputs shall be allowed through ¹[Karachi Custom House or Port Muhammad Bin Qasim or a part] nearest to the manufacturing unit;
- (v) the manufacturer-cum-importer shall, at the time of import of raw materials and components make a written declaration on the goods declaration to the effect that the raw materials and components have been imported for manufacturing of goods to be supplied to the petroleum sector companies as specified in condition (i) under the caption "CONDITIONS WITH REFERENCE TO CLAUSES (1) AND (2);
- (vi) the manufacturer cum importer shall maintain record of the inputs and the goods manufactured out of them in such form as may be prescribed by the ⁶[Federal Board of Revenue] or required under any other law in force by the FBR;
- ¹[(vii) The manufacturer-cum-importer shall communicate to the concerned Collector of Customs in writing about the consumption of imported goods within one month of consumption. In case of non-consumption within a period of one year, extendable for another year by the concerned Collector, the importer shall pay the customs-duty and other taxes involved. The importer may however re-export the unconsumed portion during the validity period;]
- (viii) in case the manufacturer-cum-importer does not provide information regarding consumption or otherwise of the imported goods within a period of one hundred eighty days of import or such extended period as allowed by the Collector or if otherwise deemed necessary, the records of importer cum manufacturer shall be audited by the Duty Suspension Audit Organization (DSAO) or by any other person duly appointed by the Collector. If upon audit consumption of goods is not found satisfactory the Collector of Customs shall initiate proceedings for the recovery of leviable customs duty and other taxes besides penal action under the relevant provisions of laws in force; and
- ¹[(ix) The manufacturer-cum-importer of goods shall furnish a delivery note duly supported with a corresponding purchase order from any petroleum sector companies as prescribed in clauses (1) and (2) of this notification.]

Explanation.1. The expression "not manufactured locally" shall mean the goods, which are not included in the list of locally manufactured goods, specified in the General Order, issued by the ⁶[Federal Board of Revenue] ²[or, as the case may be, certified as such by the Engineering Development Board].

Explanation.2. Used and refurbished machinery, equipment, materials, specialized vehicles or vessels, their components and parts importable under this notification will be subject to the provisions of Import Trade and Procedures Order in effect.

Explanation.3. For the import of 4x4 single or double cabin pickup ⁴[6 x 6 trucks] a committee will be constituted for giving approval. It will comprise nominees of ⁶[FBR] and Pakistan Petroleum Exploration and Production Companies Association.

[C.No.1/10/Mach./2004]

(Muhammad Ramzan)
Additional Secretary

As Amended

1.	S.R.O.571(I)/2005	-	dated	06.06.2005
2.	S.R.O.1064(I)/2005	-	dated	20.10.2005
3.	S.R.O.437(I)/2006	-	dated	10.05.2006
4.	S.R.O.398(I)/2007	-	dated	17.05.2007
5.	S.R.O.875(I)/2007	-	dated	29.08.2007

6. S.R.O.558(I)/2008 - dated 11.06.2008(w.e.f.12.06.2008)

ANNEXURE – XVI

BOQ/BID PRICE SCHEDULES

OIL & GAS DEVELOPMENT COMPANY LTD.
BID PRICE SCHEDULE SUMMARY FOR PCC CONTRACTOR

S.NO.	DESCRIPTION	QTY.	UNIT	SUPPLY		SERVICES		Total Price (In Pak. Rs.)
				Unit Price (Pak.Rs.)	Total Price (Pak.Rs.)	Unit Price (Pak.Rs.)	Total Price (Pak.Rs.)	
					A		B		C= A+B
1.0	MECHANICAL / FIRE FIGHTING EQUIPMENT / COMPANY SUPPLIED EQUIPMENT AND PACKAGES WORKS							
	Refer to Attachment - 1							
2.0	PIPING WORKS							
	Refer to Attachment - 2							
3.0	ELECTRICAL WORKS							
	Refer to Attachment - 3							
4.0	INSTRUMENTATION WORKS							
	Refer to Attachment - 4							
5.0	CIVIL & STRUCTURAL WORKS			-	-			
	Refer to Attachment - 5							
	GRAND TOTAL							

NOTES:

- (1) Copy of the SRO 678 (1)/2007 is given in **Annexure-XIX**
- (2) The charges shall be supported by verified quotation of Inspection Agency.

PREAMBLE TO BILL OF QUANTITIES

PREAMBLE TO BILL OF QUANTITIES

1. The items mentioned in the Bill of Quantities consist of furnishing all plant, labour, equipment, machinery, consumables and materials for completing the entire work scope. The work shall be done, complete in all respects in accordance with Specifications and Drawings within the stipulated time frame.
2. The Contractor shall be responsible for carrying out all work, complete in all respects, in accordance with the drawings, specifications and other conditions of contract without extra cost to the Owner. Any item of work required for completion but not expressly indicated in the Bill of Quantities shall be deemed to have been included in the unit rates quoted by the Contractor.
3. The Quantities contained in the Bill of Quantities for each work are estimated and liable to change (increase, decrease or omitted) when the work is actually executed. The Owner does not expressly or by implication guarantee that actual quantities of work to be performed will correspond to BOQ quantities. The payment to be made to the Contractor shall be based on the actual quantity of work performed.
4. The prices and rates to be quoted in the Bill of Quantities are to be full inclusive value of the Works described under specified items including all costs and expenses which may be required in and for the construction of the Works described, together with all risks, liabilities and obligations set forth and implied in all the documents referred to on which the tender is based. Rates and prices quoted by bidder shall be firm for the duration of the Contract. No extra payments on account of escalation in prices due to any reason, whatsoever, shall be admissible, unless specified elsewhere.
5. Unit rate is to be entered against each item in the Bill of Quantities where quantities are non entered. Items against which no price or rate is quoted in the BOQ shall be deemed to have been covered by rates or prices quoted in other BOQ items.
6. The BOQ shall be read in conjunction with conditions of contract, technical specification and the drawings.
7. The nomenclature used in BOQ is for identification of work only and is not intended to describe the complete work under that item which should be developed from Drawings, Specifications, Scope of Work and Conditions of Contract.
8. The contractor shall be responsible for arranging electricity and potable water for construction purposes at his own cost, inclusive of safety and security of the manpower, site Material, Transportation, handling and storage etc.
9. The works are to be carried out on a fast track basis therefore it is essential that the contractor shall be prepared to execute the work round the clock including Sundays and Holidays.
10. Any surplus or scrap materials remaining after the execution of work shall be reconciled and handed over to the Owner.

ATTACHMENT - 1



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES



Rev.	Date	Description	Prepared By	Checked By	Approved By
0	6/4/2018	Issued for Tender	MAS	MIAH	SH

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	INSTRUMENT AIR PACKAGE														
1.1	SUPPLY OF MATERIAL, FABRICATION, INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF INSTRUMENT AIR RECEIVER VESSEL (3000-V330B) AS PER REFERENCE DOCUMENTS AND APPLICABLE STANDARDS COMPLETE IN ALL RESPECT. REFERENCE DOCUMENTS : 165-2-DSM-114 165-2-MPV-101	1	NOS.												WEIGHTS GIVEN ARE APPROXIMATE AND FOR BIDDING PURPOSE ONLY. FINAL WEIGHTS WILL BE PROVIDED WITH "ISSUED FOR CONSTRUCTION" DRAWINGS TO THE SUCCESSFUL BIDDER
1.2	INSTALLATION, TESTING, CLEANING AND COMMISSIONING OF INSTRUMENT AIR PACKAGE IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS, RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECT. REFERENCE DOCUMENTS : 165-2-PID-107 SEE VENDOR'S DATA FOR INSTRUMENT AIR SYSTEM IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.	1	L.S												INSTRUMENT AIR SYSTEM IS FREE ISSUED ITEM EXCEPT 3000-V330B INSTRUMENT AIR RECEIVER VESSEL WHICH IS IN CONTRACTOR'S SCOPE AND INSTALLATION OF COMPLETE INSTRUMENT AIR PACKAGE IS CONTRACTOR'S RESPONSIBILITY.
2.0	GAS ENGINE DRIVEN RECIPROCATING COMPRESSOR PACKAGE														
2.1	INSTALLATION, TESTING AND COMMISSIONING ASSISTANCE OF COMPRESSORS AS PER THE DOCUMENTS REFERENCE DOCUMENTS : SEE VENDOR'S DATA FOR GAS ENGINE DRIVEN RECIPROCATING COMPRESSOR PACKAGE IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.	3	NOS.												
3.0	TANKAGE														
3.1	FIRE WATER TANK T-3501 SUPPLY OF MATERIAL, FABRICATION, WELDING, INSTALLATION, TESTING, CLEANING, BOX-UP AND COMMISSIONING OF 1 NO. 12.190 m DIA. X 13.000 m Height FIRE WATER TANK (T-3501), IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS, RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECT. THE WORKS INCLUDE THE FOLLOWING: REFERENCE DOCUMENTS : 165-2-PID-109 (SHEET 2 OF 4) 165-2-MST-3501 165-2-DSM-110														THE RATES OF ITEM B (ALL PARTS), F (ALL PARTS) & D IN S.NO. 1.1.1 SHALL BE INCLUSIVE OF SURFACE PREPARATION & PAINTING AS PER PAINTING SPECIFICATION. WEIGHTS GIVEN ARE APPROXIMATE AND FOR BIDDING PURPOSE ONLY. FINAL WEIGHTS WILL BE PROVIDED WITH "ISSUED FOR CONSTRUCTION" DRAWINGS TO THE SUCCESSFUL BIDDER
a)	ROOF PLATES	6,731	KG.												
b)	ROOF STRUCTURE	4,271	KG.												
c)	SHELL PLATES	27,823	KG.												
d)	CURB ANGLE	349	KG.												
e)	BOTTOM PLATES	10,327	KG.												
f)	TANK NOZZLES AND APPURTENANCES INCLUDING THE FOLLOWING:	3,207	KG.												
i)	SHELL AND ROOF MANHOLES														
ii)	SHELL AND ROOF NOZZLES														
iii)	PRODUCT DRAW-OFF WITH INTERNAL PIPES & NAME PLATE														
g)	SPIRAL STAIRCASE AND HAND RAIL	1,692	KG.												
	SUB TOTAL FOR T-3501	54,400	KG												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
3.2	DIESEL DAY TANK (T-4001) SUPPLY OF MATERIAL, FABRICATION, WELDING, INSTALLATION, TESTING, CLEANING, BOX-UP AND COMMISSIONING OF 1 NO. 2.788 m LENGTH x 1.738 m WIDTH x 1.834 m HEIGHT DIESEL DAY TANK (T-4001), IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS, RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECT. THE WORKS INCLUDE THE FOLLOWING: REFERENCE DOCUMENTS : 165-2-PID-108 165-2-MST-4001 165-2-DSM-113														THE RATES OF ITEMS STIFFENER, LADDER PLATFORM MATERIAL, NOZZLES & APPURTENANCES (all parts), CURB ANGLE SHALL BE INCLUSIVE OF SURFACE PREPARATION & PAINTING AS PER PAINTING SPECIFICATION. WEIGHTS GIVEN ARE APPROXIMATE AND FOR BIDDING PURPOSE ONLY. FINAL WEIGHTS WILL BE PROVIDED WITH "ISSUED FOR CONSTRUCTION" DRAWINGS TO THE SUCCESSFUL BIDDER
a)	ROOF PLATES	484	KG.												
b)	SHELL PLATES	1,574	KG.												
c)	CURB ANGLE	102	KG.												
d)	BOTTOM PLATES	533	KG.												
e)	STIFFENER ANGLE	409	KG.												
f)	SUPPORTED BEAM	195	KG.												
g)	TANK NOZZLES AND APPURTENANCES INCLUDING THE FOLLOWING:	279	KG.												
i)	SHELL AND ROOF MANHOLES														
ii)	SHELL AND ROOF NOZZLES														
iii)	PRODUCT DRAW-OFF WITH INTERNAL PIPES														
iv)	NAME PLATE														
h)	LADDER, PLATFORM AND HAND RAIL	74	KG.												
	SUB TOTAL FOR T-4001	3,650	KG												
3.3	SUPPLY OF ALL MATERIALS, INSTALLATION AND TESTING OF FLOAT TYPE LEVEL INDICATOR FOR FOLLOWING TANKS, COMPLETE IN ALL RESPECTS AS PER RELEVANT DOCUMENT: REFERENCE DOCUMENTS : 165-2-DSI-005														
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												
3.4	VACUUM BOX TESTING OF BOTTOM FOR THE FOLLOWING TANKS:														
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												
3.5	HYDROSTATIC TESTING OF FOLLOWING TANKS:														
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
3.6	CALIBRATION OF FOLLOWING TANKS : (USING OPTICAL LINE METHOD). (WITH APPROVAL FROM PWD)														CONTRACTOR TO SUBMIT PROCEDURE FOR APPROVAL FROM THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR GETTING NECESSARY APPROVALS FROM PWD AND RELEVANT DEPARTMENTS. CALIBRATION SHALL BE PERFORMED BY REPUTABLE THIRD PARTY AGENCY PREFERABLY SGS. ANY OTHER AGENCY NOMINATED FOR CALLIBRATION SHALL FIRST BE APPROVED FROM OWNER. CHARGES OF THIRD PARTY AGENCY SHALL BE AT CONTRACTOR'S EXPENSE
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												
3.7	SUPPLY OF ALL MATERIALS, SURFACE PREPARATION BY SAND BLASTING TO S.A. 2 1/2 AND PAINTING OF TANKS WHICH INCLUDES 2 COATS OF RED OXIDE (LEAD FREE) PRIMER (40-45 MICRONS EACH) FOLLOWED BY TWO COATS OF ALKYD ENAMEL (20-25 MICRONS EACH) GIVING A TOTAL DRY FILM THICKNESS (DFT) OF 125 MICRONS MINIMUM ON EXTERNAL SURFACES (INCLUDING ALL NOZZLES ETC.) OF THE FOLLOWING TANK ACCORDING TO SPECIFICATIONS AND TO THE ENTIRE SATISFACTION OF THE OWNER'S REPRESENTATIVE.														FOR DETAIL SEE SPECIFICATION 165-2-SPM-013
a)	12.190 m DIA. x 13.000 m HEIGHT (1 NO.S)	650	SQ.M												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT (1 Nos.)	32	SQ.M												
3.8	SUPPLY OF ALL MATERIALS, SURFACE PREPARATION BY SAND BLASTING TO S.A. 2 1/2 AND APPLICATION OF 3 COATS OF COALTAR EPOXY (125 MICRONS EACH) GIVING A TOTAL DRY FILM THICKNESS OF 375 MICRONS. ON UNDER SIDE OF BOTTOM PLATES AND INTERNAL PAINTING ON INSIDE OF TANK SHELL HEIGHT FOR THE FIRE WATER TANK.														FOR DETAIL SEE SPECIFICATION 165-2-SPM-013
a)	12.190 m DIA. x 13.000 m HEIGHT (1 NO.S)	175	SQ.M												
3.9	SUPPLY OF ALL MATERIALS, SURFACE PREPARATION BY SAND BLASTING TO S.A. 2 1/2 AND APPLICATION OF 3 COATS OF EPOXY ULTRABUILD LINER (125 MICRONS EACH) GIVING A TOTAL DRY FILM THICKNESS OF 375 MICRONS. ON UNDER SIDE OF BOTTOM PLATES AND INTERNAL PAINTING ON 1 METER OF SHELL HEIGHT FOR THE FOLLOWING TANK														ONLY FOR RATES
a)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT (1 Nos.)	25	SQ.M												
3.10	DESIGN, SUPPLY OF ALL MATERIALS, INSTALLATION, TESTING AND COMMISSIONING OF CATHODIC PROTECTION SYSTEM , AS PER RELEVANT CODES AND SPECIFICATIONS. (REF. SPEC. NO. 165-2-SPE-026)	-	NOS.												
4.0	FIREWATER & FIREFIGHTING SYSTEM THE SUPPLIED FIRE WATER EQUIPMENT SHALL COMPLY WITH THE FOLLOWING DOCUMENTS ATTACHED. ANY DEVIATION SHALL BE CLEARLY HIGHLIGHTED & JUSTIFIED BY THE SUPPLIER. REFERENCE DRAWING NO.S: 165-2-PID-109 (FIRE WATER SYSTEM) 165-2-MPD-001 (TYPICAL DETAILS OF FIRE HYDRANT AND MONITOR) REFERENCE DATA SHEETS & SPECIFICATIONS 165-2-SPM-035 (SPECIFICATION FOR FIRE FIGHTING SYSTEM). 165-2-SPM-040 (SPECIFICATION FOR FIRE TRUCK). 165-2-SPM-041 (SPECIFICATION FOR MOBILE FOAM UNITS). 165-2-DSM-111 (DATA SHEET FOR FIRE HYDRANTS). 165-2-DSM-112 (DATA SHEET FOR FIRE MONITORS).														

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
4.1	FIRE WATER HYDRANTS: SUPPLY & INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF FIREWATER HYDRANTS AS PER DATA SHEET NO. 165-2-DSM-111.	12	NOS.												
4.2	FIRE FOAM MONITORS: SUPPLY & INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF FIRE FOAM MONITORS AS PER DATA SHEET NO. 165-2-DSM-112.	13	NOS.												
4.3	MOBILE FOAM UNITS: SUPPLY & INSTALLATION, ERECTION, TESTING, PLACEMENT AND COMMISSIONING OF TROLLEY MOUNTED MOBILE FOAM UNITS AS PER SPECIFICATION 165-2-SPM-041.	8	NOS.												
4.4	FIXED FOAM UNITS FOR STORAGE TANKS: SUPPLY & INSTALLATION OF SKID BASED FIXED FOAM UNITS WITH BLADDER TANK, PROPORTIONATER, PIPING, INSTRUMENTATION ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												
4.5	FOAM POURER / CHAMBER FOR TANKS: SUPPLY & INSTALLATION OF 4" 150#, RF FOAM POURER ASSEMBLY AND NOZZLE AND PIPING CLEATS AND ALL REQUIRED TESTING AS PER API-653 FOR FOLLOWING TANKS, IN ACCORDANCE WITH RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECTS AS PER SITE CONDITION REFERENCE DOCUMENT: 165-2-DSM-115 165-2-MST-003 165-2-MST-004														
a)	13.716 m DIA. x 9.010 m HEIGHT	6	NOS.												
b)	18.288 m DIA x 12.192 m HEIGHT	2	NOS.												
4.6	COOLING WATER SPRAY SYSTEM FOR TANKS: SUPPLY & INSTALLATION OF COOLING WATER SPRAY SYSTEM & ALL REQUIRED TESTING AS PER API-653 FOR FOLLOWING TANKS, IN ACCORDANCE WITH RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECTS AS PER SITE CONDITION REFERENCE DOCUMENT: 165-2-MST-001 165-2-MST-002														
a)	13.716 m DIA. x 9.010 m HEIGHT	6	NOS.												
b)	18.288 m DIA x 12.192 m HEIGHT	2	NOS.												
4.7	HOSE CABINET: SUPPLY & INSTALLATION OF FIRE HOSE CABINETS, FLOOR STANDING TYPE, MIN. 4' x 4' x 10', FABRICATED FROM 16 SWG SHEET, CAPABLE OF HOLDING: a) 2 NOS. HOSE REELS 2-1/2" ND x 30M LONG. b) 1NO. FOAM MAKING BRANCH WITH PICK-UP TUBE c) 1NO. TRIPLE PURPOSE NOZZLE.	8	NOS.												
4.8	HOSE REEL: SUPPLY & INSTALLATION OF FIRE HOSE REELS OF 2-1/2" ND x 30 M LONG, WITH EXPANSION RING TYPE COUPLING MALE AND FEMALE TYPE ON EACH END RESPECTIVELY. HOSE TO BE NEOPRENE LINED AND COVERED WITH AN OIL ABRASIVE RESISTANT NEOPRANE OR PLASTIC COATING, HOSE SHALL BE SUITABLE FOR 200 PSIG PRESSURE.	16	NOS.												

CONTRACTOR TO SUBMIT PROCEDURE FOR INSTALLATION & TESTING FOR APPROVAL FROM OWNER ALONGWITH THE BID DOCUMENTS.

CONTRACTOR TO SUBMIT PROCEDURE FOR INSTALLATION & TESTING FOR APPROVAL FROM OWNER ALONGWITH THE BID DOCUMENTS.

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
4.9	BRANCH PIPE: SUPPLY & INSTALLATION, PLACEMENT OF SELF INDUCTING FOAM MAKING BRANCH PIPE RATED AT 50GPM AT 7 BARG HYDRANT PRESSURE WITH A THROW OF 40M SUITABLE FOR CONNECTION WITH 2-1/2" DIA. QUICK/INSTANEOUS TYPE COUPLING.	8	NOS.												
4.10	TRIPLE PURPOSE NOZZLE: SUPPLY & INSTALLATION OF TRIPLE PURPOSE NOZZLE FOR JET SPRAY AND FOG, RATED AT 80M3/HR. AT 7 BARG AND THROW OF 40M, SUITABLE FOR 2-1/2" DIA. QUICK/INSTANEOUS TYPE COUPLING.	8	NOS.												
4.11	FIRE EXTINGUISHERS														
4.11.1	SUPPLY & INSTALLATION AND PLACEMENT OF PORTABLE FIRE EXTINGUISHERS ABC, DRY CHEMICAL, NIPPON PAN-20 SD OR EQUIVALENT, POWDER TYPE COMPLETE WITH ALL ACCESSORIES & INITIAL CHARGE IN FOLLOWING CAPACITIES: 6 Kg.	5	NOS.												
4.11.2	SUPPLY & NSTALLATION AND PLACEMENT OF PORTABLE FIRE EXTINGUISHERS, CO2, NIPPON NC-7 OR EQUIVALENT, COMPLETE WITH ALL ACCESSORIES AND INITIAL CHARGE IN FOLLOWING CAPACITIES: 5 Kg.	5	NOS.												
4.11.3	SUPPLY & INSTALLATION AND PLACEMENT OF TROLLEY MOUNTED FIRE EXTINGUISHERS, DRY CHEMICAL POWDER TYPE COMPLETE WITH ALL ACCESSORIES & INITIAL CHARGE IN FOLLOWING CAPACITIES: 50 Kg.	2	NOS.												
5.0	SUPPLY & INSTALLATION AND PLACEMENT OF FIRE BLANKETS	10	NOS.												
6.0	SUPPLY & INSTALLATION AND PLACEMENT OF SAND BUCKETS (SAND FILLED) WITH STANDS AND SHOVELS.	8	NOS.												
7.0	SUPPLY OF FIRE TRUCK AS PER SPECIFICATION 165-2-SPM-040	1	NOS.												
8.0	AFFF FOAM CONCENTRATE 200 LITRE DRUM FOR WATER/FOAM MONITORS.	4	NOS.												
9.0	SUPPLY AND INSTALLATION OF SPRINKLERS FOR 8 X EXISTING CONDENSATE STORAGE TANKS AS PER DATASHEETS 165-2-DSM-117 (SPRINKLER DATASHEET).	1	LS												
10.0	PUMPS														
10.1	DIESEL ENGINE DRIVEN FW PUMP (P-3501 A/B & 3502) INSTALLATION, ERECTION, TESTING & COMMISSIONING OF FIRE WATER PUMP, DIESEL ENGINE DRIVEN, MOUNTED ON A COMMON BASE FRAME COMPLETE WITH COUPLING, CONTROL PANEL AND ACCESSORIES AS PER THE FOLLOWING DOCUMENTS / DRAWINGS ATTACHED: REFERENCE DOCUMENTS: 165-2-PID-109 (SHEET 2 OF 4) SEE VENDOR'S DATA FOR PUMPS IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.														
a)	1500 GPM	1	NOS.												
b)	750 GPM	2	NOS.												
10.2	FIRE JOCKEY PUMP (P-3503 A/B) INSTALLATION, ERECTION, TESTING & COMMISSIONING OF CENTRIFUGAL PUMP, ELECTRIC MOTOR DRIVEN, MOUNTED ON A COMMON BASE FRAME COMPLETE WITH COUPLING AND ACCESSORIES AS PER THE FOLLOWING DOCUMENTS / DRAWINGS ATTACHED: REFERENCE DOCUMENTS: 165-2-PID-109 (SHEET 2 OF 4) SEE VENDOR'S DATA FOR PUMPS IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.	2	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
10.3	ELECTRIC MOTOR DRIVEN FIRE WATER TANK FILLING PUMP (P-3505 A/B) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF FOLLOWING CENTRIFUGAL PUMPS COMPLETE WITH MOTOR ASSEMBLIES AND CONTROL PANEL (MOUNTED ON COMMON BASE PLATE) ON RCC FOUNDATIONS. JOB INCLUDES SHIFTING, PLACING IN POSITION, LEVELING, GROUTING, ALIGNMENT, TESTING AND COMMISSIONING OF THE PUMP FOR TROUBLE FREE WORKING INCLUDING COLD & HOT ALIGNMENT CHECKS & WITH FOLLOWING SPECIFICATION FLOWRATE : 425 GPM DIFFERENTIAL HEAD : 35 PSIG REFERENCE DOCUMENT : 165-2-DSM-116 165-2-PID-109 (SHEET 1 OF 4)	2	NOS.												
11.0	RADIOGRAPHIC INSPECTION OF WELDS:														
a)	15 INCH. FILM	-	NOS.												ONLY FOR RATES
b)	10 INCH. FILM	-	NOS.												ONLY FOR RATES
11.1	ELECTRIC MOTOR DRIVEN DIESEL TRANSFER PUMPS (P-4001 A/B) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF FOLLOWING CENTRIFUGAL PUMPS COMPLETE WITH MOTOR ASSEMBLIES AND CONTROL PANEL (MOUNTED ON COMMON BASE PLATE) ON RCC FOUNDATIONS. JOB INCLUDES SHIFTING, PLACING IN POSITION, LEVELING, GROUTING, ALIGNMENT, TESTING AND COMMISSIONING OF THE PUMP FOR TROUBLE FREE WORKING INCLUDING COLD & HOT ALIGNMENT CHECKS & WITH FOLLOWING SPECIFICATION FLOWRATE : 10 GPM DIFFERENTIAL HEAD : 40 PSIG REFERENCE DOCUMENT : 165-2-DSM-108 165-2-PID-108	2	NOS.												
12.0	FIXED SKID MOUNTED SCRAPER LAUNCHER materials, manufacture, fabrication, assembly, inspection, non-destructive examination, testing and painting.SUPPLY, MANUFACTURE / FABRICATION, INSTALLATION, ASSEMBLY, INSPECTION, TESTING, PAINTING & COMMISSIONING OF SKID MOUNTED 8' x 10' FIXED SCRAPER LAUNCHER SKID ALONGWITH ITS COMPLETE PIPING AND INSTRUMENTATION. REFERENCE DOCUMENT: 165-2-SPM-042 165-2-MPV-001	1	NOS.												
13.0	MISCELLANEOUS FOLLOWING ITEMS ARE REQUIRED WITH THE ABOVE ITEMS:														
a)	PRE-SHIPMENT INSPECTION (1)	1	L.S												
b)	START-UP AND COMMISSIONING SPARES (UNIT/SYSTEM WISE LIST WITH ITEM-WISE PRICES TO BE ATTACHED)	1	L.S												
c)	SUPPLY OIF TWO (02) YEARS RECOMMENDED SPARE PARTS.	1	L.S												
d)	TRAINING TO OGCL STAFF AT SITE FOR TWO (02) WEEKS	1	L.S												
e)	SUPPLY OF OPERATIONAL CONSUMABLE (DETAILS WITH ITEM-WISE PRICES TO BE ATTACHED)	1	L.S												

OPTIONAL
OPTIONAL

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES**

ITEM	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)			
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
f)	OCEAN FRIEGHT AND INSURANCE ON IMPORTED EQUIPMENT AND MATERIAL	1	L.S													
g)	IMPORTATION EXPENSES (i.e. CLEARING AND FORWARDING etc.)	1	L.S													
h)	CUSTOM DUTIES AND TAXES LEVIED ON IMPORTED EQUIPMENT AND MATERIAL TO BE INCORPORAED IN THE PROJECT AS PER SRO 678(1)/2007 (2)	1	L.S													
i)	INLAND TRANSPORTATION AND INSURANCE EXPENSES	1	L.S													
TOTAL (Rs.)																

Note:

- (1) All taxes shall be payable by contractor.
- (2) The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- (3) Copy of the SRO 678 (1)/2007 is given in **Annexure-XV** and CGO List given in **Attachment-IV** of ITB.
- (4) Vendor to fill the price in unprotected cells, unprotection of BOQ by bidder lead to disqualification.
- (5) Test certificates and MTC's of all items (where applicable) shall be provided.
- (6) The charges shall be supported by verified quotation of Inspection Agency.

ATTACHMENT - 2



Zishan Engineers (Pvt.) Ltd.

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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS



Rev.	Date	Description	Prepared By	Checked By	Approved By
0	04-06-2018	Issued for Tender	MAS	MIAH	SH

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
	THE FOLLOWING WORK SHALL INCLUDE , BUT NOT LIMITED TO SUPPLY, INSTALLATION, SHIFTING, PLACEMENT, FABRICATION, WELDING, NDT, HYDROSTATIC TESTING, SURFACE PREPARATION, PAINTING, TESTING, BOLTING, THREADING, PRECOMMISSIONING, COMMISSIONING OF PIPING WORKS COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE.														
	SPEC. NO. 165-2-SPM-021 SPEC. NO. 165-2-SPM-022														
1.0	CARBON STEEL PIPES														
a)	SEAMLESS CARBON STEEL PIPES CONFORMING TO ASTM A-106, Gr.B or API 5L Gr. B. DIMENSIONS ACCORDING TO ASME B36.10, IN DOUBLE RANDOM (12 METER) STD. LENGTHS.														
	PIPE DIA 2" AND ABOVE TO BE SUPPLIED WITH BEVEL ENDS ACCORDING TO ASME B16.25. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1/2" NPS. SCH. 80 SMLS	12	RM												
ii)	1/2" NPS. SCH. 160 SMLS	6	RM												
iii)	3/4" NPS. SCH. 80 SMLS	6	RM												
iv)	3/4" NPS. SCH. 160 SMLS	12	RM												
v)	1" NPS. SCH. 80 SMLS	24	RM												
vi)	1" NPS. SCH. 160 SMLS	6	RM												
vii)	1 1/2" NPS. SCH. 80 SMLS	12	RM												
viii)	1 1/2" NPS. SCH. 160 SMLS	12	RM												
ix)	2" NPS. SCH. 40 SMLS	20	RM												
x)	2" NPS. SCH. 80 SMLS	846	RM												
xi)	2" NPS. SCH. 160 SMLS	60	RM												
xii)	2 1/2" NPS. SCH. 80 SMLS	60	RM												
xiii)	3" NPS. SCH. 40 SMLS	246	RM												
xiv)	3" NPS. SCH. 80 SMLS	270	RM												
xv)	3" NPS. SCH. 160 SMLS	60	RM												
xvi)	4" NPS. SCH. 40 SMLS	372	RM												
xvii)	4" NPS. SCH. 80 SMLS	72	RM												
xviii)	4" NPS. SCH. 160 SMLS	72	RM												
xix)	6" NPS. SCH. 40 SMLS	1458	RM												
xx)	6" NPS. SCH.80, SMLS	162	RM												
xxi)	6" NPS. SCH.160, SMLS	24	RM												
xxii)	8" NPS. SCH. 40 SMLS	174	RM												
xxiii)	8" NPS. SCH. 80 SMLS	72	RM												
xxiv)	10" NPS. SCH. 40 SMLS	2574	RM												
xxv)	10" NPS. SCH. 80 SMLS	100	RM												
xxvi)	10" NPS. SCH. 120 SMLS	100	RM												
xxvii)	12" NPS. SCH. 40, SMLS	60	RM												
xxviii)	12" NPS. SCH. 80, SMLS	60	RM												
xxix)	12" NPS. SCH. STD, SMLS	42	RM												
xxx)	14" NPS. SCH. 80, SMLS	12	RM												
xxxi)	14" NPS. SCH. STD, SMLS	12	RM												

OIL & GAS DEVELOPMENT COMPANY LTD.**BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS**

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
2.0	POLYETHYLENE TAPE WRAP COATING SUPPLY OF ALL MATERIALS, COATING & WRAPPING AND TESTING OF IN PLANT BURIED PIPING AS PER SPECIFICATION, DRAWINGS AND INSTRUCTIONS OF OWNER'S REPRESENTATIVE, IN THE FOLLOWING SIZES: REFERENCE DOCUMENT: 165-2-SPM-023														
i)	1/2" NPS. SCH. 160 SMLS	6	RM												
ii)	3/4" NPS. SCH. 160 SMLS	6	RM												
iii)	1" NPS. SCH. 160 SMLS	6	RM												
iv)	2" NPS. SCH. 80 SMLS	6	RM												
v)	3" NPS. SCH. 80 SMLS	234	RM												
vi)	3" NPS. SCH. 40 SMLS	138	RM												
vii)	4" NPS. SCH. 40 SMLS	294	RM												
viii)	6" NPS. SCH. 40 SMLS	1428	RM												
ix)	8" NPS. SCH. 40 SMLS	174	RM												
x)	10" NPS. SCH. 40 SMLS	2562	RM												
xi)	12" NPS. SCH. STD. SMLS	42	RM												
TOTAL (Pak. Rs.)															

NOTES:

- 1) ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- 2) THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- 3) TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- 4) VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	<p>THE FOLLOWING WORK SHALL INCLUDE , BUT NOT LIMITED TO SUPPLY, INSTALLATION, SHIFTING, PLACEMENT, FABRICATION, WELDING, NDT, HYDROSTATIC TESTING, SURFACE PREPARATION, PAINTING, TESTING, BOLTING, THREADING, PRECOMMISSIONING, COMMISSIONING OF CARBON STEEL FITTINGS COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE.</p> <p>CARBON STEEL FITTINGS</p> <p>SUPPLY OF CARBON STEEL FITTINGS COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE.</p> <p>SPEC. NO. 165-2-SPM-016 SPEC. NO. 165-2-SPM-022</p>														
1.1	<p>BUTT WELD 90° ELBOWS:</p> <p>a) ELBOW 90°, LONG RADIUS, B.W. ENDS, ASTM A-234, GR.WPB AS PER ANSI/ASME B 16.9. IN THE FOLLOWING SIZES:</p>														
	i) 1/2" NPS, SCH. 80	4	NOS.												
	ii) 1/2" NPS, SCH. 160	6	NOS.												
	iii) 3/4" NPS, SCH. 80	8	NOS.												
	iv) 3/4" NPS, SCH. 160	4	NOS.												
	v) 1" NPS, SCH. 80	5	NOS.												
	vi) 1" NPS, SCH. 160	4	NOS.												
	vii) 1 1/2" NPS, SCH. 80	2	NOS.												
	viii) 1 1/2" NPS, SCH. 160	2	NOS.												
	ix) 2" NPS, SCH. 40	3	NOS.												
	x) 2" NPS, SCH. 80	54	NOS.												
	xi) 2" NPS, SCH. 160	6	NOS.												
	xii) 2 1/2" NPS, SCH. 80	4	NOS.												
	xiii) 3" NPS, SCH. 40	5	NOS.												
	xiv) 3" NPS, SCH. 80	12	NOS.												
	xv) 3" NPS, SCH. 160	5	NOS.												
	xvi) 4" NPS, SCH. 40	56	NOS.												
	xvii) 4" NPS, SCH. 80	5	NOS.												
	xviii) 4" NPS, SCH. 160	4	NOS.												
	xix) 6" NPS, SCH. 40	62	NOS.												
	xx) 6" NPS, SCH. 80	12	NOS.												
	xxi) 6" NPS, SCH. 160	4	NOS.												
	xxii) 8" NPS, SCH. 40	20	NOS.												
	xxiii) 8" NPS, SCH. 80	8	NOS.												
	xxiv) 10" NPS, SCH. 40	101	NOS.												
	xxv) 10" NPS, SCH. 80	5	NOS.												
	xxvi) 10" NPS, SCH. 120	6	NOS.												
	xxvii) 12" NPS, SCH. 40	7	NOS.												
	xxviii) 12" NPS, SCH. 80	7	NOS.												
	xxix) 12" NPS, SCH. STD	7	NOS.												
	xxx) 14" NPS, SCH. 80	2	NOS.												
	xxxi) 14" NPS, SCH. STD	4	NOS.												

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.2	BUTT WELD 45° ELBOWS:														
a)	ELBOW 45°, LONG RADIUS, B.W. ENDS, ASTM A-234, GR.WPB AS PER ANSI/ASME B 16.9. IN THE FOLLOWING SIZES:														
i)	2" NPS, SCH. 80	6	NOS.												
ii)	3" NPS, SCH. 80	4	NOS.												
iii)	6" NPS, SCH. 40	16	NOS.												
iv)	8" NPS, SCH. 40	6	NOS.												
v)	10" NPS, SCH. 40	23	NOS.												
vi)	10" NPS, SCH. 80	5	NOS.												
vii)	10" NPS, SCH. 120	6	NOS.												
viii)	12" NPS, SCH. 40	7	NOS.												
ix)	12" NPS, SCH. 80	7	NOS.												
x)	12" NPS, SCH. STD	7	NOS.												
xi)	14" NPS, SCH. 80	2	NOS.												
xii)	14" NPS, SCH. STD	4	NOS.												
1.3	SOCKET WELD 90° ELBOWS:														
a)	ELBOW 90°, LONG RADIUS, S.W. ENDS, CLASS 3000 #, ASTM A-105, AS PER ANSI/ASME B 16.11 IN THE FOLLOWING SIZES:														
i)	1/2" NPS, SCH. 80	6	NOS.												
ii)	1/2" NPS, SCH. 160	8	NOS.												
iii)	3/4" NPS, SCH. 80	8	NOS.												
iv)	3/4" NPS, SCH. 160	4	NOS.												
v)	1" NPS, SCH. 80	9	NOS.												
vi)	1" NPS, SCH. 160	4	NOS.												
vii)	1 1/2" NPS, SCH. 80	2	NOS.												
viii)	1 1/2" NPS, SCH. 160	2	NOS.												
1.4	REDUCING TEES:														
a)	REDUCING TEE, B.W ENDS, ASTM A-234 GR. WPB AS PER ANSI B16.9. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	4"x2", SCH. 160	4	NOS.												
ii)	4"x3", SCH. 40	4	NOS.												
iii)	4"x3", SCH. 160	4	NOS.												
iv)	6"x2", SCH. 80 x SCH. 80	3	NOS.												
v)	6"x3", SCH. 160	3	NOS.												
vi)	6"x4", SCH. 40	4	NOS.												
vii)	6"x4", SCH. 40 x SCH. 80	8	NOS.												
viii)	6"x4", SCH. 160	8	NOS.												
ix)	8"x4", SCH. 80 x SCH. 80	3	NOS.												
x)	8"x6", SCH. 40 x SCH. 40	5	NOS.												
xi)	10"x4", SCH. 40 x SCH. 80	3	NOS.												
xii)	10"x6", SCH. 40	35	NOS.												
xiii)	10"x8", SCH. 40	5	NOS.												
xiv)	12" x 6" , SCH.80. x SCH. 160.	4	NOS.												
xv)	12" x 8" , SCH.STD. x SCH. 40.	4	NOS.												
xvi)	14" x 12" , SCH.STD. x SCH. 80.	4	NOS.												

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
b)	REDUCING TEE, S.W CLASS 3000# ASTM A-105 AS PER ANSI B16.11. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1" x 3/4" SCH. 160	24	NOS.												
ii)	2" x 3/4" SCH. 80	46	NOS.												
1.5	EQUAL TEES:														
a)	EQUAL TEES, BUTT WELDING ENDS DIMENSIONS ACCORDING TO ASME B16.9, MATERIAL ASTM A-234 GR. WPB IN THE FOLLOWING SIZES AND QUANTITIES:														
i)	1" NPS, SCH. 80	5	NOS.												
ii)	1" NPS, SCH. 160	4	NOS.												
iii)	1 1/2" NPS, SCH. 80	2	NOS.												
iv)	1 1/2" NPS, SCH. 160	2	NOS.												
v)	2" NPS, SCH. 40	3	NOS.												
vi)	2" NPS, SCH. 80	20	NOS.												
vii)	2" NPS, SCH. 160	3	NOS.												
viii)	2 1/2" NPS, SCH. 80	3	NOS.												
ix)	3" NPS, SCH. 40	3	NOS.												
x)	3" NPS, SCH. 80	3	NOS.												
xi)	3" NPS, SCH. 160	3	NOS.												
xii)	4" NPS, SCH. 40	6	NOS.												
xiii)	4" NPS, SCH. 80	6	NOS.												
xiv)	4" NPS, SCH. 160	6	NOS.												
xv)	6" NPS, SCH. 40	31	NOS.												
xvi)	6" NPS, SCH. 80	4	NOS.												
xvii)	6" NPS, SCH. 160	5	NOS.												
xviii)	8" NPS, SCH. 40	10	NOS.												
xix)	8" NPS, SCH. 80	4	NOS.												
xx)	10" NPS, SCH. 40	28	NOS.												
xxi)	10" NPS, SCH. 80	2	NOS.												
xxii)	10" NPS, SCH. 120	3	NOS.												
xxiii)	12" NPS, SCH. 40	3	NOS.												
xxiv)	12" NPS, SCH. 80	3	NOS.												
xxv)	12" NPS, SCH. STD.	3	NOS.												
xxvi)	14" NPS, SCH. 80	3	NOS.												
xxvii)	14" NPS, SCH. STD	4	NOS.												
1.6	BRANCH FITTINGS														
a)	MATERIAL ASTM A-105, DIMENSION ACCORDING TO ASME B 16.9/16.11/16.25/ ANSI B 1.20.1. IN THE FOLLOWING SIZES AND QUANTITY (W.T. match to pipe):														
i)	3/4" DIA. SOCKOLET CLASS 3000 # ON 3" PIPE	29	NOS.												
ii)	3/4" DIA. SOCKOLET CLASS 3000 # ON 4" PIPE	60	NOS.												
iii)	3/4" DIA. SOCKOLET CLASS 3000 # ON 6" PIPE	87	NOS.												
iv)	3/4" DIA. SOCKOLET CLASS 3000 # ON 8" PIPE	87	NOS.												
v)	3/4" DIA. SOCKOLET CLASS 3000 # ON 10" PIPE	60	NOS.												
vi)	3/4" DIA. SOCKOLET CLASS 3000 # ON 12" PIPE	6	NOS.												

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
vii)	1/2" DIA. SOCKOLET CLASS 3000 # ON 3" PIPE	18	NOS.												
viii)	1/2" DIA. SOCKOLET CLASS 3000 # ON 10" PIPE	8	NOS.												
ix)	1/2" DIA. SOCKOLET CLASS 3000 # ON 4" PIPE	24	NOS.												
x)	1/2" DIA. SOCKOLET CLASS 3000 # ON 6" PIPE	18	NOS.												
xi)	1/2" DIA. SOCKOLET CLASS 3000 # ON 8" PIPE	15	NOS.												
xii)	1/2" DIA SOCKOLET CLASS 3000 # ON 12" PIPE	8	NOS.												
xiii)	1" DIA. SOCKOLET CLASS 3000 # ON 4" PIPE	8	NOS.												
xiv)	1" DIA. SOCKOLET CLASS 3000 # ON 6" PIPE	5	NOS.												
xv)	3" DIA. WELDOLET, SCH. 80 ON 10" PIPE	3	NOS.												
xvi)	4" DIA. WELDOLET, SCH. 40 ON 12" PIPE	3	NOS.												
1.7	SWAGES & PIPE NIPPLES														
a)	CONCENTRIC SWAGE NIPPLE, SOCKET WELDED, CLASS 3000#, DIMENSIONS ACCORDING TO ASME B16.11, MATERIAL: ASTM A 106 Gr. B / A-105 IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1" x 3/4" NPS, SCH. 80 PLE-PSE	5	NOS.												
ii)	2" x 1" NPS, SCH. 80 PLE-PSE	14	NOS.												
b)	PIPE NIPPLE, SOCKET WELDED, DIMENSIONS ACCORDING TO ASME B36.10, MATERIAL: ASTM A 106 Gr. B IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1/2" NPS, SCH. 80, BOE - POE x 75 mm long	5	NOS.												
ii)	1/2" NPS, SCH. 80, PBE x 75 mm long	4	NOS.												
iii)	1/2" NPS, SCH. 160, PBE x 75 mm long	4	NOS.												
iv)	1/2" NPS, SCH. 160, POE-TOE x 75 mm long	42	NOS.												
v)	1/2" NPS, SCH. 160, PBE x 150 mm long	48	NOS.												
vi)	3/4" NPS, SCH 160, PBE, x 100mm long	3	NOS.												
vii)	1" NPS, SCH 80, BOE - POE, x 100mm long	4	NOS.												
viii)	1" NPS, SCH 80, PBE, x 100mm long	4	NOS.												
ix)	1" NPS, SCH 160, PBE, x 75mm long	22	NOS.												
x)	1" NPS, SCH 160, POE-TOE, x 75mm long	4	NOS.												
xi)	1 1/2" NPS, SCH 160, PBE, x 75mm long	2	NOS.												
xii)	1 1/2" NPS, SCH 160, BOE-POE, x 100mm long	3	NOS.												
xiii)	2" NPS, SCH 80, PBE, x 150mm long	2	NOS.												
xiv)	2 1/2" NPS, SCH 160, BOE-POE, x 150mm long	3	NOS.												
1.8	REDUCERS:														
1.8.1	CONCENTRIC REDUCERS:														
a)	CONCENTRIC REDUCER, B.W ENDS, ASTM A-234 Gr. WPB AS PER ANSI B16.9. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	3"x1 1/4", SCH. 80	3	NOS.												
ii)	4"x3", SCH. 80	3	NOS.												
iii)	6"x3", SCH. 40	10	NOS.												
iv)	6"x3", SCH. 40 x SCH. 80	20	NOS.												
v)	6"x4", SCH. 40	33	NOS.												
vi)	8" x 6", SCH. 80 x SCH 160	10	NOS.												
vii)	8" x 4", SCH. 40	10	NOS.												
viii)	8" x 5", SCH. 40	3	NOS.												

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
ix)	10" x 4", SCH. 120 x SCH 160	3	NOS.												
x)	10" x 6", SCH. 40	3	NOS.												
xi)	10" x 8", SCH. 40	2	NOS.												
xii)	12" x 8", SCH. 80	2	NOS.												
xiii)	12" x 10", SCH. 40	2	NOS.												
xiv)	14" x 10", SCH. 80 x SCH 120	2	NOS.												
xv)	14" x 12", SCH. 80	2	NOS.												
1.8.2	<u>ECCENTRIC REDUCERS</u>														
a)	ECCENTRIC REDUCER, B.W ENDS, ASTM A-234 Gr. WPB AS PER ANSI B16.9. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	4" x 2 1/2", SCH. 40 x SCH. 80	3	NOS.												
ii)	8" x 6", SCH. 80 x SCH. 80	3	NOS.												
iii)	12" x 6", SCH. 40 x SCH 160	2	NOS.												
iv)	12" x 8", SCH. 40	2	NOS.												
v)	12" x 10", SCH. 80 x SCH 120	2	NOS.												
1.9	<u>PLUGS:</u>														
a)	PLUG, SQUARE HEAD, CLASS 3000#, ASTM A-105 AS ASME B16.11 IN THE FOLLOWING SIZES & QUANTITY:														
i)	1/2" NPS	7	NOS.												
ii)	3/4" NPS	327	NOS.												
iii)	1" NPS	16	NOS.												
1.10	<u>CAPS</u>														
a)	CAP, WELDED, MATERIAL A 234 GR. WPB , DIMENSIONS ACCORDING TO ASME B 16.9 IN THE FOLLOWING SIZES AND QUANTITY:														
i)	3" NPS, SCH 40.	10	NOS.												
ii)	3" NPS, SCH 80.	20	NOS.												
iii)	4" NPS, SCH 40.	10	NOS.												
iv)	6" NPS, SCH 40.	5	NOS.												
TOTAL (Pak. Rs.)															

NOTES:

- 1) ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- 2) THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- 3) TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- 4) VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
	THE FOLLOWING WORK SHALL INCLUDE , BUT NOT LIMITED TO SUPPLY, INSTALLATION, SHIFTING, PLACEMENT, FABRICATION, WELDING, NDT, HYDROSTATIC TESTING, SURFACE PREPARATION, PAINTING, TESTING, BOLTING, THREADING, PRECOMMISSIONING, COMMISSIONING OF CARBON STEEL FLANGES, GASKETS & STUD BOLTS COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE.														
	SPEC. NO. 165-2-SPM-022 SPEC. NO. 165-2-SPM-017														
1.0	CARBON STEEL FLANGES														
1.1	WELD NECK FLANGES														
a)	FLANGES WELD NECK TYPE, CLASS 150#, RAISED FACE, ASTM A-105 AS PER ASME B-16.5, IN THE FOLLOWING SIZES AND QUANTITY: <i>Note: Flanges Bore should match with Pipe Sch./Wall Thk.</i>														
i)	2" NPS SCH. 40	2	NOS.												
ii)	2" NPS SCH. 80	72	NOS.												
iii)	2" NPS SCH. 160	4	NOS.												
iv)	2 1/2" NPS SCH. 80	4	NOS.												
v)	3" NPS SCH. 40	6	NOS.												
vi)	3" NPS. SCH. 80	12	NOS.												
vii)	3" NPS. SCH. 160	4	NOS.												
viii)	4" NPS. SCH 40	72	NOS.												
ix)	4" NPS. SCH 80	7	NOS.												
x)	4" NPS. SCH 160	8	NOS.												
xi)	5" NPS SCH .40	4	NOS.												
xii)	6" NPS SCH .40	48	NOS.												
xiii)	6" NPS SCH .80	2	NOS.												
xiv)	6" NPS SCH .160	4	NOS.												
xv)	8" NPS SCH .40	27	NOS.												
xvi)	8" NPS SCH .80	2	NOS.												
xvii)	10" NPS. SCH. 40	64	NOS.												
xviii)	10" NPS. SCH. 80	4	NOS.												
xix)	10" NPS. SCH. 120	6	NOS.												
xx)	12" NPS. SCH. 40	3	NOS.												
xxi)	12" NPS. SCH. 80	4	NOS.												
xxii)	12" NPS SCH.STD	5	NOS.												
xxiii)	14" NPS. SCH. 80	6	NOS.												
xxiv)	14" NPS. SCH. STD	8	NOS.												
b)	FLANGES WELD NECK TYPE, CLASS 600#, RAISED FACE, ASTM A-105 AS PER ASME B-16.5 (for sizes upto - 24"), IN THE FOLLOWING SIZES AND QUANTITY: <i>Note: Flanges Bore should match with Pipe Sch./Wall Thk.</i>														
i)	10" NPS. SCH. 120	2	NOS.												
ii)	8" NPS. SCH. 80	2	NOS.												
iii)	6" ND, SCH .80	8	NOS.												
iv)	4" NPS. SCH. 80	2	NOS.												
v)	3" NPS. SCH. 160	2	NOS.												
vi)	2" NPS. SCH. 160	2	NOS.												

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
1.2	SOCKET WELD FLANGES														
a)	SOCKET WELD FLANGES, CLASS 150#, RF, ASTM A-105 AS PER ANSI B-16.5. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	3/4" NPS, SCH .80	2	NOS.												
ii)	1 1/4" NPS, SCH .80	3	NOS.												
iii)	1" NPS, SCH .80	10	NOS.												
iv)	1 1/2" NPS, SCH .160	10	NOS.												
1.3	BLIND FLANGES														
a)	BLIND FLANGES CLASS 150#, RAISED FACE, ASTM A-105 AS PER ASME B-16.5 (for sizes upto 24") . IN THE FOLLOWING SIZES AND QUANTITY:														
i)	2" NPS.	4	NOS.												
ii)	4" NPS.	3	NOS.												
iii)	8" NPS.	3	NOS.												
iv)	10" NPS.	4	NOS.												
v)	12" NPS	2	NOS.												
vi)	14" NPS	2	NOS.												
2.0	GASKETS														
a)	CLASS 150#, 1/8" THK. FLEXIBLE GRAPHITE W/ 304 or 316 SS CORRUGATED INSERT, ASME B16.20														
i)	3/4" NPS	5	NOS.												
ii)	1 1/4" NPS	6	NOS.												
iii)	1" NPS	12	NOS.												
iv)	1 1/2" NPS	12	NOS.												
v)	2" NPS	85	NOS.												
vi)	2 1/2" NPS	10	NOS.												
vii)	3" NPS	25	NOS.												
viii)	4" NPS	90	NOS.												
ix)	5" NPS	5	NOS.												
x)	6" NPS	55	NOS.												
xi)	8" NPS	34	NOS.												
xii)	10" NPS	80	NOS.												
xiii)	12" NPS.	14	NOS.												
xiv)	14" NPS.	18	NOS.												
b)	CLASS 600#, 1/8" THK. FLEXIBLE GRAPHITE W/ 304 or 316 SS CORRUGATED INSERT, ASME B16.20														
i)	10" NPS	2	NOS.												
ii)	8" NPS	2	NOS.												
iii)	6" NPS	10	NOS.												
iv)	4" NPS	4	NOS.												
v)	3" NPS	2	NOS.												
vi)	2" NPS	2	NOS.												

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BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
3.0	STUD BOLTS & NUTS STUD BOLTS WITH TWO HEXAGONAL NUTS & TWO WASHERS EACH, MATERIALS ARE AS FOLLOWS: STUD BOLTS: ASTM A-193 GR. B7, CADMIUM PLATED HEX. NUTS: ASTM A-194 GR. 2H HEAVY HEXAGONAL , CADMIUM PLATED WITH WASHERS AS PER ASME B 18.2.1/18.2.2. REQUIRED NOMINAL SIZES AND LENGTHS ARE AS UNDER:														
	i) 1 1/4" x 215 mm	32	NOS.												
	ii) 1 1/4" x 195 mm	32	NOS.												
	iii) 1" x 180 mm	120	NOS.												
	iv) 1" x 145 mm	32	NOS.												
	v) 1" x 130 mm	192	NOS.												
	vi) 1" x 120 mm	1104	NOS.												
	vii) 3/4" x 125 mm	296	NOS.												
	viii) 3/4" x 110 mm	720	NOS.												
	ix) 5/8" x 110 mm	24	NOS.												
	x) 5/8" x 100 mm	884	NOS.												
	xi) 5/8" x 90 mm	1024	NOS.												
	xii) 5/8" x 85 mm	328	NOS.												
	xiii) 7/8" x 140 mm	734	NOS.												
	xiv) 7/8" x 120 mm	216	NOS.												
	xv) 1/2" x 70 mm	52	NOS.												
	xvi) 1/2" x 65 mm	48	NOS.												
TOTAL (Pak. Rs.)															

NOTES:

- 1) ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- 2) THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- 3) TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- 4) VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
	THE FOLLOWING WORK SHALL INCLUDE , BUT NOT LIMITED TO SUPPLY, INSTALLATION, SHIFTING, PLACEMENT, FABRICATION, WELDING, NDT, HYDROSTATIC TESTING, SURFACE PREPARATION, PAINTING, TESTING, BOLTING, THREADING, PRECOMMISSIONING, COMMISSIONING OF CARBON STEEL VALVES COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE. SPEC. NO. 165-2-SPM-022 SPEC. NO. 165-2-SPM-018														
1.0	BALL VALVES														
1.1	CAST STEEL BALL VALVES														
a)	BALL VALVES, RF ENDS, 150#, REGULAR PORT ASTM 216 Gr. WCB AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	2" NPS, VB-201	10	NOS.												
ii)	2" NPS, VB-202	4	NOS.												
iii)	3" NPS, VB-202	4	NOS.												
iv)	4" NPS, VB-202	3	NOS.												
v)	6" NPS, VB-202	2	NOS.												
vi)	8" NPS, VB-202	2	NOS.												
vii)	10" NPS, VB-202	2	NOS.												
viii)	12" NPS, VB-202	2	NOS.												
b)	BALL VALVES, RF ENDS, 600#, REGULAR PORT ASTM 216 Gr. WCB AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	6" NPS, VB-222	6	NOS.												
1.2	FORGED STEEL BALL VALVES														
a)	BALL VALVES, SW ENDS, 800#, REG. PORT, ASTM A-105 AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022)														
i)	1/2" NPS, VB-101	30	NOS.												
ii)	3/4" NPS, VB-101	327	NOS.												
iii)	1" NPS, VB-101	9	NOS.												
iv)	1 1/2" NPS, VB-101	5	NOS.												
2.0	CHECK VALVES														
2.1	CAST STEEL CHECK VALVES														
a)	FLANGED CHECK VALVE SWING TYPE CLASS 150#, RF, ASTM 216 Gr. WCB AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	2" NPS, VC-201	4	NOS.												
ii)	3" NPS, VC-202	3	NOS.												
iii)	4" NPS, VC-201	3	NOS.												
iv)	6" NPS, VC-201	3	NOS.												
v)	8" NPS, VC-202	2	NOS.												
vi)	10" NPS, VC-202	2	NOS.												
vii)	12" NPS, VC-202	2	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
3.0	GLOBE VALVES														
3.1	CAST STEEL GLOBE VALVES														
a)	GLOBE VALVE, ASME CLASS 150#, RF ENDS, ASTM 216 Gr.WCB DIMENSION, AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	2" NPS, VGL-201	2	NOS												
ii)	4" NPS, VGL-201	3	NOS												
iii)	6" NPS, VGL-201	3	NOS												
iv)	8" NPS, VGL-202	2	NOS												
v)	10" NPS, VGL-202	2	NOS												
vi)	12" NPS, VGL-202	2	NOS												
4.0	GATE VALVES														
4.1	CAST STEEL GATE VALVES														
a)	GATE VALVE, ASME CLASS 150#, RF BODY ASTM 216 Gr.WCB DIMENSION, AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022)														
i)	2" NPS, VG-201	6	NOS.												
ii)	3" NPS, VG-201	4	NOS.												
iii)	3" NPS, VG-202	3	NOS.												
iv)	4" NPS, VG-201	2	NOS.												
v)	4" NPS, VG-202	8	NOS.												
vi)	6" NPS, VG-201	3	NOS.												
vii)	6" NPS, VG-202	16	NOS.												
viii)	8" NPS, VG-202	7	NOS.												
ix)	10" NPS, VG-202	32	NOS.												
x)	12" NPS, VG-202	3	NOS.												
4.2	FORGED STEEL GATE VALVES														
a)	GATE VALVE, SW ENDS, CLASS 800#, REG. PORT, FORGED STEEL ASTM A-105 AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	1/2" NPS, VG-101	16	NOS.												
ii)	3/4" NPS, VG-101	4	NOS.												
iii)	1" NPS, VG-101	14	NOS.												
iv)	1 1/2" NPS, VG-101	4	NOS.												
5.0	BASKET-TYPE STRAINER														
	BODY MATERIAL CARBON STEEL ASTM 106 Gr.B														
i)	BASKET-TYPE STRAINER Dia 8" 150# RF	3	NOS.												
ii)	BASKET-TYPE STRAINER Dia 12" 150# RF	3	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
6.0	Y-TYPE STRAINER BODY MATERIAL CARBON STEEL ASTM 106 Gr.B														
i)	Y-TYPE STRAINER Dia 2" 150# RF	3	NOS.												
ii)	Y-TYPE STRAINER Dia 4" 150# RF	3	NOS.												
iii)	Y-TYPE STRAINER Dia 6" 150# RF	8	NOS.												
iv)	Y-TYPE STRAINER Dia 8" 150# RF	3	NOS.												
7.0	DIESEL OIL FILTER														
i)	DIESEL OIL FILTER F-4001 A/B REFERENCE DOCUMENT: 165-2-DSM-106 165-2-PID-108	2	NOS.												
TOTAL (Pak. Rs.)															

NOTES:

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- 2) THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- 3) TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- 4) VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

ATTACHMENT – 3



Zishan Engineers (Pvt.) Ltd.

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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR ELECTRICAL CABLES



0	04-06-2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR ELECTRICAL CABLES OF GAS PROCESSING PLANT

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	SUPPLY & INSTALLATION OF ELECTRICAL CABLE SUPPLY, LAYING, DRESSING, TAGGING, TERMINATION, TESTING AND COMMISSIONING OF FOLLOWING ELECTRICAL POWER, CONTROL AND LIGHTING CABLE (AS PER REFERRED CABLE SCHEDULES, SPECIFICATIONS AND TYPICAL INSTALLATION DRAWINGS) ON CABLE LADDER / RACKS/ M.S CHANNEL, CONDUITS, TRENCHES COMPLETE IN ALL RESPECTS INCLUDING INSTALLATION OF CABLE LUGS, TERMINATION OF ARMOUR (IF AVAILABLE) THROUGH GLAND / PLATE UPTO THE EARTH TERMINAL OF EQUIPMENT, TAGGING WITH ALPHA NUMERIC PLASTIC FERRULES, ETC. COMPLETE IN ALL RESPECT														
1.1	SINGLE CORE ARMoured LOW VOLTAGE CABLES (FOR POWER APPLICATIONS). SINGLE CORE LOW VOLTAGE POWER CABLES, STRANDED COPPER CONDUCTOR AS PER IEC-60502, CROSS LINKED POLY ETHYLENE INSULATED 600/1000 VOLT GRADE, NON-HYGROSCOPIC FILLERS, EXTRUDED POLYVINYL CHLORIDE BEDDED AND SINGLE ALUMINIUM WIRE ARMoured POLYVINYL CHLORIDE SHEATHED OVERALL.														
1.1.1	1C - 240 SQMM (CU/XLPE/PVC/AWA/PVC)	3300	RMTRS.												
1.1.2	1C - 300 SQMM (CU/XLPE/PVC/AWA/PVC)	1260	RMTRS.												
1.2	MULTI CORE ARMoured LOW VOLTAGE CABLES (FOR POWER APPLICATIONS). MULTI CORE LOW VOLTAGE POWER CABLES, STRANDED COPPER CONDUCTOR AS PER IEC-60502, CROSS LINKED POLY ETHYLENE INSULATED 600/1000 VOLT GRADE, NON-HYGROSCOPIC FILLERS, EXTRUDED POLYVINYL CHLORIDE BEDDED, SINGLE STEEL WIRE ARMoured AND POLYVINYL CHLORIDE SHEATHED OVERALL.														
1.2.1	2C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	2,170	RMTRS.												
1.2.2	2C - 4 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.3	2C - 6 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.4	2C - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.5	2C+PE - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	3,570	RMTRS.												
1.2.6	2C+PE - 4 SQMM (CU/XLPE/PVC/SWA/PVC)	860	RMTRS.												
1.2.7	2C+PE - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	1,032	RMTRS.												
1.2.8	2C+PE - 25 SQMM (CU/XLPE/PVC/SWA/PVC)	195	RMTRS.												
1.2.9	2C+PE - 35 SQMM (CU/XLPE/PVC/SWA/PVC)	165	RMTRS.												
1.2.10	3C - 4.0 SQMM (CU/XLPE/PVC/SWA/PVC)	1,166	RMTRS.												
1.2.11	3C - 6.0 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.12	3C - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.13	3C - 16 SQMM (CU/XLPE/PVC/SWA/PVC)	180	RMTRS.												
1.2.14	3C - 25 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.15	3C - 35 SQMM (CU/XLPE/PVC/SWA/PVC)	940	RMTRS.												
1.2.16	3C - 50 SQMM (CU/XLPE/PVC/SWA/PVC)	988	RMTRS.												
1.2.17	3C - 70 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR ELECTRICAL CABLES OF GAS PROCESSING PLANT

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.2.18	4C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.19	4C - 4 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.20	4C - 6 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.21	4C - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	1,747	RMTRS.												
1.2.22	4C - 16 SQMM (CU/XLPE/PVC/SWA/PVC)	190	RMTRS.												
1.2.23	4C - 25 SQMM (CU/XLPE/PVC/SWA/PVC)	35	RMTRS.												
1.2.24	4C - 35 SQMM (CU/XLPE/PVC/SWA/PVC)	1,030	RMTRS.												
1.2.25	4C - 50 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.26	4C - 70 SQMM (CU/XLPE/PVC/SWA/PVC)	30	RMTRS.												
1.2.27	4C - 95 SQMM (CU/XLPE/PVC/SWA/PVC)	495	RMTRS.												
1.2.28	4C - 120 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.29	4C - 240 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.30	4C - 300 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
	NOTE: THE COLOR CODING FOR THE ABOVE MULTI CORE CABLES SHALL BE AS FOLLOWS:														
	FOR 1C CABLES - RED OR YELLOW OR BLUE OR BLACK AS PER CABLE SCHEDULE														
	FOR 2C CABLES - RED AND BLACK														
	FOR 3C CABLES - RED , YELLOW & BLUE														
	FOR 4C CABLES - RED , YELLOW, BLUE & BLACK														
	FOR 2C+PE CABLES - IT SHOULD BE 3C CABLE WITH OVERALL ARMORING AND SHEATH, RED FOR PHASE, BLACK FOR NEUTRAL & GREEN FOR EARTH														
1.3	ARMoured LOW VOLTAGE CABLES (FOR CONTROL APPLICATIONS).														
	LOW VOLTAGE CONTROL CABLES, STRANDED COPPER CONDUCTOR, CROSS LINKED POLY ETHYLENE INSULATED, 600/1000 VOLT GRADE, POLYVINYL CHLORIDE BEDDED, SINGLE STEEL WIRE ARMoured AND POLYVINYL CHLORIDE SHEATHED OVERALL. (TO BS 6346 / IEC60502)														
1.3.1	7C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	840	RMTRS.												
1.3.2	10C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	840	RMTRS.												
1.3.3	12C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.4	14C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.5	7C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.6	10C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.7	12C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	900	RMTRS.												
1.3.8	14C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	1,270	RMTRS.												

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES FOR ELECTRICAL CABLES OF GAS PROCESSING PLANT**

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
1.4	CABLE GLANDS (FOR HAZARDOUS AREA) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF BRASS CABLE GLANDS OF FOLLOWING SIZES CONFORMING TO BS 6121 AND SUITABLE FOR CU/XLPE/PVC/SWA/PVC LOW VOLTAGE CABLES. GLANDS TO BE SUPPLIED COMPLETE WITH PCP SHROUD AND SHALL BE, E1FW, DUAL CERTIFIED (EX'E' / EX'D') SUITABLE FOR CLASS I, ZONE 1 & 2, IP 66 APPLICATIONS. COMPLETE IN ALL RESPECT AND AS PER REFERRED CABLE SCHEDULE														
1.4.1	E1FW 20	52	NOS.												
1.4.2	E1FW 25	45	NOS.												
1.4.3	E1FW 32	6	NOS.												
1.4.4	E1FW 40	3	NOS.												
1.4.5	E1FW 50	3	NOS.												
1.4.6	E1FW 50S	3	NOS.												
1.4.7	E1FW 63	3	NOS.												
1.5	CABLE GLANDS (FOR NON HAZARDOUS AREA) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF BRASS CABLE GLANDS OF FOLLOWING SIZES CONFORMING TO BS 6121 AND SUITABLE FOR LOW VOLTAGE CABLES. GLANDS TO BE SUPPLIED COMPLETE WITH PCP SHROUD AND SHALL BE E1W, WEATHERPROOF, SUITABLE FOR IP 66 APPLICATIONS. . COMPLETE IN ALL RESPECT AND AS PER REFERRED CABLE SCHEDULE														
1.5.1	E1W 20	99	NOS.												
1.5.2	E1W 20S	10	NOS.												
1.5.3	E1W 25	21	NOS.												
1.5.4	E1W 32	34	NOS.												
1.5.5	E1W 50	114	NOS.												
1.5.6	E1W 50S	3	NOS.												
1.5.7	E1W 63	3	NOS.												
1.5.8	E1W 63S	3	NOS.												
TOTAL PRICE (1.1 - 1.5)															

NOTES:

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- TEST CERTIFICATES AND MTC'S OF ALL ITEMS (WHERE APPLICABLE) SHALL BE PROVIDED.
- THE CHARGES SHALL BE SUPPORTED BY VERIFIED QUOTATION OF INSPECTION AGENCY.
- COPY OF THE SRO 678 (1)/2007 IS GIVEN IN ANNEXURE-XVIII
- THE BRASS REDUCERS AND ADOPTERS HAZARDOUS AND NON HAZARDOUS TYPE SHALL BE CONSIDERD BUILT IN FOR SECTION 1.4 AND 1.5 AS PER SITE REQUIREMENT AND ARE INCLUDED IN THE SCOPE OF CONTRACTOR



Zishan Engineers (Pvt.) Ltd.

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47/F, Block 6, PECHS, Karachi-Pakistan
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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR LIGHTING, SOCKET OUTLETS, JBs & LOCAL CONTROL STATIONS



0	04-06-2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

S NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
1.0	FLUORESCENT LAMPS (For Hazardous Area)														
1.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF, 2X36W, 230V 50HZ FLUORESCENT LIGHT FIXTURE SUITABLE FOR PROTECTION TYPE EEXD' II-C T4, IP-65, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE PROTECTED WITH HIGH IMPACT ACRYLIC POLYCARBONATE DIFFUSER COMPLETE WITH ELECTRONIC BALLAST CONTROL GEAR, 2X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES OF M20 (FOR FIXTURE TO FIXTURE CABLING). COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
1.1.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS AND AS PER REFERRED INSTALLTION DETAILS.	3	NOS.												
1.1.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS AND AS PER REFERRED INSTALLATION DETAILS.	1	NOS.												
1.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX PROOF, 1X36W, 230V 50HZ FLUORESCENT EMERGENCY LIGHT FIXTURE , NON-MAINTAINED (WITH SELF-TEST FEATURE), NIMH BATTERY BACKUP FOR 1 HOUR, PROTECTION TYPE EEX'D' II-C T4, IP-65, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE PROTECTED WITH HIGH IMPACT ACRYLIC POLYCARBONATE DIFFUSER COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, 1X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES OF M20 (FOR FIXTURE TO FIXTURE CABLING). COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
1.2.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS.	1	NOS.												
1.2.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												
2.0	FLUORESCENT LIGHTS (FOR NON-HAZARDOUS AREA)														
2.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF, 2X36W, 230V, 50HZ, FLUORESCENT LIGHT FIXTURE, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE, IP 65, WITH POLYCARBONATE / ACRYLIC DIFFUSER, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, 2X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES M20 (FOR FIXTURE TO FIXTURE CABLING).COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
2.1.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS.	3	NOS.												
2.1.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
2.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF, 1X36W, 230V, 50HZ, FLUORESCENT EMERGENCY LIGHT FIXTURE , NON-MAINTAINED (WITH SELF-TEST FEATURE), NIMH BATTERY BACKUP FOR 1 HOUR, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE, IP 65, WITH POLYCARBONATE / ACRYLIC DIFFUSER, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, 1X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES M20 (FOR FIXTURE TO FIXTURE CABLING), COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
2.2.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS.	1	NOS.												
2.2.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												
3.0	FLOOD LIGHTS (FOR HAZARDOUS AREA)														
3.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF 400W-230V AC-50HZ FLOOD LIGHT FIXTURE SUITABLE FOR PROTECTION TYPE EEX "n" II-C T4 ,IP-65, POLE TOP MOUNTED, WITH INTEGRAL CONTROL GEAR, GLASS REINFORCED POLYESTER (GRP) OR DIE-CAST ALUMINIUM ENCLOSURE COMPLETE WITH BALLAST/ STARTERS/ CAPACITORS, 400W SON T(BS 4533) LAMP, ASYMMETRICAL REFLECTOR. CABLE ENTRIES OF M20 SHALL BE PROVIDED FOR FIXTURE TO FIXTURE WIRING (LOOP/THROUGH WIRING). ALL MOUNTING ACCESSORIES SHALL BE SUPPLIED WITH FIXTURE, COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	33	NOS.												165-2-ELT-005
4.0	FLOOD LIGHTS (FOR NON-HAZARDOUS AREA)														
4.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF 400W- 230V AC-50HZ FLOOD LIGHT FIXTURE, IP-65, POLE TOP MOUNTED, WITH INTEGRAL CONTROL GEAR, GLASS REINFORCED POLYESTER (GRP) OR DIE-CAST ALUMINIUM ENCLOSURE COMPLETE WITH BALLAST/ STARTERS/ CAPACITORS, 400W SON T(BS 4533) LAMP, ANODIZED ALUMINIUM REFLECTOR (ASYMMETRICAL). CABLE ENTRIES OF M20 SHALL BE PROVIDED FOR FIXTURE TO FIXTURE WIRING (LOOP/THROUGH WIRING).ALL MOUNTING ACCESSORIES SHALL BE SUPPLIED WITH FIXTURE. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	33	NOS.												165-2-ELT-005
5.0	LIGHTING POLES SUPPLY, INSTALLATION, TESTING, ERECTION AND COMMISSIONING OF LIGHTING POLE FOR FLOODLIGHTING, MADE OF GALVANIZED STEEL PIPE, 10 METER HIGH WITH ARMS FOR MULTIPLE 400 WATT FLOODLIGHTS WELD ON THE TOP OF THE POLE AS SHOWN ON TYPICAL DETAIL DRAWING, COMPLETE WITH BASE PLATE, EARTHING BOSS ETC. AND OTHER ACCESSORIES. THE JOB ALSO INCLUDES CONSTRUCTION OF FOUNDATIONS AND ALL OTHER RELATED CIVIL WORKS COMPLETE IN ALL RESPECTS														165-2-ELT-005
5.1	TYPE-A (2 FLOOD LIGHTS PER POLE)	1													
5.2	TYPE-B (3 FLOOD LIGHTS PER POLE)	22													
5.3	TYPE-C (4 FLOOD LIGHTS PER POLE)	1													

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
6.0	JUNCTION BOX (FOR HAZARDOUS AREA)														
6.1	JUNCTION BOX FOR LIGHTING SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF JUNCTION BOX FOR LIGHTING SUITABLE FOR HAZARDOUS AREA, EEX'E' II-C T4, IP65, IMPACT RESISTANT POLYESTER ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 25MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AND AS PER REFERRED INSTALLATION DETAILS AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	12	NOS.												165-2-ELT-002
6.2	JUNCTION BOX FOR UTILITY SOCKET OUTLET SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF JUNCTION BOX FOR UTILITY OUTLETS SUITABLE FOR HAZARDOUS AREA, EEX'E' II-C T4, IP65, IMPACT RESISTANT POLYESTER ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 25MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AS PER REFERRED ANNEXURES AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	3	NOS.												165-2-ELT-002
7.0	JUNCTION BOX (FOR NON-HAZARDOUS AREA)														
7.1	JUNCTION BOX FOR LIGHTING SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF JUNCTION BOX FOR LIGHTING, IP55 (MIN), UV STABILIZED POLYCARBONATE OR SHEET METAL ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 25MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AS PER REFERRED ANNEXURES AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	12	NOS.												165-2-ELT-002
7.2	JUNCTION BOX FOR UTILITY SOCKET OUTLET SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF JUNCTION BOX FOR UTILITY OUTLETS, IP55 (MIN), UV STABILIZED POLYCARBONATE OR SHEET METAL ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 16MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AS PER REFERRED ANNEXURES AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	3	NOS.												165-2-ELT-002
8.0	UTILITY SOCKET OUTLETS (FOR HAZARDOUS AREA)														
8.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED UTILITY OUTLETS 16A, SINGLE PHASE 3-PIN 230V, PROTECTION TYPE EEX'D' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE. COMPLETE WITH 2 NOS. CABLE ENTRIES OF M25 (WITH STOPPING PLUGS), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	5	NOS.												165-2-ELT-003

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
8.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED UTILITY OUTLETS 16A, SINGLE PHASE 3-PIN 230V, PROTECTION TYPE EEX'n' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE, COMPLETE WITH 2 NOS. CABLE ENTRIES OF M25 (WITH STOPPING PLUGS), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	1	NOS.												165-2-ELT-003
9.0	UTILITY SOCKET OUTLETS (FOR NON-HAZARDOUS AREA)														
9.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF SWITCHED UTILITY OUTLETS 16A, SINGLE PHASE 3-PIN 230V, IP-65 UV STABILIZED POLYCARBONATE ENCLOSURE, COMPLETE WITH 2 NOS. CABLE ENTRIES OF M25 (WITH STOPPING PLUGS), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	2	NOS.												165-2-ELT-003
10.0	WELDING SOCKET OUTLETS (FOR HAZARDOUS AREA)														
10.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED WELDING SOCKET OUTLET 63A, THREE PHASE 5-PIN 400V, PROTECTION TYPE EEX'D' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE, COMPLETE WITH 1 NO CABLE ENTRY OF M32 (WITH STOPPING PLUG), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	3	NOS.												165-2-ELT-003
10.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED WELDING SOCKET OUTLET 63A, THREE PHASE 5-PIN 400V, PROTECTION TYPE EEX'n' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE, COMPLETE WITH 1 NO CABLE ENTRY OF M32 (WITH STOPPING PLUG), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	1	NOS.												165-2-ELT-003
11.0	WELDING SOCKET OUTLETS (FOR NON-HAZARDOUS AREA)														
11.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF SWITCHED WELDING SOCKET OUTLET 63A, THREE PHASE 5-PIN 400V, IP-65 UV STABILIZED POLYCARBONATE ENCLOSURE, COMPLETE WITH 1 NO CABLE ENTRY OF M32 (WITH STOPPING PLUG), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	2	NOS.												165-2-ELT-003
12.0	LOCAL CONTROL STATIONS (FOR HAZARDOUS AREA)														
12.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF LOCAL CONTROL STATION (OF FOLLOWING TYPE) FOR LV MOTORS, EEX'N' IIC T4, IP-65. GRP POLYCARBONATE ENCLOSURE, COMPLETE WITH CABLE ENTRY OF M25 (WITH STOPPING PLUG) FOR 12C-2.5MM2 ARMoured CABLE. LOCAL CONTROL STATION SHALL BE SUPPLIED COMPLETE WITH ALL REQUIRED INTERNAL TERMINALS, EARTHING TERMINALS, GLAND PLATE, NUTS, BOLTS, WASHERS, ETC COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	2	NO.												165-2-ELT-004
	THREE POSITION (I-O-II) ROTARY SELECTOR SWITCH FOR MANUAL-OFF-AUTO (MOA) SELECTION AND COMPRISING OF 1 NO. ON PUSH BUTTON (MOMENTARY CONTACT), 1 NO. MUSHROOM STAYPUT (LATCHED CONTACT) TYPE OFF PUSH BUTTON AND 2 NO. GREEN AND RED INDICATION LAMP.														

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
13.0	LOCAL CONTROL STATIONS (FOR NON- HAZARDOUS AREA).														
13.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF LOCAL CONTROL STATION (OF FOLLOWING TYPE) FOR LV MOTORS, IP-55. UV STABILIZED POLYCARBONATE ENCLOSURE, COMPLETE WITH CABLE ENTRY OF M25 (WITH STOPPING PLUG) FOR 12C-2.5MM2 ARMoured CABLE. LOCAL CONTROL STATION SHALL BE SUPPLIED COMPLETE WITH ALL REQUIRED INTERNAL TERMINALS, EARTHING TERMINALS, GLAND PLATE, NUTS, BOLTS, WASHERS, ETC. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-004
	THREE POSITION (I-O-II) ROTARY SELECTOR SWITCH FOR MANUAL-OFF-AUTO (MOA) SELECTION AND COMPRISING OF 1 NO. ON PUSH BUTTON (MOMENTARY CONTACT), 1 NO. MUSHROOM STAYPUT (LATCHED CONTACT) TYPE OFF PUSH BUTTON AND 1 NO. GREEN INDICATION LAMP.	2	NOS.												
14.0	MULTIPLE SOCKET ASSEMBLIES (FOR HAZARDOUS AREA).														
14.1	SUPPLY OF EX-PROOF MULTIPLE SOCKET ASSEMBLIES, SUITABLE FOR USE AS A PORTABLE SUPPLY POINT IN CLASS I, DIV 1 CLASSIFIED HAZARDOUS AREA. THIS INCLUDES A COMMON ENCLOSURE RATED EEX de IIC T4, IP65 MADE OF GRP OR METAL COMPLETE WITH FOLLOWING COMPONENTS. - 63A, 5 PIN SOCKET INLET FOR RECEIVING POWER CONNECTION. - 63 A 3P MCB AS INCOMING PROTECTION. - 2 NOS 16A 3 PIN SWITCHED SOCKET OUTLET COMPLETE WITH 1P MCB. -1 NOS 32A 5 PIN SWITCHED SOCKET OUTLET. COMPLETE WITH 3P MCB.	1	NOS.												165-2-ELT-004
	Total Price (1 to 14)														

NOTES:

- 1 All taxes shall be payable by contractor.
- 2 The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- 3 Test certificates and MTC's of all items (where applicable) shall be provided.
- 4 The charges shall be supported by verified quotation of Inspection Agency.
- 5 Copy of the SRO 678 (1)/2007 is given in **Annexure-XVIII**



Zishan Engineers (Pvt.) Ltd.

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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR MOTOR CONTROL CENTER AND DISTRIBUTION PANELS & BOARDS



0	6/4/2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR MOTOR CONTROL CENTER AND DISTRIBUTION PANELS & BOARDS

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
1.0	LOW VOLTAGE SWITCHGEAR / MCC / SUB DISTRIBUTION BOARDS:														
1.1	SUPPLY, INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF MOTOR CONTROL CENTER/ SWITCHGEAR (101-MCC-01) FLOOR MOUNTED 400 V, 50 Hz LV MCC / SWITCHGEAR ASSEMBLIES AS PER REFERRED SLDs DATA SHEET AND SPECIFICATION COMPLETE IN ALL RESPECTS INCLUDING BUT NOT LIMITED TO SUPPLY, FABRICATION, FIXING / BOLTING OF GALVANIZED STEEL BASE FRAME AND ALL OTHER INSTALLATION AND MOUNTING ACCESSORIES RQUIRED FOR JOB COMPLETION ALONG WITH TWO YEAR RECOMMENDED SPARE AND TRAININGS. THE JOB ALSO INCLUDES PROTECTION COORDINATION STUDIES OF THE NETWORK.	1	Set												165-2-ELS-002 165-2-SPE-017 165-2-SPE-024
1.2	SUPPLY OF TWO (02) YEARS RECOMMENDED SPARE PARTS. (PLEASE PROVIDE SEPARATE ITEM-WISE PRICED LIST)	1	LOT												
2.0	LOW VOLTAGE SUB DISTRIBUTION PANELS/BOARDS: (indoor type)														
	SUPPLY, INSTALLATION, ERECTION , TESTING , COMMISSIONING OF FOLLOWING LOW VOLTAGE SUB DISTRIBUTION PANELS , INDOOR TYPE, IP31 ENCLOSURE AS SHOWN IN REFERRED SLD AND AS PER REFERRED DOCUMENTS COMPLETE IN ALL RESPECT INCLUDING ALL INSTALLATIONS, MOUNTING AND FIXING ACCESSORIES. THE JOB INCLUDES EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING BETWEEN PANELS ALONG WITH TWO YEAR RECOMMENDED SPARE AND TRAININGS COMPLETE IN ALL RESPECT.														165-2-SPE-017 165-2-SPE-024
2.1	LIGHTING DISTRIBUTION PANEL (101-LDP-01)	1	Set												165-2-ELS-004
3.0	AC UN-INTERRUPTABLE POWER SUPPLY:														
3.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AC UPS OF 20 KVA SUITABLE FOR 400V INPUT VOLTAGE, 230V OUTPUT VOLTAGE, 50 HZ, DUAL REDUNDANT TYPE, HOT STAND-BY, LEAD ACID SEALED BATTERY TYPE, AS PER REFERRED SPECIFICATIONS AND DATASHEETS. COMPLETE IN ALL RESPECT INCLUDING SUPPLY AND INSTALLATION OF ALL MOUNTING AND INSTALLATION ACCESSORIES. THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF FRAME (IF REQUIRED) AND EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING COMPLETE IN ALL RESPECT. EACH MODULE SHOULD BE SIZED TO WITHSTAND 100% LOAD	1	NO.												165-2-SPE-019 165-2-DSE-003
3.2	SUPPLY OF TWO (02) YEARS RECOMMENDED SPARE PARTS. (PLEASE PROVIDE SEPARATE ITEM-WISE PRICED LIST)	1	LOT												
4.0	AC UN-INTERRUPTABLE POWER SUPPLY:														
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AC UPS OF 30 KVA SUITABLE FOR 400V INPUT VOLTAGE, 400V OUTPUT VOLTAGE, 50 HZ, DUAL REDUNDANT TYPE, HOT STAND-BY, LEAD ACID SEALED BATTERY TYPE, AS PER REFERRED SPECIFICATIONS AND DATASHEETS. COMPLETE IN ALL RESPECT INCLUDING SUPPLY AND INSTALLATION OF ALL MOUNTING AND INSTALLATION ACCESSORIES. THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF FRAME (IF REQUIRED) AND EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING COMPLETE IN ALL RESPECT. EACH MODULE SHOULD BE SIZED TO WITHSTAND 100% LOAD	RATE ONLY	NO.												RATE ONLY

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES FOR MOTOR CONTROL CENTER AND DISTRIBUTION PANELS & BOARDS**

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
5.0	RECTIFIER														
5.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF RECTIFIER OF 4 KVA SUITABLE FOR 400V INPUT VOLTAGE, 24V DC OUTPUT VOLTAGE, LEAD ACID SEALED BATTERY TYPE, AS PER REFERRED SPECIFICATIONS AND DATASHEETS. COMPLETE IN ALL RESPECT INCLUDING SUPPLY AND INSTALLATION OF ALL MOUNTING AND INSTALLATION ACCESSORIES. THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF FRAME (IF REQUIRED) AND EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING COMPLETE IN ALL RESPECT. EACH MODULE SHOULD BE SIZED TO WITHSTAND 100% LOAD, ALONG WITH DC DISTRIBUTION BOARD AND DC CABLING UPTO DISTRIBUTION BOARDS.	1	NO.												165-2-SPE-020 165-2-DSE-004
5.2	SUPPLY OF TWO (02) YEARS RECOMMENDED SPARE PARTS. (PLEASE PROVIDE SEPARATE ITEM-WISE PRICED LIST)	1	LOT												
6.0	UPS DISTRIBUTION PANELS/BOARDS: SUPPLY, INSTALLATION, ERECTION , TESTING , COMMISSIONING OF FOLLOWING UPS DISTRIBUTION PANELS , INDOOR TYPE, IP31 ENCLOSURE AS SHOWN IN REFERRED SLD AND AS PER REFERRED DOCUMENTS COMPLETE IN ALL RESPECT INCLUDING ALL INSTALLATIONS, MOUNTING AND FIXING ACCESSORIES. THE JOB INCLUDES EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING BETWEEN PANELS COMPLETE IN ALL RESPECT. FOR FLOOR MOUNTED PANELS, THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF STEEL BASE FRAME COMPLETE IN ALL RESPECT.														165-2-SPE-019 165-2-DSE-003
6.1	UPS DISTRIBUTION PANEL-01 (102-UDP-01)	1	Set												165-2-ELS-003
6.2	UPS DISTRIBUTION PANEL-02 (102-UDP-02)	1	Set												165-2-ELS-007
7.0	TRAINING TRAINING OF OPERATIONAL PERSONNEL AT PLANT FOR THE PERIOD OF TWO (02) WORKING WEEKS FOR ITEM NO 1.0 AND ITEM NO 3.0	1	JOB												
Total Price (1 to 7)															

NOTES:

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- TEST CERTIFICATES AND MTC'S OF ALL ITEMS (WHERE APPLICABLE) SHALL BE PROVIDED.
- THE CHARGES SHALL BE SUPPORTED BY VERIFIED QUOTATION OF INSPECTION AGENCY.



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR BUILDINGS



0	04-06-2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR BUILDINGS

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)			
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
1.0	WIRING / WIRING ACCESSORIES PROVIDING, INSTALLATION, TESTING & COMMISSIONING OF FOLLOWING ITEMS INCLUDING ALL MATERIAL, TOOLS, LABOR & ACCESSORIES REQUIRED FOR COMPLETION OF WORK AS PER SPECIFICATIONS, DETAILS & DRAWINGS. COMPLETE IN ALL RESPECTS.															
1.1	SMALL WIRING FOR LIGHTS															
1.1.1	CIRCUIT WIRING FROM DISTRIBUTION BOARD (DB) TO SWITCH BOARD USING 3NOS OF 1C X 2.5 SQ.MM CU/PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN DB TO SWITCH BOARD IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	10	NO.													
1.1.2	WIRING FOR LIGHT POINT FROM SWITCH BOARD TO OTHER SWITCH BOARD USING 3NOS OF 1C X 2.5 SQ.MM PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN SWITCH BOARD TO SWITCH BOARD IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	9	NO.													
1.1.3	WIRING FOR LIGHT POINT FROM SWITCH BOARD TO FIRST LIGHT POINT USING 3C X 2.5 SQ.MM PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN SWITCH BOARD TO LIGHT POINT IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	35	NO.													
1.1.4	WIRING FOR LIGHT POINT FROM POINT TO POINT USING 3 nos of 1C X 1.5 SQ.MM PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN LIGHT POINT TO LIGHT IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	60	NO.													
1.2	SMALL WIRING FOR UTILITY POWER SOCKETS															
1.2.1	CIRCUIT WIRING FROM RESPECTIVE DISTRIBUTION BOARD (DB) TO 5A SWITCH SOCKET UNITS (FIRST OUTLET) USING FOLLOWING SIZE OF MULTI CORE PVC INSULATED SOLID COPPER CONDUCTOR, COLOR CODED WIRES IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.															
1.2.1.1	3 NOS OF 1C - 2.5 SQMM AS PHASE, NEURAL & EARTH	6	NO.													
1.2.2	WIRING FOR 5A SWITCH SOCKET UNITS FROM OUTLET TO OUTLET USING FOLLOWING SIZE OF SINGLE CORE PVC INSULATED SOLID COPPER CONDUCTOR, COLOR CODED WIRES IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.															
1.2.2.1	3 NOS OF 1C - 2.5 SQMM AS PHASE, NEURAL & EARTH	12	NO.													
1.2.3	WIRING FOR 15A SWITCH SOCKET UNITS FROM DB TO OUTLET USING FOLLOWING SIZE OF SINGLE CORE PVC INSULATED SOLID COPPER CONDUCTOR, COLOR CODED WIRES IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.															
1.2.3.1	3 NOS OF 1C - 4 SQMM AS PHASE, NEURAL & EARTH	10	NO.													
2.0	WIRING DEVICES / RECEPTACLES PROVIDING, INSTALLATION AND COMMISSIONING OF FOLLOWING WIRING DEVICES / LIGHT CONTROL SWITCHES / POWER RECEPTACLES AS PER BS STANDARDS INCLUDING 16 SWG MS POWDER COATED BACK BOXES, FLUSH WITH WALL AS SHOWN IN DRAWINGS AND DETAILS.															

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
2.1	LIGHT CONTROLLED SWITCHES														
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 10A SWITCH, INDOOR (COMMERCIAL) TYPE, UV STABILIZED POLYCARBONATE FRONT PLATE COMPLETE WITH FLUSH MOUNTED BACK BOX AND INSTALLATION AND MOUNTING ACCESSORIES.														
2.1.1	2-GANG SWITCH	12	NO.												
2.1.2	3-GANG SWITCH	4	NO.												
2.1.3	4-GANG SWITCH	3	NO.												
2.1.4	5-GANG SWITCH	1	NO.												
2.2	UTILITY / CONDITIONED POWER RECEPTACLES														
2.2.1	5A, SIMPLEX ROUND 2-PIN SWITCH SOCKET UNIT	8	NO.												
2.2.2	15A, SIMPLEX ROUND 3-PIN SWITCH SOCKET UNIT	6	NO.												
3.0	LIGHTING FIXTURES														
3.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2X36W, 230V, FLUORESCENT LIGHT FIXTURE, SURFACE MOUNTED, WITH POLYCARBONATE DIFFUSER, CABLE ENTRIES FOR THROUGH (FIXTURE TO FIXTURE) WIRING, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, LAMPS COMPLETE WITH ALL MOUNTING AND INSTALLATION ACCESSORIES.	15	NO.												
3.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 4X18W, 230V, FLUORESCENT TROFFER LIGHT FIXTURE, RECESSED MOUNTED, WITH SPECULAR (M2 TYPE) LOUVERS, SHEET STEEL POWDER COATED WHITE BODY, PLASTIC END CAPS, CABLE ENTRIES FOR THROUGH (FIXTURE TO FIXTURE) WIRING, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, LAMPS COMPLETE WITH ALL MOUNTING AND INSTALLATION ACCESSORIES.	6	NO.												
3.3	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 1X10W, 230V, FLUORESCENT, SURFACE MOUNTED EXIT LIGHT, NON-MAINTAINED (WITH SELF-TEST FEATURE), WITH NIMH BATTERY BACKUP FOR 2 HOURS BACKUP OPERATION INJECTION MOLDED PLASTIC BODY, ACRYLIC DIFFUSER, 'EXIT' OR 'EXIT+ARROW' SIGN, CABLE ENTRY, ELECTRONIC BALLAST, CONTROL GEAR, LAMP COMPLETE WITH ALL MOUNTING AND INSTALLATION ACCESSORIES.	4	NO.												
3.4	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF SURFACE MOUNTED DOWNLIGHT FIXTURE WITH 18W PLC LAMP ALL INSTALLATION AND MOUNTING ACCESSORIES.	6	NO.												
4.0	FANS														
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230V, 8 INCH SWEEP, EXHAUST FAN WITH SQUARE FRAME INCLUDING ALL MOUNTING AND INSTALLATION ACCESSORIES.	2	NO.												
5.0	DISTRIBUTION PANELS / SWITCHBOARDS														
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF FOLLOWING DISTRIBUTION BOARDS IN ACCORDANCE WITH THE ATTACHED SINGLE LINE DIAGRAMS AND LAYOUT PLANS. THE PANELS SHALL BE MADE WITH 16 SWG SHEET STEEL HOUSING, POWDER COATED AFTER ANTI-RUST PRIMERS. THE COPPER BUS BARS SHALL BE TIN ELECTROPLATED WITH PROTECTIVE COLOR CODED HEAT SHRINK SLEEVES. ALL DISTRIBUTION BOARDS SHALL FOR INDOOR INSTALLATIONS BUT PROVIDED WITH GAS KITS. ALL COMPONENTS AND ACCESSORIES SHALL BE AS PER THE SLD. CONTRACTOR HAS TO SUBMIT THE SHOP DRAWINGS PRIOR TO FABRICATION FOR CLIENT'S APPROVAL.														
5.1	LDB-CONTROL ROOM BUILDING (102-LDB-01)	1	NO.												165-2-ELS-005
5.2	LDB-MCCROOM & GEN SHED BUILDING (101-LDB-02)	1	NO.												165-2-ELS-006

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
6.0	CABLE RACEWAYS / CONTAINMENT PROVIDING AND LAYING OF FOLLOWING PVC CONDUITS FOR MAIN / SUB MAIN CABLES, POWER , SECURITY AND COMMUNICATION RISERS FROM RESPECTIVE FLOORS TO PULL BOXES / PANELS AS SHOWN IN THE PLANS. COMPLETE WITH ALL ACCESSORIES LIKE JUNCTION BOXES, BENDS, SOCKETS , ELBOWS ETC. ALL ITEMS SHALL BE OF SAME MANUFACTURER.														
6.1	25 MM DIA PVC CONDUIT.	80	RM.												
7.0	TELEPHONE & DATA CABLING PROVIDING , LAYING TESTING TAGGING COMMISSIONING OF CATEGORY 6 , UTP CABLES, FOR TELEPHONE SYSTEM & DATA FROM SERVICE PROVIDER TO MAIN TJB OR DATA RACK AT BUILDING IN APPROPRIATE SIZE OF UNDER FLOOR PVC. WORK INCLUDES ALL TERMINATIONS, MANAGEMENT AND TAGGING AT BOTH ENDS.	50	RM.												
7.1	10 PAIR, 0.6 MM TELEPHONE CABLE FROM MAIN TJB TO OUTLET AT BUILDING IN APPROPRIATE SIZE OF PVC CONDUIT INCLUDING ALL ACCESSORIES. COMPLETE WITH TERMINATION AND TAGGING AT BOTH ENDS.	30	RM.												
7.2	PATCH PANEL PATCH PANEL FOR DATA MAKE IN BUILDING INCLUDING WITH MARKING ARRANGEMENTS FOR 10 PAIR CABLES.	2	NO.												
7.3	TELEPHONE JUNCTION BOX TELEPHONE JUNCTION BOX MAKE IN BUILDING INCLUDING WITH MARKING ARRANGEMENTS FOR 10 PAIR CABLES.	1	NO.												
7.4	INFORMATION OUTLETS														
7.4.1	WORKSTATION/WALL/FLOOR OUTLET BOX MOUNTED INFORMATION OUTLET HAVING SIMPLEX FACE PLATE WITH 1NO. CAT-6, RJ-45 SOCKET FOR TELEPHONE SYSTEM INCLUDING SHUTTERED CLICK-INS, LABELS, JACKS ETC. COMPLETE IN ALL RESPECTS WITH CABLE IDENTIFICATION TAGS.	6	NO.												
7.4.2	WORKSTATION/WALL/FLOOR OUTLET BOX MOUNTED INFORMATION OUTLET HAVING SIMPLEX FACE PLATE WITH 1NO. CAT-6, RJ-45 SOCKET FOR DATA COMMUNICATION SYSTEM INCLUDING SHUTTERED CLICK-INS, LABELS, JACKS ETC. COMPLETE IN ALL RESPECTS WITH CABLE IDENTIFICATION TAGS.	8	NO.												
8.0	FIRE ALARM SYSTEM DESIGN, SUPPLY INSTALLATION, TESTING AND COMMISSIONING OF CONVENTIONAL ADDRESSABLE FIRE ALARM SYSTEM IN CIVIL CONSTRUCTED BUILDING OF PC TENDER SCOPE, COMPRISING OF FOLLOWING EQUIPMENTS INCLUDING ALL ACCESSORIES REQUIRED FOR THE COMPLETION OF THE SYSTEM COMPLETE IN ALL RESPECTS. FIRE / ALARM SYSTEM SHALL CONSIST OF BUT NOT LIMITED TO FOLLOWING MAJOR COMPONENTS SMOKE DETECTORS / HEAT DETECTORS / UV FLARE DETECTORS (SELECTION OF OPTIMUM TYPE OF DETECTOR SHALL BE CONTRACTOR RESPONSIBILITY), BREAK GLASS TYPE MANUAL CALL STATIONS BREAK GLASS SHALL ALSO INCORPORATES AN INDICATION LED FLASHED AFTER PRESSING THE BUTTON TO ACKNOWLEDGE THE ACTIVATION AND KEY OPERATION FACILITY FOR TESTING PURPOSES.	1	JOB.												

165-4-SPE-102

165-2-SPE-022

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
	<p>INDOOR ELECTRONIC SOUNDERS WITH FLASHER, MINIMUM SOUND OUTPUT 100 DB AT 1METER WITH FREQUENCIES FOR VARIETY OF SOUNDS AS REQUIRED.</p> <p>ADDRESSABLE FIRE ALARM CONTROL PANEL(S) MINIMUM OF TWO LOOPS WITH ANY COMMUNICATION MODULES REQUIRED TO INTERFACE / INTEGRATE MULTIPLE FACPS. COMPLETE SYSTEM INTEGRATION, TESTING & COMMISSIONING OF THE SYSTEM INCLUDING ALL SOFTWARE / FIRMWARE / HARDWARE REQUIREMENTS, AS REQUIRED FOR SUCCESSFUL COMMISSIONING OF THE SYSTEM AS PER RELEVANT INTERNATIONAL STANDARDS AND INDUSTRY NARROWS.</p> <p>COMPLETE SYSTEM WIRING / CABLING INCLUDING POWER CABLING, SIGNAL WIRING, ETC. COMPLETE WITH ALL REQUIRED CABLE WAYS (CONDUITS / TRAY, ETC). WIRING FOR COMPLETE FIRE ALARM SYSTEM USING 2C, 1.5 SQ. MM. LSZH CABLE IN APPROPRIATE SIZE OF GI CONDUITS. COMPLETE IN ALL RESPECTS. POWER WIRING FOR FACP FROM EMERGENCY DB IN USING 3 X 1.5 SQMM SINGLE CORE PVC INSULATED WIRES IN APPROPRIATE SIZE OF PVC CONDUIT. COMPLETE IN ALL RESPECTS.</p>														
	Total Price (1 to 8)														

NOTES:

- All taxes shall be payable by contractor.
- The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- Test certificates and MTC's of all items (where applicable) shall be provided.
- The charges shall be supported by verified quotation of Inspection Agency.



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR EARTHING WORKS



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BILL OF QUANTITIES FOR EARTHING WORKS

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					A	B	C = A+B	D	E = C+D	F	G	H = F+G	I=E+H		
1.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 4M LONG EARTH ELECTRODE, COPPER CLADDED STEEL, 3/4" DIA ROD, WITH 2 M LONG AND 2" DIA UPVC PIPE, EXTENDIBLE ON BOTH SIDES COMPLETE WITH DRIVING HEAD CAP ON TOP, 2 NOS. CLAMPS FOR 70 SQ.MM BARE CONDUCTOR CONNECTION, STAINLESS STEEL FASTENING ACCESSORIES ETC. COMPLETE IN ALL RESPECT. THE JOB INCLUDES CONSTRUCTION OF CONCRETE EARTH PIT WITH ALL MATERIALS AS SHOWN IN REFER DRAWING COMPLETE IN ALL RESPECT	6	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
2.0	SAME AS ITEM#1, BUT WITHOUT CONSTRUCTION OF EARTH PIT. (RODS TO BE BURIED)	8	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
3.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 6M LONG EARTH ELECTRODE, COPPER CLADDED, 3/4" DIA ROD, WITH 3 M LONG AND 2" DIA UPVC PIPE, EXTENDIBLE ON BOTH SIDES COMPLETE WITH DRIVING HEAD CAP ON TOP, 2 NOS. CLAMPS FOR 70 SQ.MM BARE CONDUCTOR CONNECTION, STAINLESS STEEL FASTENING ACCESSORIES ETC. COMPLETE IN ALL RESPECT. THE JOB INCLUDES CONSTRUCTION OF CONCRETE EARTH PIT WITH ALL MATERIALS AS SHOWN IN REFER DRAWING COMPLETE IN ALL RESPECT	3	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
4.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF EARTH BARS MADE OF HARD DRAWN COPPER (TINNED), SUITABLE FOR MOUNTING ON STEEL STRUCTURE, CONSISTING OF 10 NOS. EQUALLY SPACED M8 HOLES. EACH PLATE SHALL ALSO HAVE 2 NOS. M10 HOLES FOR MOUNTING. EACH PLATE SHALL BE SUPPLIED WITH 2 NOS. GALVANIZED MILD STEEL TUBE SPACERS, AND M10, ELECTROZINC PLATED NUTS, BOLTS AND STAR WASHERS, COMPLETE IN ALL RESPECTS.	12	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
5.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF PVC-INSULATED, GREEN-YELLOW OUTER PVC SHEATHED, CIRCULAR, STRANDED ANNEALED COPPER CONDUCTOR CABLES, CONFIRMING TO BS-6004, (450 / 750 V) ON CABLE LADDER / RACK OR BURIED COMPLETE IN ALL RESPECTS INCLUDING SUPPLY AND INSTALLATION OF CRIMPED CONNECTORS FOR BRANCHING OF ABOVE GROUND EARTH CABLE, SUPPLY AND INSTALLATION CABLE LUGS AND TERMINATIONS ON EQUIPMENT AND EARTHING PHILOSOPHY DOCUMENTS.														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
5.1	1C-240	70	RMtrs.												
5.2	1C-70	180	RMtrs.												
5.3	1C-35	120	RMtrs.												
5.4	1C-16	40	RMtrs.												
5.5	1C-6	240	RMtrs.												
6.0	SUPPLY AND INSTALLATION OF CAD WELD CONNECTIONS ON BURIED CABLE OF FOLLOWING SIZES														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
6.1	1C-70	6	Nos												
6.2	1C-35	12	Nos												
6.3	1C-16	10	Nos												
7.0	SUPPLY, INSTALLATION, LAYING, TERMINATION, TESTING AND COMMISSIONING OF FOLLOWING SIZES BARE COPPER CONDUCTORS (TO IEC 60228) COMPLETE IN ALL RESPECTS. CONDUCTOR TO BE LAID ON LEAN CONCRETED SURFACE. THIS ALSO INCLUDES CABLE TERMINATION / CLAMPING ON ABOVE EARTH RODS, INSTALLATION OF STUB-UP PIPES FOR BRINGING THE CABLE ABOVE SURFACE AND TERMINATION ON STEEL STRUCTURE OR EARTH PLATES ETC. AS SPECIFIED ON EARTHING SCHEMATIC														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
7.1	1C-70	50	RMtrs.												
7.2	1C-35	60	RMtrs.												
7.3	1C-10	80	RMtrs.												
7.4	1C-6	100	RMtrs.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR EARTHING WORKS

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8.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF C-TYPE, COPPER COMPRESSION TAPS / CONNECTOR FOR CRIMPED CONNECTIONS OF EARTH CABLE BRANCHES FROM MAIN CABLE. CONNECTORS SHALL BE SUITABLE FOR FOLLOWING CABLE SIZES.														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
8.1	MAIN 70 SQMM; BRANCH 70 SQMM	2	Nos.												
8.2	MAIN 70 SQMM; BRANCH 35 SQMM	11	Nos.												
8.3	MAIN 70 SQMM; BRANCH 16 SQMM	3	Nos.												
8.4	MAIN 35 SQMM; BRANCH 35 SQMM	2	Nos.												
8.5	MAIN 35 SQMM; BRANCH 16 SQMM	8	Nos.												
8.6	MAIN 16 SQMM; BRANCH 16 SQMM	2	Nos.												
9.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF ANNEALED COPPER STRIP 20 mm x 3 mmT IN HORIZONTAL MESH FORMAT ON TOP OF DIFFERENT BUILDINGS INCLUDING CONNECTION OF THE NETWORK WITH STEEL BARS OF ROOF RCC STRUCTURE COMPLETE IN ALL RESPECTS INCLUDING ALL INSTALLATION ACCESSORIES SUCH AS CLAMPS, NUTS, BOLTS ETC. THE JOB INCLUDES SECURELY CONNECTING ALL MUTUALLY CROSSING STRIPS AT INTERSECTION POINTS AS PER REFERRED INSTALLATION DETAILS.	30	RMtrs.												165-2-ELT-008 165-2-SPE-023 165-2-SPE-021
10.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF ANNEALED COPPER STRIP 20 mm x 3 mmT AS DOWN CONDUCTOR OF LP SYSTEM. THIS INCLUDES CLAMPING ON EXTERNAL WALL AND CONNECTION WITH THE EARTH AND RCC STRUCTURE NETWORK.	4	RMtrs.												
11.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF LP TEST POINTS.	3	Nos.												
12.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE IMPRESSED CURRENT CATHODIC PROTECTION FOR 2 NOS OF TANKS AT MELA FACILITY COMPLETE IN ALL RESPECTS AS DETAILED IN SCOPE OF WORK AND SPECIFICATION FOR CP SYSTEM (165-2-SPE-026). THE JOB INCLUDES BUT NOT LIMITED TO COMPLETE ANODE, RECTIFIER, TRANSFORMER, ALL CABLING, TEST POINTS, CONTROL PANEL ETC ETC REQUIRED FOR COMPLETE CATHODIC PROTECTION SYSTEM.	1	JOB												
13.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE SACRIFICIAL ANODE CATHODIC PROTECTION FOR COMPLETE PLANT BURIED PIPINGS AS PER ATTACHED PIPING LAYOUTS AND P&IDs AT MELA FACILITY COMPLETE IN ALL RESPECTS AS DETAILED IN SCOPE OF WORK AND SPECIFICATION FOR CP SYSTEM (165-2-SPE-026). THE JOB INCLUDES BUT NOT LIMITED TO COMPLETE ANODE, ALL CABLING, TEST POINTS ETC REQUIRED FOR COMPLETE CATHODIC PROTECTION SYSTEM.	1	JOB												
Total Price (1 to 13)															

NOTES:

- All taxes shall be payable by contractor.
- The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- Test certificates and MTC's of all items (where applicable) shall be provided.
- The charges shall be supported by verified quotation of Inspection Agency.



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR CONDUIT, TRAY, LADDER TRENCHES, SLEEVES ROAD CROSSINGS, STUB UPS ETC (ELECTRICAL WORKS)



0	04-06-2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	SUPPLY AND INSTALLATION OF GI PIPES/CONDUIT OF FOLLOWING SIZES, BURIED IN SOIL PAVING OR INSTALLED / SUPPORTED ON STEEL/RCC STRUCTURE. THE JOB INCLUDES ALL MOUNTING AND INSTALLATION ACCESSORIES SUCH AS CLAMPS, HOLDERS, SUPPORTS, UNITS / BOLTS, WASHER, ETC. COMPLETE IN ALL RESPECTS.														
1.1	75 MM DIA GI CONDUIT	25	RMTRS.												
1.2	63 MM DIA GI CONDUIT	30	RMTRS.												
1.3	50 MM DIA GI CONDUIT	50	RMTRS.												
1.4	32 MM DIA GI CONDUIT	90	RMTRS.												
1.5	25 MM DIA GI CONDUIT	80	RMTRS.												
1.6	20 MM DIA GI CONDUIT	60	RMTRS.												
2.0	SUPPLY AND INSTALLATION OF FOLLOWING GI PIPES/CONDUITS FITTING OF STATED SIZES, (TO BE INSTALLED UNDERGROUND OR INSTALLED ABOVE GROUND, SUPPORTED ON STEEL STRUCTURE/RCC) INCLUDING ALL MOUNTING AND INSTALLTION ACCESSORIES COMPLETE IN ALL RESPECT.														
2.1	UNIONS:														
2.1.1	75 MM DIA	3	Nos.												
2.1.2	63 MM DIA	10	Nos.												
2.1.3	50 MM DIA	8	Nos.												
2.1.4	32 MM DIA	7	Nos.												
2.1.5	25 MM DIA	10	Nos.												
2.1.6	20 MM DIA	8	Nos.												
2.2	TEES														
2.2.1	75 MM DIA	2	Nos.												
2.2.2	63 MM DIA	2	Nos.												
2.2.3	50 MM DIA	3	Nos.												
2.2.4	32 MM DIA	3	Nos.												
2.2.5	25 MM DIA	5	Nos.												
2.2.6	20 MM DIA	6	Nos.												
2.3	ELBOWS														
2.3.1	75 MM DIA	6	Nos.												
2.3.2	63 MM DIA	8	Nos.												
2.3.3	50 MM DIA	12	Nos.												
2.3.4	32 MM DIA	10	Nos.												
2.3.5	25 MM DIA	20	Nos.												
2.3.6	20 MM DIA	18	Nos.												
2.4	OUTLET BOX 4-WAY WITH COVER														
2.4.1	75 MM DIA	1	Nos.												
2.4.2	63 MM DIA	1	Nos.												
2.4.3	50 MM DIA	1	Nos.												
2.4.4	32 MM DIA	2	Nos.												
2.4.5	25 MM DIA	4	Nos.												
2.4.6	20 MM DIA	5	Nos.												
3.0	SUPPLY AND INSTALLATION OF CLASS "D" UPVC CONDUITS FOR USE AS STUB UP PIPE SLEEVES FOR BURIED CABLE (FROM UNDERGROUND TO SURFACE).														
3.1	4" DIA PIPE OF 1M LENGTH EACH	6	Nos.												
3.2	3" DIA PIPE OF 1M LENGTH EACH	8	Nos.												
3.3	2" DIA PIPE OF 1M LENGTH EACH	15	Nos.												

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
4.0	SUPPLY & INSTALLATION OF CLASS D UPVC CONDUIT AS BURIED RUNS OF PIPE SLEEVES AT DIFFERENT PLANT LOCATION UNDER PAVED AREAS. THE JOBS INCLUDES ALL CONDUIT FITTINGS, REQUIREMENTS FOR COMPLETION OF JOB.														
4.1	4" DIA.	15	RMTRS												
4.2	3" DIA.	18	RMTRS												
4.3	2" DIA.	26	RMTRS												
5.0	SUPPLY & INSTALLATION OF MS PIPE AS BURIED SLEEVES UNDER PAVED AREA IN APPLICATIONS OTHER THAN ROAD CROSSING COMPLETE IN ALL RESPECTS. (PIPE SLEEVES USED AS ROAD CROSSING SHALL BE QUOTED AS PART OF ITEM 9.0)														
5.1	6" DIA	10	RMTRS												
5.2	4" DIA	18	RMTRS												
6.0	SUPPLY & INSTALLATION OF M.S. CHANNELS OF FOLLOWING SIZES, INSTALLED ON STEEL OR RCC STRUCTURES, EITHER AS SUPPORT / MOUNTING OR AS CABLE WAY FOR SMALL DIA SINGULAR CABLE RUNS. THIS INCLUDES SUPPLY AND INSTALLATION OF ALL MOUNTING & INSTALLATION ACCESSORIES SUCH AS CLAMPS, HOLDERS, BOLTS, WASHER'S, COUPLERS, ETC. COMPLETE IN ALL RESPECTS														
6.1	50MM(W) X 50MM(D) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	22	RMTRS												
6.2	50MM (W) X 75MM (D) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	18	RMTRS												
7.0	SUPPLY AND INSTALLATION OF GALVANIZED STEEL CABLE LADDER AND ACCESSORIES, MADE UP OF STRUCTURAL QUALITY STEEL, HOT DIP GALVANIZED TO BS 729, AND SUITABLE FOR USE IN MARINE ENVIRONMENT. COMPLETE IN ALL RESPECTS INCLUDING SUPPLY AND INSTALTION OF ALL REQUIRED SPLICE PLATES, HEX NUT, BOLTS AND WASHERS, ETC. NOTES: 1.THE MENTIONED QUANTITIES ARE COMBINED FOR BOTH ELECTRICAL & INSTRUMENT CABLE LADDER RACKS. 2.OVERALL LADDER RACK SIDE HEIGHT SHALL BE 127MM (MAX.) 3.NUTS BOLTS AND WASHERS SHALL BE GALVANISED AND SUITABLY SIZED. 4.PROVISION TO BE MADE FOR BONDING BETWEEN RACK SECTIONS. 5.RUNGS TO BE SLOTTED, INSTALLED FLAT SIDE UP AND SPACED AT 300MM CENTRES.														
7.1	900MM WIDE STRAIGHT LADDER RACK	130	RMTRS												
7.2	600MM WIDE STRAIGHT LADDER RACK	128	RMTRS												
7.3	300MM WIDE STRAIGHT LADDER RACK	270	RMTRS												
7.4	150MM WIDE STRAIGHT LADDER RACK	330	RMTRS												
7.5	100MM WIDE STRAIGHT LADDER RACK	160	RMTRS												
7.6	90 DEG. HORIZONTAL FLAT BEND, 900MM	2	Nos.												
7.7	90 DEG. HORIZONTAL FLAT BEND, 600MM	3	Nos.												
7.8	90 DEG. HORIZONTAL FLAT BEND, 300MM	4	Nos.												
7.9	90 DEG. HORIZONTAL FLAT BEND, 150MM	5	Nos.												
7.10	90 DEG. HORIZONTAL FLAT BEND, 100MM	2	Nos.												
7.11	45 DEG. HORIZONTAL FLAT BEND, 900MM	3	Nos.												
7.12	45 DEG. HORIZONTAL FLAT BEND, 600MM	4	Nos.												
7.13	45 DEG. HORIZONTAL FLAT BEND, 300MM	1	Nos.												
7.14	45 DEG. HORIZONTAL FLAT BEND, 150MM	1	Nos.												
7.15	HORIZONTAL TEE 900MM	1	Nos.												
7.16	HORIZONTAL TEE 600MM	1	Nos.												
7.17	HORIZONTAL TEE 300MM	1	Nos.												
7.18	HORIZONTAL TEE 150MM	1	Nos.												
7.19	HORIZONTAL TEE 100MM	1	Nos.												

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
7.20	HORIZONTAL REDUCING/EXPANDING TEE 900MM X 600MM	1	Nos.												
7.21	HORIZONTAL REDUCING/EXPANDING TEE 600MM X 300MM	1	Nos.												
7.22	HORIZONTAL REDUCING/EXPANDING TEE 300MM X 150MM	1	Nos.												
7.23	HORIZONTAL CROSS 900MM	1	Nos.												
7.24	HORIZONTAL CROSS 600MM	1	Nos.												
7.25	HORIZONTAL CROSS 300MM	1	Nos.												
7.26	HORIZONTAL CROSS 150MM	1	Nos.												
7.27	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 900MM	1	Nos.												
7.28	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 600MM	1	Nos.												
7.29	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 300MM	1	Nos.												
7.30	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 150MM	1	Nos.												
8.0	MATERIAL FOR LADDER / RACK SUPPORTS SUPPLY FABRICATION AND INSTALLATION OF CABLE TRAY SUPPORT STRUCTURE COMPRISING OF VARIOUS CONFIGURATIONS OF FOLLOWING STRUCTURAL STEEL MEMBERS (AS SHOWN IN REFERRED TYPICAL DETAILS), COMPLETE IN ALL RESPECTS INCLUDING ALL MATERIALS / ACCESSORIES REQUIRED FOR FABRICATION, FIXING AND INSTALLATION.														
8.1	ANGLE 10MM THICKNESS	300	KG												
8.2	ANGLE 6MM THICKNESS	280	KG												
8.3	CHANNELS 10MM THICKNESS	45	KG												
8.4	CHANNELS 6MM THICKNESS	38	KG												
8.5	PLATE 6MM THK	40	KG												
8.6	PLATE 10MM THK	75	KG												
9.0	CONSTRUCTION OF CABLE DUCT BANKS OF FOLLOWING TYPES AT ROAD CROSSING AS PER REFERRED TYPICAL DETAILS COMPLETE IN ALL RESPECTS WITH ALL CIVIL MATERIAL, INCLUDING SUPPLY AND LAYING OF MS PIPES (OF DIMENSIONS AND QUANTITY) AS SHOWN IN REFERRED DRAWINGS. (ROAD WIDTH TO BE TAKEN AS 6 M FOR EACH ROAD CROSSING)														165-2-ELT-009
9.1	TYPE-A	3	Nos.												
9.2	TYPE-B	3	Nos.												
9.3	TYPE-C	8	Nos.												
9.4	TYPE-D	1	Nos.												
9.5	TYPE-E	1	Nos.												
10.0	CONSTRUCTION OF CABLE PITS / HAND HOLES / MAN HOLES OF FOLLOWING TYPES AS PER REFERRED TYPICAL DETAIL DRAWINGS COMPLETE IN ALL RESPECTS WITH ALL CIVIL MATERIAL AS SHOWN IN REFERRED DRAWINGS (COST OF PIPES SHOWN IN THE DRAWING SHALL NOT BE INCLUDED IN THIS ITEM AND SHALL BE QUOTED SEPARATELY UNDER ITEMS 9.0 & 5.0)														165-2-ELT-010
10.1	TYPE-A	2	Nos.												
10.2	TYPE-B	6	Nos.												
10.3	TYPE-C	4	Nos.												
11.1	EXCAVATION OF CABLE TRENCH 800MM(W) X 1000MM(D) AS PER CABLE LAYOUT DRAWING AND REFERRED TYPICAL INSTALLATION DETAILS. THE JOB ALSO INCLUDES BACKFILLING OF CABLE TRENCH AFTER CABLE LAYING. THIS INCLUDES PROVIDING AND LAYING OF LAYER OF FINE SAND ABOVE AND BELOW THE CABLE, PROVIDING AND LAYING OF CABLE TILES COVERING ENTIRE WIDTH OF THE TRENCH, BACKFILLING OF CABLE TRENCH WITH RUBBLE FREE SOIL, COMPACTING OF TRENCH, INSTALLATION OF DANGER TAPE AND INSTALLATION OF CABLE MARKERS.	510	Mtrs												165-2-ELL-003 165-2-ELT-006

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
11.2	EXCAVATION OF CABLE TRENCH 450MM(W) X 800MM(D) AS PER CABLE LAYOUT DRAWING AND REFERRED TYPICAL INSTALLATION DETAILS. THE JOB ALSO INCLUDES BACKFILLING OF CABLE TRENCH AFTER CABLE LAYING. THIS INCLUDES PROVIDING AND LAYING OF LAYER OF FINE SAND ABOVE AND BELOW THE CABLE, PROVIDING AND LAYING OF CABLE TILES COVERING ENTIRE WIDTH OF THE TRENCH, BACKFILLING OF CABLE TRENCH WITH RUBBLE FREE SOIL, COMPACTING OF TRENCH, INSTALLATION OF DANGER TAPE AND INSTALLATION OF CABLE MARKERS.	635	Mtrs												165-2-ELL-003 165-2-ELT-006
Total Price (1 to 11)															

NOTES:

- 1 All taxes shall be payable by contractor.
- 2 The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- 3 Test certificates and MTC's of all items (where applicable) shall be provided.
- 4 The charges shall be supported by verified quotation of Inspection Agency.
- 5 Copy of the SRO 678 (1)/2007 is given in **Annexure-XVIII**



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

UNIT PRICE SCHEDULE



0	04-06-2018	Issued for Tender	MF	NAK	MIAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
SCHEDULE OF RATES FOR ADDITIONAL ELECTRICAL WORKS
UNIT PRICE SCHEDULE

S. NO.	DESCRIPTION	QTY	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	MCC / DISTRIBUTION BOARDS SUPPLY AND INSTALLATION OF CUBICLES OF LV SWITCHGEAR (400 V) INCLUDING BUSBAR, BUS DROPPER, INTERNAL WIRING, CONNECTORS, METERING INDICATIONS AND PROTECTIONS.														
A.	ADDITIONAL CUBICLE FOR 101-MCC-01 OFW=800 X D=800 X H =2200 MM														
2.0	SUPPLY AND INSTALLATION OF FOLLOWING COMPONENTS OF LV SWITCHGEAR (400 V) INCLUDING BUSBAR, BUS DROPPER, INTERNAL WIRING, CONNECTORS, METERING INDICATIONS AND PROTECTIONS.														
	STARTERS:														
	A. DOL STARTERS														
	(I) 0.37 KW	1	Nos												
	(II) 1.5 KW	1	Nos												
	(III) 2.2 KW	1	Nos												
	(IV) 3.7 KW	1	Nos												
	(V) 5.5 KW	1	Nos												
	(VI) 7.5 KW	1	Nos												
	(VII) 11 KW	1	Nos												
	(VIII) 15 KW	1	Nos												
	(IX) 18.5 KW	1	Nos												
	(X) 22 KW	1	Nos												
	(XI) 30 KW	1	Nos												
	(XII) 37 KW	1	Nos												
	B. SOFT STARTERS														
	(I) 22 KW	1	Nos												
	(II) 30 KW	1	Nos												
	(III) 37 KW	1	Nos												
	(IV) 45 KW	1	Nos												
	(V) 55 KW	1	Nos												
	(VI) 75 KW	1	Nos												
	C. VARIABLE FREQUENCY DRIVES:														
	I 3.75 KW	1	Nos												
	II 5.5 KW	1	Nos												
	III 7.5 KW	1	Nos												
	IV 11 KW	1	Nos												
	V 15 KW	1	Nos												
	VI 18.5 KW	1	Nos												
	VII 22 KW	1	Nos												
	VIII 30 KW	1	Nos												
	IX 37 KW	1	Nos												
	X 45 KW	1	Nos												
	XI 55 KW	1	Nos												
	XII 75 KW	1	Nos												
	FEEDERS:														
	D. MCCB CIRCUIT BREAKER														
	(I) 400 A	1	Nos												
	(II) 600 A	1	Nos												
	(III) 800 A	1	Nos												
	(IV) 1000 A	1	Nos												
	(V) 1200 A	1	Nos												
	(VI) 1500 A	1	Nos												
Total Price (1 to 2)															

NOTES:

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THIS SHALL INCLUDE TO AND FROM TRAVEL EXPENSES, BOARDING / LODGING, INSURANCE, MEDICAL COVER AND ALL OTHER EXPENSES. THE ABOVE RATES WOULD ONLY BE APPLICABLE TO CALCULATE VARIATION IN SWITCHGEAR PRICES, IN CASE OF ADDITION, REDUCTION OR REPLACEMENT OF ANY OF THE ABOVE MENTIONED COMPONENTS / MODULES AS COMPARED TO ORIGINAL TENDER DESIGN, DUE TO POSSIBLE CHANGE IN LOAD KW RATINGS. CONTRACTOR / SUPPLIER SHALL REMAIN RESPONSIBLE TO INCORPORATE ALL SUCH CHANGES RECEIVED FROM OGDCL BEFORE START OF SWITCHGEAR FABRICATION.IT SHALL BE NOTED THAT THE ABOVE PRICE SCHEDULE SHALL FORM THE BASIS FOR CALCULATION OF PRICE VARIATION IN SWITCHGEAR (IF REQUIRED). BIDDER'S QUOTED PRICES SHALL BE INCLUSIVE OF ANY ASSOCIATED COSTS

ATTACHMENT - 4



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR FIELD INSTRUMENTS / DEVICES



0	04-06-2018	Issued for Tender	JAK	JAK	NAK
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

ITEM	MATERIAL DESIGNATION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	INSTRUMENTS														
	SUPPLY, INSTALLATION, HOOKUP, CALIBRATION, TESTING AND COMMISSIONING OF FOLLOWING INSTRUMENTS AS PER INSTRUMENT HOOKUP DRAWINGS AND INSTRUMENT DATA SHEETS/SPECIFICATIONS COMPLETE IN ALL RESPECTS. THE PRICES QUOTED SHALL BE INCLUSIVE OF: SUPPLY AND INSTALLATION OF ALL REQUIRED MOUNTING AND INSTALLATION ACCESSORIES SUCH AS MOUNTING STANDS / SUPPORTS, STANCHION, CLAMPS, NUTS, BOLTS, BASE ETC. (AS REFERRED IN TYPICAL DETAIL DRAWINGS). SUPPLY, INSTALLATION, CONNECTIONS, TESTING AND COMMISSIONING OF INSTRUMENT TUBINGS AND FITTINGS (SUCH AS CONNECTORS, COUPLINGS, INST. MANIFOLD VALVES, ETC) WITH ALL RELATED MOUNTING ACCESSORIES SUCH AS CLAMPS/TIES (FOR SECURING TUBING RUNS TO AVAILABLE SUPPORTS), TUBING SUPPORTS (WELDED TO AVAILABLE STEEL STRUCTURE), ETC. COMPLETE IN ALL RESPECTS. (AS REFERRED IN INSTRUMENT HOOKUP DRAWINGS).														FOLLOWING TYPICAL DRAWINGS SHALL REMAIN APPLICABLE TO ALL ITEMS COVERED IN THIS SECTION. 165-2-IDT-001 165-2-IDT-003
1.1	INSTRUMENTS														
1.1.1	PRESSURE INSTRUMENTS														
a)	PRESSURE GAUGES WITH BLOCK AND BLEED VALVE MANIFOLD	31	NOS.												165-2-DSI-001 165-2-IHU-001
b)	PRESSURE DIFFERENTIAL INDICATOR WITH 5 VALVE MANIFOLD	2	NOS.												165-2-DSI-006 165-2-IHU-005
1.1.2	TEMPERATURE INSTRUMENTS														
a)	TEMPERATURE INDICATORS WITH THERMOWELL	1	NO.												165-2-DSI-002 165-2-IHU-002
1.1.3	FLOW INSTRUMENTS														
a)	FLOW INDICATOR WITH FLOW TOTALIZER (TURBINE TYPE)	1	NO.												165-2-DSI-004 165-2-IHU-006
1.1.4	VALVES														
a)	PRESSURE SAFETY VALVE (1" x 2")	1	NO.												165-2-DSI-003
b)	PRESSURE SAFETY VALVE (3/4" x 1")	2	NOS.												165-2-DSI-003
c)	PRESSURE SAFETY VALVE (4" x 6")	2	NOS.												165-2-DSI-003
d)	PRESSURE SAFETY VALVE (6" x 8")	1	NO.												165-2-DSI-003
1.1.5	LEVEL INSTRUMENTS														
(a)	LEVEL INDICATOR (FLOAT & MAGNETIC TYPE)	1	NO.												165-2-DSI-005 165-2-IHU-003
(b)	LEVEL TRANSMITTER (RADAR TYPE)	1	NO.												165-2-DSI-007 165-2-IHU-004
1.2	MISCALLENEOUS INSTRUMENTS														
a)	RESTRICTION ORIFICE	1	NO.												165-2-DSI-008
b)	MOISTURE ANALYZER	1	NO.												165-2-DSI-009

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

ITEM	MATERIAL DESIGNATION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
2.0	MISC. TUBING / FITTINGS														
	RATES AGAINST FOLOWING ITEMS SHALL NOT BE APPLICABLE FOR SECTION - 1.0 OF THIS BOQ. THESE RATES SHALL ONLY BE APPLICABLE FOR ANY QUANTITIES NOT COVERED IN INSTRUMENT HOOKUP DRAWINGS REFERRED IN SECTION - 1.0														
	SUPPLY & INSTALLATION OF FOLLOWING TUBING / FITTINGS:														
a)	SEAMLESS STAINLESS STEEL TUBING, 12MM X 2.0MM WT, ASTM A269 GR. TP316	150	MTR.												
b)	DOUBLE FERRULE COMPR. TYPE STRAIGHT COUPLING, NPT SCREW, 12MM OD., MATERIAL AISI 316 SS.	30	NOS.												
c)	MALE STUD COUPLING, 1/2" NPT X 12MM OD. , MATERIAL AISI 316 SS.	15	NOS.												
d)	COMPRESSION ENDS INSTRUMENT VALVE, 12MMOD , MATERIAL AISI 316 SS.	5	NOS.												
3.0	F&G DETECTORS / DEVICES														
3.1	GAS DETECTORS (INFRA RED) POINT TYPE														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING & COMMISSIONING OF GAS DETECTOR, INFRA-RED, POINT TYPE, SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, COMPLETE IN ALL RESPECTS INCLUDING SUPPLY, FABRICATION AND INSTALLATION OF ALL SUPPORT / STANDS, SUNSHADES, MOUNTING AND INSTALLATION ACCESSORIES AS SHOWN IN REFERRED DRAWINGS AND DATA SHEET. THIS JOB ALSO INCLUDES SUPPLY & INSTALLATION OF SUNSHADES COMPLETE IN ALL RESPECTS.	6	NOS.												165-2-DSF&G-001 165-2-IDT-002
3.2	FLAME DETECTORS (INFRA-RED TYPE)														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING & COMMISSIONING OF FLAME DETECTOR (UV / IR) TYPE, SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, COMPLETE IN ALL RESPECTS INCLUDING SUPPLY, FABRICATION AND INSTALLATION OF ALL SUPPORT / STAND, MOUNTING AND INSTALLATION ACCESSORIES AS SHOWN IN REFERRED DRAWINGS AND DATA SHEETS. THIS JOB ALSO INCLUDES SUPPLY & INSTALLATION OF SUNSHADES COMPLETE IN ALL RESPECTS.	6	NOS.												165-2-DSF&G-002 165-2-IDT-002
3.3	MANUAL ALARM CALL POINT (MCP)														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING AND COMMISSIONING OF MANUAL ALARM CALL POINTS, BREAK GLASS TYPE, SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, IP65 COMPLETE IN ALL RESPECTS INCLUDING SUPPLY, FABRICATION AND INSTALLATION OF ALL SUPPORT/ STAND, MOUNTING AND INSTALLATION ACCESSORIES AS SHOWN IN REFERRED DRAWINGS AND DATA SHEETS.	3	NOS.												165-2-DSF&G-004 165-2-IDT-002
3.4	MISCELLANIOUS F&G DEVICES														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING AND COMMISSIONING OF HORN SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, IP65, AS PER REFERRED DATA SHEET COMPLETE IN ALL RESPECTS.	3	NOS.												165-2-DSF&G-003 165-2-IDT-002

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
b)	SUPPLY, INSTALLATION, CALIBRATION, TESTING AND COMMISSIONING OF BEACON SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, IP65, AS PER REFERRED DATA SHEET COMPLETE IN ALL RESPECTS.	3	NOS.												165-2-DSF&G-005 165-2-IDT-002
4.0 INSTRUMENT CABLE															
4.1	SUPPLY, LAYING, INSTALLATION, TERMINATION, DRESSING & TAGGING ETC. OF INSTRUMENT CABLES CONFORMING TO BS 5308 OR EN 50288-7, CU CONDUCTOR, PE INSULATED, 300/500V GRADE, FLAME CHARACTERISTICS TO IEC 60331. COMPLETE IN ALL RESPECTS INCLUDING BUT NOT LIMITED TO CABLE TIES, FERRULE TAGS, LUGS, ETC. CABLES TO BE LAID IN CONDUIT, TRENCH OR TRAY, AS PER SITE CONDITIONS.														165-2-SPI-020 165-2-ICL-002
a)	1Q-1.5 SQ MM CU / MICA / XLPE / ISOS / LSHF/SWA/LSHF	300	RM												
b)	1Q-1.5 SQ MM CU / MICA / XLPE / OSCR / LSHF/SWA/LSHF	350	RM												
c)	1P-1.5 SQ MM CU / MICA / XLPE / OSCR / LSHF / SWA / LSHF	325	RM												
d)	10P-1.5 SQ MM CU / MICA / XLPE / ISOS / LSHF / SWA / LSHF	275	RM												
e)	10P-1.5 SQ MM CU / MICA / XLPE / OSCR / LSHF / SWA / LSHF	350	RM												
f)	1P x 1.5 sq. mm CU / PE / OSCR / PVC / SWA / PVC	500	RM												
g)	5P x 1.5 sq. mm CU / PE / ISOS / PVC / SWA / PVC	175	RM												
h)	5P x 1.5 sq. mm CU / PE / OSCR / PVC / SWA / PVC	500	RM												
5.0 INSTALLATION ONLY INSTRUMENT CABLE															
5.1	LAYING, INSTALLATION, TERMINATION, DRESSING & TAGGING ETC. OF OWNER SUPPLIED INSTRUMENT CABLES COMPLETE IN ALL RESPECTS INCLUDING BUT NOT LIMITED TO CABLE TIES, FERRULE TAGS, LUGS, ETC. CABLES TO BE LAID IN CONDUIT, TRENCH OR TRAY, AS PER SITE CONDITIONS.														165-2-SPI-020
a)	5P x 1.5 sq. mm CU / PE / ISOS / PVC / SWA / PVC	250	RM												
b)	10P x 1.5 sq. mm CU / PE / OSCR / PVC / SWA / PVC	250	RM												
6.0 JUNCTION BOXES															
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF JUNCTION BOXES SUITABLE FOR CLASS 1, DIV. 2, IP-65, GRP OR METALLIC ENCLOSURE COMPLETE WITH CABLE ENTRIES, GLANDS, GLAND PLATES, INTERNAL / EXTERNAL EARTH STUD, TERMINAL BLOCK, EARTHING RAIL, ETC. AS PER REFERRED DATASHEET. THE JOB INCLUDES SUPPLY, FABRICATION & INSTALLATION OF MOUNTING FRAME / STANDS COMPLETE IN ALL RESPECTS INCLUDING ALL INSTALLATION & MOUNTING ACCESSORIES AS SHOWN IN REFERRED TYPICAL INSTALLATION DETAIL.														165-2-SPI-019 165-2-SPI-020 165-2-DSF&G-006 165-2-IDT-006
a)	JUNCTION BOXES FOR F&G ANALOG SIGNALS	2	NOS.												
b)	JUNCTION BOXES FOR F&G DIGITAL SIGNALS	3	NOS.												
c)	JUNCTION BOXES FOR ANALOG SIGNALS	1	NO.												
d)	JUNCTION BOXES FOR DIGITAL SIGNALS	1	NO.												

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
7.0	INSTRUMENT CABLE GLANDS & ACCESSORIES														
	SUPPLY AND INSTALLATION OF BRASS CABLE GLANDS OF FOLLOWING SIZES CONFORMING TO BS 6121 PART 1 AND SUITABLE FOR PE INSULATED SCREENED OR O/A SCREEN, BLACK PVC SHEATH INSTRUMENT CABLES. GLANDS TO BE SUPPLIED COMPLETE WITH POLYCHLOROPRENE (P.C.P) SHROUD AND SHALL BE SUITABLE FOR CLASS 1, ZONE 2, IP 65 APPLICATIONS.(EACH GLAND SHALL BE PROVIDED WITH METALLIC EARTH TAG (RING) FOR 6-10MM ² EARTHING TERMINATION)														165-2-SPI-019 165-2-SPI-020
7.1	FOR INSTRUMENT END														
a)	20S E1FW (FOR ARMOURED CABLES)	6	NOS.												
b)	20 E1FW (FOR ARMOURED CABLES)	9	NOS.												
c)	25 E1FW (FOR ARMOURED CABLES)	12	NOS.												
7.2	FOR JUNCTION BOXES END														
a)	20 E1FW (FOR ARMOURED CABLES)	9	NOS.												
b)	25 E1FW (FOR ARMOURED CABLES)	15	NOS.												
c)	32 E1FW (FOR ARMOURED CABLES)	5	NOS.												
d)	40 E1FW (FOR ARMOURED CABLES)	2	NOS.												
8.0	M.S. CHANNELS														
	SUPPLY & INSTALLATION OF M.S. CHANNELS OF FOLLOWING SIZES, INSTALLED ON STEEL OR RCC STRUCTURES, EITHER AS SUPPORT / MOUNTING OR AS CABLE WAY FOR SMALL DIA. CABLE RUNS. THIS INCLUDES SUPPLY AND INSTALLATION OF ALL MOUNTING & INSTALLATION ACCESSORIES SUCH AS CLAMPS, HOLDERS, BOLTS, WASHER'S, COUPLERS, ETC. COMPLETE IN ALL RESPECTS														
a)	50 MM(w) X 50 MM(d) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	50	RM												
b)	50 MM(w) X 75MM (d) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	50	RM												
9.0	CABLE TRENCH														
	EXCAVATION OF CABLE TRENCH 600MM(W) X 800MM(D) AS PER CABLE LAYOUT DRAWING. THE JOB ALSO INCLUDES BACKFILLING OF CABLE TRENCH AFTER CABLE LAYING. THIS INCLUDES PROVIDING AND LAYING OF LAYER OF FINE SAND ABOVE AND BELOW THE CABLE, PROVIDING AND LAYING OF CABLE TILES COVERING ENTIRE WIDTH OF THE TRENCH, BACKFILLING OF CABLE TRENCH WITH RUBBLE FREE SOIL, COMPACTING OF TRENCH, INSTALLATION OF CABLE MARKERS.	350	MTRS												165-2-ICL-001
10.0	G.I. CONDUIT														
	SUPPLY AND INSTALLATION OF FOLLOWING GI CONDUIT, BURIED OR SUPPORTED ON STRUCTURE AS PER ELECTRICAL CABLE LAYOUT DRAWING COMPLETE IN ALL RESPECTS INCLUDING SUPPLY AND INSTALLATION OF ALL REQUIRED CONDUIT FITTINGS (UNIONS, ELBOWS, BENDS, TEES, ETC.) AND ALL REQUIRED MOUNTING AND INSTALLATION ACCESSORIES.														
a)	25 MM DIA	200	RM												
b)	50 MM DIA	50	RM												
c)	75 MM DIA	25	RM												

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
11.0	PLC														
	SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF SIL-2 PLC SYSTEM AS MAIN PLANT PLC PACKAGE IN COMPLETE ACCORDANCE WITH THE DOCUMENT 'SCOPE OF WORK, SPECIFICATION AND IO LIST COMPLETE IN ALL RESPECT	1	JOB												165-2-SPI-011 165-2-SPI-018
12.0	SPARES														
	2 (TWO) YEARS SPARE PARTS FOR PLC (BIDDER TO SUBMIT THE 2 YEARS SPARE PARTS LIST WITH BID)	1	JOB												
13.0	TOOLS														
	SPECIAL TOOLS REQUIRED FOR COMPLETION THE JOB (BIDDER TO SUBMIT LIST OF SPECIAL TOOLS WITH BID)	1	JOB												
	TOTAL PRICE (1 to 14)														

NOTES:-

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- TEST CERTIFICATES AND MTC'S OF ALL ITEMS (WHERE APPLICABLE) SHALL BE PROVIDED.
- THE CHARGES SHALL BE SUPPORTED BY VERIFIED QUOTATION OF INSPECTION AGENCY.
- THE INSTALLATION RATES QUOTED BY BIDDER AGAINST EACH ITEM SHALL BE DEEMED TO BE APPLICABLE ALSO ON ITEMS WHICH ARE OWNER SUPPLIED AND WHOSE INSTALLATION ONLY IS REQUIRED FROM PC CONTRACTOR.

ATTACHMENT - 5



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS



0	05-06-2018	Issued for Tender	MSH	SS	SMM
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
1.0	<u>EARTH WORKS</u>			
1.1	<u>EXCAVATION</u> EXCAVATION FOR FOUNDATIONS TO THE REQUIRED DEPTH WHEREVER REQUIRED AS SHOWN ON DRAWINGS IN ALL KINDS OF SOIL DRY OR WET, HARD, AVERAGE OR SOFT INCLUDING DEWATERING AND SHORING IF REQUIRED, BACKFILLING USING EXCAVATED SOIL IN 150 mm COMPACTED THICKNESS TO 95% MODIFIED PROCTOR RELATIVE DRY DENSITY AND DISPOSAL OF EXCESS MATERIAL AT DESIGNATED PLACES COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.2	<u>IMPORTED WELL GRADED COARSE SAND FILLING (INSIDE RING WALL)</u> SUPPLYING, FILLING AND COMPCTING APPROVED WELL GRADED COARSE SAND WHEREVER SPECIFIED IN THE DWGs. INCLUDING SPREADING AND COMPACTING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.3	<u>CUTTING</u> CLEARING, GRUBBING, REMOVING ALL BUSHES, DUNES AND PERFORMING CUTTING WORKS INCLUDING MAKING GRADES AND SLOPES TO ACHIEVE THE PROPOSED FINISH GRADE LEVELS AS SHOWN ON DRAWINGS INCLUDING DRESSING, WATERING AND CONSOLIDATION BY RAMMING AND COMPACTED TO ENGINEER'S INCHARGE SATISFACTION COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY OWNER'S REPRESENTATIVE/CONSULTANT.	CU.M		
1.4	<u>FILLING</u> CLEARING, GRUBBING AND PERFORMING FILLING WORKS INCLUDING, MAKING GRADES AND SLOPES TO ACHIEVE FINISH GRADE LEVEL AS SHOWN ON DRAWINGS INCLUDING DRESSING, WATERING AND CONSOLIDATION BY RAMMING IN LAYERS NOT EXCEDDING 150 mm THICK TO FULL COMPACTION TO ATTAIN 95% MODIFIED PROCTOR RELATIVE DENSITY AS PER ASTM D 1157. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY THE ENGINEER.			
	i) USING THE APPROVED CUT SOIL FROM WITHIN THE PLOT LIMITS	CU.M		
	ii) USING APPROVED IMPORTED FILL	CU.M		
1.5	<u>STONE SOLING</u> SUPPLYING AND LAYING STONE SOLING OF HARD CORE WITH BROKEN STONE OF REQUIRED SIZE UNDER THE FOUNDATIONS AND WHEREVER REQUIRED INCLUDING FILLING VOIDS SPALLS PACKING AND CHIPS OF STONE, WATERING, COMPACTING, RAMMING AND LEVELING, ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.6	<u>STONE PITCHING</u> PROVIDING AND LAYING STONE PITCHING TO THE THICKNESS AS MENTIONED ON THE DRAWINGS WITH BROKEN STONE OF REQUIRED SIZE AS IN DYKE / EMBANKMENT WALLS AND WHEREVER REQUIRED INCLUDING FILLING VOIDS AND PACKING WITH SPALLS OF STONE, WATERING, RAMMING AND SURFACE LEVELING, POINTING OF JOINTS WITH 1:4 CEMENT SAND MORTAR. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
1.7	<u>FINE SAND CUSHION</u> PROVIDING AND LAYING FINE SAND CUSHION BELOW HEAVY DUTY PAVERS. COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE/ ENGINEER.	CU.M		
1.8	<u>ASPHALT SAND MIX</u> PROVIDING AND APPLYING ASPHALT SAND MIX LAYER 75 mm THICK, ON THE FIRM AND COMPACTED SURFACE INCLUDING TACK COAT @ 0.75 LITRES / SQ.M. ASPHALT COMPACTING WITH ASTM D 946 OR AASHTO M20 PENETRATION GRADE 60 / 70 WITH MIXING PROPORTION OF 6% ASPHALT, 18% CRUSHED STONE (2.5 mm - 5 mm), 66% WELL GRADED SAND AND FINE AGGREGATES (0.07 mm - 0.42 mm). THE ASPHALT SURFACE SHALL BE COMPACTED TO THE REQUIRED SLOPE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
1.9	<u>CRUSHED STONE / GRAVEL FILLING</u> PROVIDE AND FILL WELL GRADED CRUSHED STONE / GRAVEL AS PER ASTM D-693 SIZE 10 - 20mm WHEREVER SPECIFIED IN THE DWGs. INCLUDING SPREADING AND COMPACTING. THE SURFACE VOIDS SHALL BE FILLED UP WITH FINE AGGREGATE OF GRADATION SIZE NO. 10. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.10	<u>BRICK PAVING</u> PROVIDE AND FIXING OF BRICK PAVING (75mm thk.) WITH SAND CUSHION LAYER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQM		
1.11	<u>FILLING OF SELECT MATERIAL A-3 (AS PER AASTHO SOIL CLASSIFICATION)</u> SUPPLYING, FILLING AND COMPCTING APPROVED A3 MATERIAL WHEREVER SPECIFIED IN THE DWGs. INCLUDING SPREADING AND COMPACTING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER	CU.M		
2.0	<u>PLAIN & REINFORCED CEMENT CONCRETE</u>			
2.1	<u>C.C 1:4:8 USING O.P CEMENT</u> PROVIDING AND LAYING CEMENT CONCRETE 1:4:8 UNDER FOUNDATIONS WHEREVER REQUIRED WITH APPROVED QUALITY 25mm AND DOWN SIZE STONE OR GRADED GRAVEL AND APPROVED QUALITY OF LOCAL RIVER SAND INCLUDING ALL FORMWORK RODING VIBRATING, LEVELING, COMPACTING, SPREADING AND CURING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.2	<u>REINFORCED CEMENT CONCRETE (3,750 PSI) USING O.P. CEMENT</u> PROVIDING AND LAYING RCC OF 3,750 PSI (CUBICAL STRENGTH) AS MENTIONED IN THE DRAWING & RELATED B.O.Q USING APPROVED QUALITY 20mm MAXIMUM CRUSHED GRADED STONES AND FINE AGGREGATE OF APPROVED QUALITY INCLUDING APPROVED FORMWORK AND ITS REMOVAL, ALL OPERATIONS OF VIBRATING, LEVELING, COMPACTING, SPREADING, CURING AND TESTING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
2.3	<u>REINFORCED CEMENT CONCRETE (3,750 PSI) USING S.R CEMENT</u> PROVIDING AND LAYING RCC OF 3,750 PSI (CUBICAL STRENGTH) AS MENTIONED IN THE DRAWING & RELATED B.O.Q USING APPROVED QUALITY 20mm MAXIMUM CRUSHED GRADED STONES AND FINE AGGREGATE OF APPROVED QUALITY INCLUDING APPROVED FORMWORK AND ITS REMOVAL, ALL OPERATIONS OF VIBRATING, LEVELING, COMPACTING, SPREADING, CURING AND TESTING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.4	<u>C.C 1:2:4 USING O.P. CEMENT (3000 PSI)</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.5	<u>C.C 1:3:6 USING O.P. CEMENT (1500 PSI)</u> PROVIDING AND LAYING 1:3:6 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, VIBRATING, LEVELING, SPREADING, AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.6	<u>C.C 1:2:4 USING S.R CEMENT (3000 PSI)</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.7	<u>C.C 1:3:6 USING S.R CEMENT (1500 PSI)</u> PROVIDING AND LAYING 1:3:6 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, VIBRATING, LEVELING, SPREADING, AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.8	<u>1:2:4 CEMENT CONCRETE</u>			
a)	<u>FLOOR IN PANELS USING O.P. CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE FLOORING IN PANELS. THE FLOORING SHALL BE MADE SAVE FROM SEEPAGE. AN ANTI WATER LOGGING COMPONENT IGAS LIQUID TO BE APPLIED @ 0.3 KG / SQ.M OVER THE EARLIER PREPARED CONCRETE BASE OR RCC SLAB THEN A POLYTHENE SHEET OF 90/100 MICRON WILL BE SPREAD. FINALLY THE 1:2:4 CC FLOORING IN PANEL HAVING STEEL DOWELS TO FASTEN THE SUCCESSIVE PANELS WITH PROPER FINISH, ETC. TO BE LAID. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
b)	<u>1:2:4 IN SITU USING O.P. CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE IN SITU WHEREVER REQUIRED. A CHEMICAL COMPOUND SIKA LATEX WILL BE MIXED WITH THE CONCRETE TO REDUCE WATER LOGGING. THIS JOB INCLUDES FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
c)	<u>FLOOR IN PANELS USING S.R CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE FLOORING IN PANELS. THE FLOORING SHALL BE MADE SAVE FROM SEEPAGE. AN ANTI WATER LOGGING COMPONENT IGAS LIQUID TO BE APPLIED @ 0.3 KG / SQ.M OVER THE EARLIER PREPARED CONCRETE BASE OR RCC SLAB THEN A POLYTHENE SHEET OF 90/100 MICRON WILL BE SPREAD. FINALLY THE 1:2:4 CC FLOORING IN PANEL HAVING STEEL DOWELS TO FASTEN THE SUCCESSIVE PANELS WITH PROPER FINISH, ETC. TO BE LAID. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
d)	<u>1:2:4 IN SITU USING S.R CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE IN SITU WHEREVER REQUIRED. A CHEMICAL COMPOUND SIKA LATEX WILL BE MIXED WITH THE CONCRETE TO REDUCE WATER LOGGING. THIS JOB INCLUDES FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.9	<u>RCC 1:2:4 IN FLOOR USING O.P. CEMENT</u> PROVIDING AND LAYING 1:2:4 RCC FLOORING IN PANELS AS PER DETAILS SHOWN IN DRAWING. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
2.10	<u>RCC 1:2:4 IN FLOOR USING S.R CEMENT</u> PROVIDING AND LAYING 1:2:4 RCC FLOORING IN PANELS AS PER DETAILS SHOWN IN DRAWING. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
3.0	<u>STEEL WORKS</u>			
3.1	<u>REINFORCEMENT</u> PROVIDING AND LAYING STEEL REINFORCEMENT OF 60,000 PSI YIELD STRENGTH (AS PER ASTM A-615) INCLUDING THE COST OF STRAIGHTENING, CUTTING, BENDING, BINDING, WASTAGE AND SUCH OVERLAPS AS ARE NOT SHOWN OVER THE DRAWINGS, PLACING IN POSITION ON M.S, CHAIRS, TYING WITH BINDING WIRES, ETC., IN ALL KINDS OF RCC WORK INCLUDING THE COST OF 18 GAUGE BINDING WIRES, CHAIRS, SPACERS ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	TON		
4.0	<u>MASONRY WORKS</u>			
4.1	<u>BLOCK MASONRY</u> PROVIDING AND LAYING CEMENT CONCRETE MACHINE MADE SOLID BLOCKS (1200 psi) SET IN 1:4 CEMENT SAND MORTAR INCLUDING CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
4.2	<u>BRICK MASONRY</u> PROVIDING AND LAYING BURNT BRICK MASONRY (SIZE 230 x 115x 65mm) HAVING STRENGTH 1400 PSI AS SHOWN IN DRAWINGS. IT SHOULD BE THOROUGHLY SOAKED IN WATER BEFORE BEING LAID AND JOINED IN CEMENT MORTAR 1:4 STRAIGHT OR TO CURVE WITH INNER RADIUS. BRICK SHOULD BE HARD, SQUARE, EVEN IN SIZE AND TO BE FREE FROM NODULES OF LIME AND OTHER IMPURITIES INCLUDING ALL OPERATIONS OF CURING AND TESTING ETC. INCLUDING PROVIDING DOWELS FOR ANCHORAGE BETWEEN BRICK MASONRY AND R.C.C. COLUMN. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
4.3	<u>BRICK PITCHING</u> PROVIDING AND LAYING BRICK PITCHING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
5.0	<u>CEMENT PLASTERING, ROOFING AND FLOORING WORKS</u>			
5.1	<u>CEMENT PLASTER</u> PROVIDING AND LAYING PLASTER WITH CEMENT SAND MORTAR ON BRICK AND CONCRETE SURFACES, AT ANY HEIGHT, AS SHOWN ON THE DRAWINGS WITH G.I EXPANDED METAL AT THE INTERFACES OF STRUCTURES OF DIFFERENT MATERIALS, PLASTER STOPPER, CORNER BEADS, CHANNELS OF MAKING GROOVES AND DRIP COURSE ETC. WHEREVER REQUIRED INCLUDING HACKING, STAGGING AND CURING UP TO ANY HEIGHT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	12mm THICK PLASTER WITH 1:4 CEMENT SAND MORTAR ON ALL INTERIOR SURFACES.	SQ.M		
ii)	20mm THICK PLASTER WITH 1:4 CEMENT SAND MORTAR ON ALL EXTERNAL SURFACES.	SQ.M		
iii)	12mm THICK 1:4 CEMENT SAND PLASTER MIXED WITH PUDLO @ 2.25 KG/Bag. IN WATER RETAINING STRUCTURE.	SQ.M		
5.2	<u>ROOF SCREEDING</u> MESH OF NOMINAL STEEL OF # 3 @ 300 C/C, 50-75 mm THICK (AVG.) SCREEDING WITH A LAYER OF BITUMEN SAND MIX. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
5.3	<u>DAMP PROOF COURSE</u> PROVIDING AND LAYING 50mm THICK DPC (1:2:4 CC) HAVING 12mm THICK LAYER OF (1:3) CEMENT SAND MORTAR ON THE TOP. BITUMEN COATING (10/20 GRADE) WITH A POLYTHENE SHEET OF 90/100 MICRON SHALL BE LAID BETWEEN THE DPC AND PLINTH BEAM TO CONTROL WATER LOGGING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
5.4	<u>TILES WORK</u> PROVIDING AND FIXING TILES FOR FLOORS WITH APPROVED SHADE, LAID OVER A BASE OF (1:3) C.S MORTAR AND APPROVED DRY BOND (SIKA / EQUIVALENT) INCLUDING SKIRTING & DADO SETTING IN CEMENT SLURRY FILLING THE JOINTS WITH WHITE CEMENT OR PIGMENT OF APPROVED SHADE AND APPROVED TYPE OF DRY BOND. IT ALSO INCLUDES COST OF WASHING, CLEANING AND CURING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	POCELAIN TILES BY MASTER OR ANY APPROVED MAKE (PRIME QUALITY)	SQ.M		
ii)	NON-SLIP CERAMIC TILES BY MASTER OR ANY APPROVED MAKE (PRIME QUALITY)	SQ.M		
iii)	GLAZED CERAMIC TILES BY MASTER OR ANY APPROVED MAKE (PRIME QUALITY)	SQ.M		
iv)	ANTI STATIC TILES BY APPROVED VENDOR	SQ.M		
v)	ACID RESISTANCE CLAY TILES FLOOR	SQ.M		
6.0	<u>COLORING</u>			
6.1	<u>DISTEMPER</u> PROVIDING AND APPLYING 2 COATS OF OIL BOUND DISTEMPER OF ICI / BERGER / NIPPON OR EQUIVALENT OVER A COAT OF PRIMER. DISTEMPER SHOULD BE OF APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		

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6.2	<u>PLASTIC EMULSION</u> PROVIDING AND APPLYING 2 COATS OF PLASTIC EMULSION OF ICI / BERGER / NIPPON OR EQUIVALENT OVER A COAT OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
6.3	<u>WEATHER SHIELD</u> PROVIDING AND APPLYING 2 COATS OF WEATHER SHIELD OF ICI / BERGER / NIPPON OR EQUIVALENT OVER A COAT OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
6.4	<u>SYNTHETIC ENAMEL</u> PROVIDING AND APPLYING 2 COATS OF SYNTHETIC ENAMEL BY ICI / BERGER / NIPPON OR EQUIVALENT OVER A COATS OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	ON CONCRETE / PLASTER SURFACE	SQ.M		
ii)	ON WOODEN SURFACE	SQ.M		
iii)	ON STEEL SURFACE	SQ.M		
7.0	<u>FENCE, DOORS, WINDOWS & VENTILATORS</u>			
7.1	<u>ALUMINUM WINDOWS AND VENTILATORS</u> PROVIDING AND FIXING FULL GLAZED (OR HALF GLAZED WHERE RQUIRED) POWDER COATED ALUMINUM SAFETY WINDOWS AND VENTILATORS OF APPROVED MANUFACTURER (PRIME ALUMINIUM / LUCKY ALUMINIUM / ALCOP) OF FRAME THICKNESS 1.6mm, USING (PREMIUM MODEL OF ANODIZED BRONZE OR ALUMINUM EXTRUDED), SCREWS, GLAZED WITH DISTORTION FREE IMPORTED TINTED SAFETY GLASS AS SPECIFIED AND FLY PROOFING, COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	WINDOWS	SQ.M		
ii)	VENTILATORS	SQ.M		
7.2	<u>ALUMINUM DOORS</u> PROVIDING AND FIXING GLAZED COLOUR ANODIZED (OF APPROVED SHADE) POWDER COATED ALUMINUM SWING SAFETY DOOR (WITH SAFETY PUSH HANDLE WHERE REQUIRED) OF APPROVED MANUFACTURERS (PRIME ALUMINIUM / LUCKY ALUMINIUM / ALCOP) OF FRAME THICKNESS 1.8mm, USING SCREWS, GLAZED WITH DISTORTION FREE IMPORTED TINTED SAFETY GLASS AND FIXING ON CONCRETE, WOODEN OR STEEL FRAME. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
7.3	<u>STEEL DOORS.WINDOWS & VENTILATORS</u> SUPPLYING AND FIXING JOISTS, CHANNEL, ANGLE, TEE SECTIONS, GUARD BARS, HOOKS, HOLD FAST, GATES, GRILLS ETC., ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 2 COATS OF SYNTHETIC ENAMEL BY ICI / BERGER / NIPPON OR EQUIVALENT OVER A COATS OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	STEEL SWING DOORS / GATES 18 GUAGE MS PLATE (WITH OR WITHOUT 5mm THICK TINTED GLASS)	SQ.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
ii)	M. S. LOUVERED DOORS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
iii)	M. S. LOUVERED WINDOWS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
iv)	M. S. LOUVERED VENTILATORS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
v)	M. S. GLAZED VENTILATORS WITH 5mm THICK TINTED GLASS & LOUVERED VENTILATORS (COMBINATION)	SQ.M		
vi)	FENCE WINDOW (50x50mm DIAMOND SHAPED GALVANIZED CHAIN LINK MESH WITH DIA. 3.15mm WIRE) WITH FRAME	SQ.M		
vii)	FENCE DOOR (50x50mm DIAMOND SHAPED GALVANIZED CHAIN LINK MESH WITH DIA. 3.15mm WIRE, DIA. 38 x 5 G.I PIPE BRACING & SLIDING LATCH WITH PAD LOCK) WITH FRAME	SQ.M		
viii)	M. S. GLAZED WINDOW WITH 5mm THICK TINTED GLASS	SQ.M		
ix)	M. S. LOUVERED VENTILATORS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm) WITH EXHAUST FAN (600 X 600)	SQ.M		
x)	M. S. GLAZED VENTILATOR WITH 5mm THICK TINTED GLASS	SQ.M		
xi)	STEEL SHUTTER DOOR	SQ.M		
xii)	STEEL SLIDING DOOR (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
7.4	<u>HANDRAILING</u> SUPPLYING AND FIXING RAILINGS. ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 03 COATS OF ZINC PHOSPHATE AND 01 COAT OF PRIMER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	RM		REFER DRAWING FOR DETAIL
7.5	<u>WOODEN DOORS</u> SUPPLYING AND FIXING SOLID/ FLUSH DOORS CONSISTING OF DOORS 38 mm THICK CONSISTING OF STEEL FRAME 16SWG AS PER DRAWING WITH 5 mm THICK COMMERCIAL PLY IMPORTED QUALITY, SOLID SHUTTER SINGLE/DOUBLE LEAVES WITH SHEESHAM LEAVING ETC. HAVING APPROVED HARDWARE, INCLUDING COST OF APPLICATION OF SOLIGNUM (TIMBERTONE MADE IN ENGLAND / GERMANY). ONE SET OF MORTISE LOCK OF ALPHA W-DOUBLE LOCK MADE IN JAPAN BEARING WITH ROUND KNOB, BEADING, ARCHITRAVE OXIDIZED FITTING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
8.0	<u>SANITARY FITTINGS</u>			
8.1	<u>WATER CLOSET</u>			
a)	SUPPLYING AND FIXING WATER CLOSET APPARATUS EUROPEAN PATTERN, COMPLETE COMPRISING CLOSET, 13 LITRES CISTERN FLUSHING (LOW DOWN), FLUSH PIPE, BACK LITE SEAT ETC., SIZE TO BE APPROVED BY OWNER'S REPRESENTATIVE ENGINEER, FIXED TO CONCRETE/BRICK WORK, PORTA OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
b)	SUPPLYING AND FIXING WATER CLOSET ASIATIC PATTERN, CLASS "A", COMPLETE WITH CLOSET, FOOT REST, 13 LITRES FLUSHING CISTERN, FLUSH PIPE ETC; SIZE TO BE APPROVED BY OWNER'S REPRESENTATIVE ENGINEER, FIXED TO CONCRETE/BRICK WORK, PORTA OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		

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8.2	<u>WASH BASIN</u> SUPPLYING AND FIXING WASH HAND BASIN WITH GLAZED WARE PEDESTAL, SINGLE HOLE, COMPLETE WITH WASTE PIPE, WASTE COUPLING, ONE CHROMIUM PLATED CHAIN AND PLUG, MIXER, AND BRACKET ETC; FIXED TO CONCRETE, PORTA OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
8.3	<u>SHOWER</u> SUPPLYING AND FIXING TOILET SHOWER 15 mm DIA BY MASTER (TO BE APPROVED BY CLIENT) OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
8.4	<u>MIRROR</u> SUPPLYING AND FIXING MIRROR OF REQUIRED SIZE (5 mm THICK), BELGIUM OR ANY EQUIVALENT FOREIGN MADE, EDGES AND BACK COVERED WITH FINE HARD BOARD FURNISHED, FIXED TO CONCRETE, BRICK WALL. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQM		
8.5	<u>GEYSER</u> PROVIDING AND INSTALLING ELECTRICAL WATER GEYSER OF SINGER OR FIREX OR ANY EQUIVALENT MAKE CAPACITY 150 LITERS TO 250 LITERS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
8.6	<u>FIBER GLASS WATER TANKS</u> PROVIDING AND FIXING WATER TANKS MADE OF FIBER GLASS BY "FIBRETECH" OR ANY EQUIVALENT MADE, FIXED WITH INLET, OUTLET, OVERFLOWS AND WASHOUT CONNECTION PIECES COMPLETE WITH MANHOLE AND HINGED COVER, SUPPLY AND FIXING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	300 GALLONS	NO.		
ii)	500 GALLONS	NO.		
iii)	1000 GALLONS	NO.		
iv)	1500 GALLONS	NO.		
v)	3000 GALLONS	NO.		
9.0	<u>MISCELLANEOUS ITEMS</u>			
9.1	<u>BITUMEN COATING</u> PROVIDING AND APPLYING 3 COATS OF BITUMEN GRADE 10 / 20 TO ACHIEVE 1200 MICRONS THICKNESS WITH 1 COAT OF PRIMER ON CONCRETE SURFACES EXPOSED TO EARTH. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.2	<u>POLYETHYLENE SHEET</u> PROVIDING & LAYING POLYETHYLENE SHEET (50 MICRON THK.) OVER PLINTH BEAM. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.3	<u>COUNTER</u> PROVIDING AND LAYING OF GRANITE OR OTHER APPROVED MARBLE COUNTER 25 mm THK COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		

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9.4	<u>RAIN WATER DRAIN PIPE/SPOUT</u> SUPPLYING & FIXING UPVC PIPES IN ROOF FOR THE DISPOSAL OF RAIN WATER FROM ROOF ALONG WITH ALL NECESSARY FITTINGS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.5	<u>FALSE CEILING</u> PROVIDING AND FIXING MINERAL FIBER FALSE CEILING IN SIZE 600 x 600 x 20 WITH ALUMINUM "T" CHANNEL (ULTRA GRIDS / EQUIVALENT MAKE, THICKNESS SHALL BE AS PER VENDOR RECOMMENDATION) AND MULTIPLE PROFILE INCLUDING G.I. SUSPENSION SYSTEM. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.6	<u>STEEL RUNGS</u> PROVIDING, FABRICATING AND FIXING PAINTED REINFORCING STEEL RUNGS AS SHOWN IN DRAWING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER	KG		
9.7	<u>EMBEDDED ITEMS</u> PROVIDING, FIXING, LEVELING AND PLACING OF ASTM A-36 EMBEDDED PLATES/SECTIONS AT THE DESIGNATED LOCATIONS AT ANY HEIGHT AND REQUIRED LENGTH. EMBEDDED PLATES/SECTIONS MUST BE OF APPROVED SIZE AND STANDARDS , IT INCLUDES ALL NECESSARY ACCESSORIES LIKE RUBBER PACKING AND LUGS ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	KG		
9.8	<u>PVC WATER STOPPER</u> PROVIDING LAYING AND FIXING PVC WATER STOPPER 225 mm WIDE OF SIKA, BERDEX, FOSPAK OR ANY APPROVED AND WELL KNOWN MANUFACTURER. COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.9	<u>ISOLATION JOINT</u> SUPPLYING & MAKING ISOLATION JOINT INCLUDING FILLING THE JOINT WITH MASTER FLEX FIBERFIL OR SIMILAR APPROVED MATERIAL. ALSO FILLING THE JOINT WITH JOINT SEALANT AS SHOWN ON DRAWING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.10	<u>EXPANSION JOINT</u> PROVIDING AND LAYING 25 mm THICK MASTER FLEX FIBRE FILL INCLUDING POLYSULPHIDE JOINT SEALANT ,ALUMINIUM BACKING STRIP AND STEEL DOWEL BARS ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.11	<u>WOODEN PARTITIONS (100mm THK.)</u> PROVIDING AND ERECTING WOODEN PARTITIONS . THE WOOD SHOULD BE OF DEODAR, SHEESHAM OR APPROVED EQUIVALENT WHEREVER REQUIRED. THE TIMBER / WOOD MUST BE SOLID AND FREE FROM ALL SORTS OF WOODEN INFECTIONS. THAT APPLICATION OF SOLIGNUM (TIMBERTONE MADE IN ENGLAND / GERMANY) IS NECESSARY, INCLUDING THE PROVISION AND ERECTION OF DOORS & WINDOWS ETC. FOR THE DOORS A SET OF MORTISE LOCK OF ALPHA W-DOUBLE LOCK MADE IN JAPAN BEARING WITH ROUND KNOB, BEADING, ARCHITRAVE OXIDIZED FITTING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
9.12	<u>PLINTH PROTECTION</u> PROVIDING AND LAYING PLINTH PROTECTION OVER COMPACTED SUB-GRADE WITH 75 THK. 1:3:6 PCC. IN S.R. CEMENT, INCLUDING 50 THK. CC. 1:4:8 WITH FORMWORK, VIBRATING, LEVELING, SPREADING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.13	<u>MARBLE STRIP</u> SUPPLYING AND FIXING 12MM WIDE MARBLE STRIP IN P.C.C FLOOR. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE/ ENGINEER	RM		
9.14	<u>JOINT SEALANT</u> PROVIDING AND APPLYING SIKAFLEX PRO-3 WF OR ANY EQUIVALENT AS JOINT SEALANT BETWEEN RING WALL FOUNDATION AND ANNULAR BASE PLATE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER .	RM		
9.15	<u>HDPE LINER (GEO MEMBERANE)</u> PROVIDING,LAYING,JOINTING,WELDING AND TESTING OF 60 MIL GEOMEMBRANE USING E-LOCK AS PER MANUFACTURE'S INSTRUCTION .COMPLETE IN ALL RESPECTS AS PER SPECIFICATION,DRAWING AND TO THE ENTIRE SATISFACTIONS OF OWNER'S REPRESENTATIVE/CONSULTANT.	SQ.M		
10.0	<u>STRUCTURAL STEEL WORKS (ASTM A36)</u> SUPPLYING AND FIXING JOISTS, CHANNEL, ANGLE, TEE SECTIONS, GUARD BARS, RAILINGS, LADDERS, BRACKETS, HOOKS, HOLD FASTS, PIPE SUPPORTS PLATES ROOF TRUSSES, BEAMS, PURLINS ETC., ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 03 COATS OF ZINC PHOSPHATE AND 01 COAT OF PRIMER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	TON		
11.0	<u>ANCHOR BOLTS</u> SUPPLYING AND FIXING ANCHOR BOLTS (ASTM A-307) BY USE OF TEMPLATES WITH HEXAGON, SQUARE, CUP OR CHEESE HEADS, SCREWED ONE OR BOTH END, OR ONE END ENLARGED OR JAGGED OR LEWISED, EACH WITH ONE WASHER AND TWO HEXAGONE OR SQUARE NUT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS STANDARDS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	KG		
12.0	<u>GROUTING</u> PROVIDING AND LAYING GROUT IN FOUNDATIONS AND POCKETS INCLUDING FORMWORK, LEVELING AND SPREADING ETC OF APPROVED MANUFACTURER (SIKA / FOSPAK / IMPORIENT CHEMICALS / EQUIVALENT). COMPLETE IN ALL RESPECT AS PER DRAWINGS. SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	NON SHRINK CEMENTITIOUS	CU.M		
ii)	EPOXY	CU.M		
13.0	<u>ROADS & PAVEMENTS</u>			
13.1	<u>GRADED AGGREGATE BASE COURSE</u> PROVIDING AND LAYING GRADED AGGREGATE BASE COURSE INCLUDING PREPARATION OF BASE GRADE BEFORE BASE COURSE WORKS, AS PER ASTM D-693 SIZE AND THICKNESS WHEREVER SPECIFIED IN THE DRAWINGS. SURFACE VOIDS SHALL BE FILLED UP WITH WELL GRADED FINE AGGREGATE INCLUDING SPREADING AND COMPACTION TO ACHIEVE 95% OF MAXIMUM DRY DENSITY AS PER ASTM D1557. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
13.2	<u>ASPHALT CONCRETE BASE LAYER</u> PROVIDING AND LAYING BASE LAYER OF ASPHALT CONCRETE THICKNESS AS MENTIONED IN THE DRAWINGS AND COMPACTING WITH APPROVED WEIGHT ROLLER INCLUDING PRIME COAT @ 1.75 LTRS/ SQ.M TO BASE COURSE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.3	<u>ASPHALT CONCRETE WEARING COURSE</u> PROVIDING AND LAYING WEARING COURSE OF ASPHALT CONCRETE THICKNESS AS MENTIONED IN THE DRAWINGS AND COMPACTING WITH APPROVED WEIGHT ROLLER INCLUDING TACK COAT @ 0.5 LTRS./SQ.M TO ASPHALT BASE LAYER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.4	<u>SURFACE DRESSING</u> PROVIDING AND APPLYING SURFACE DRESSING (SEAL COAT) OF ASPHALT (0.5 LTRS. / SQ.M) WITH APPROVED QUALITY OF SAND. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.5	<u>TERMITE CONTROL TREATMENT</u> PROVIDING AND SPRAYING "BIFLEX" BY "FMC" OR ANY EQUIVALENT PESTICIDES SOLUTION WITH SPRAYING EQUIPMENT AS SPECIFIED BY THE MANUFACTURERS IN FOUNDATION PITS,(WALL&BASE), TRENCHES, EXCAVATED EARTH, CONSOLIDATED LAYER OF EARTHIN PLINTH, UNDER FLOOR, CAST IN SITU WALLS, TIE BEAMS, WOOD WORK ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.6	<u>PRECAST KURB STONE</u> PROVIDING AND LAYING PRECAST FAIR FACED KURB STONE OF SIZE 450X300X150 TO BE EMBEDDED (50mm) IN 100mm THK.1:3:6 C.C , ALONG THE EDGE OF ROAD AND TO BE PAINTED WITH 2 COATS OF ALKYD ENAMEL PAINT WITH SEALANT AND OF PRIMER COLOUR SCHEME ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	RM		
14.0	<u>M.S. GRATING (A36)</u> SUPPLYING AND FIXING JOISTS, CHANNEL, ANGLE, TEE SECTIONS, GUARD BARS, HOOKS, HOLD FAST, GATES, GRILLS ETC., ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 03 COATS OF ZINC PHOSPHATE AND 01 COAT OF PRIMER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		SEE DRAWING 165-2-C-010 FOR DETAIL
15.0	<u>HEAVY DUTY PAVERS</u> PROVIDING AND LAYING HEAVY DUTY PAVERS (80mm THK.) OF STRENGTH \geq 7000 PSI. COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE/ ENGINEER.	SQ.M		
16.0	<u>MANHOLE</u> SUPPLY & CONSTRUCTION OF MANHOLE RCC, SQUARE (UPTO 1000mm x 1000mm) WITH VARIABLE DEPTH FROM INVERT TO SURFACE OF COVER INCLUDING CONCRETE BENCHING AND PRECAST COVER & WITH FRAME BY CME. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NOS.		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
17.0	<u>ANCHOR POCKET</u> SUPPLYING AND FIXING ANCHOR POCKET IN EQUIPMENT FOUNDATION WITH APPROVED MATERIALS COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NOS.		
18.0	<u>CONCRETE PROTECTIVE COATING</u> SUPPLYING AND APPLICATION OF CONCRETE PROTECTIVE COATING (SIKA SEAL 105N OR APPROVED EQUIVALENT) COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY OWNER'S REPRESENTATIVE / ENGINEER	SQ.M		
19.0	<u>PIPE SLEEVE INCLUDING SEALANT</u> SUPPLYING AND FIXING OF PIPE SLEEVE INCLUDING SEALANT COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY OWNER'S REPRESENTATIVE / ENGINEER	NOS.		
20.0	<u>PIPING WORKS</u>			
20.1	<u>UPVC PIPES</u> PROVIDING AND INSTALLING UPVC PIPES FOR PLUMBING, AIR-CONDITIONING, DRAINAGE, SEWERAGE AND GAS SUPPLY OF LIANSU, DADEX NIKASI AND PAK ARAB PIPES (APPROVED BY CLIENT) IN WALLS, FLOORS, SLABS BELOW GROUND SURFACE ETC. IT ALSO INCLUDES ALL BENDS, JOINTS, REDUCERS, CONNECTIONS, SOCKETS, TRAPS, STRAINERS, TEE, ENDS, ADOPTERS, ELBOWS, CLIPS, RINGS, COUPLINGS ETC. UP TO ANY HEIGHT OR LENGTH COMPLETE IN ALL RESPECT AS PER REQUIREMENT, DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
	i) 50 mm DIA	RM		
	ii) 75 mm DIA	RM		
	iii) 100mm DIA	RM		
	iv) 150mm DIA	RM		
	v) 200 mm DIA	RM		
	vi) 250 mm DIA	RM		
	vii) 300 mm DIA	RM		
	viii) 400 mm DIA	RM		
20.2	<u>C.S. PIPES</u> SUPPLYING, FABRICATION, WELDING, FIXING AND TESTING OF SEAMLESS CARBON PIPES CONFORMING TO API-5L GR.B/ ASTM A-106/ASTM A-53 (SCH. 40) FOR OILY WATER DRAIN, WASTE DRAIN AND VENT WITH COMPLETE FITTINGS CONFORMING TO ASTM STANDARDS. ALL PIPES AND FITTINGS SHALL BE SUPPLIED WITH BUTT WELDED ENDS. THE WORK ALSO INCLUDES SUPPLY AND APPLICATION OF ALL MATERIAL, SURFACE PREPARATION COATING AND WRAPPING OF PIPING COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS, AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
	i) 100 mm DIA	RM		
	ii) 125 mm DIA	RM		
	iii) 150 mm DIA	RM		
	iv) 200 mm DIA	RM		
	v) 250 mm DIA	RM		
	vi) 300 mm DIA	RM		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
20.3	<u>RCC. PIPES</u> PROVIDING AND LAYING RCC. SPIGOT AND SOCKET PIPES OF CLASS "A" (RAZIA BRAND OR EQUIVALENT) AND FIXING IN TRENCH INCLUDING CUTTING, FITTING, JOINTING WITH RUBBER RINGS AND CEMENT MORTAR (1:1) INCLUDING TESTING WITH WATER TO A HEAD OF 1.2 M ABOVE THE TOP OF THE HIGHEST PIPE, INCLUDING 75mm THICK. FINE SAND CUSHION BED UNDER THE RCC. PIPE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	150 mm DIA	RM		
ii)	200 mm DIA	RM		
iii)	250 mm DIA	RM		
iv)	300 mm DIA	RM		
v)	350 mm DIA	RM		
vi)	400 mm DIA	RM		
21.0	<u>CAST IRON MANHOLE COVER (600 X 600) 30 THK.</u> SUPPLY AND INSTALLATION OF CAST IRON MANHOLE COVER (600 X 600) 30 THK. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
22.0	<u>DEMOLITION WORKS</u> DEMOLITION OF SPECIFIED ITEMS INCLUDING COMPLETE DISMANTLING, LOADING, TRANSPORTATION AND UNLOADING OF DISMANTLED MATERIAL TO THE AREA DESIGNATED BY THE OWNER'S REPRESENTATIVE / ENGINEER:			
i)	RCC	CU.M		
ii)	PCC	CU.M		
iii)	BRICK/BLOCK	CU.M		
23.0	<u>POLYSULPHIDE JOINT SEALANT</u> PROVIDING AND LAYING POLYSULPHIDE JOINT SEALANT OR SIMILAR APPROVED WHERE REQUIRED COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
24.0	<u>MAIN GATE</u> SUPPLY AND INSTALLATION, PAINTING OF MAIN GATE INCLUDING COMPLETE FIXING ASSEMBLY COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	KG		
25.0	<u>BOULDERS</u> SUPPLY AND LAYING LOOSE PACKING OF BOULDERS SIZE > 100 & <150 WHERE REQUIRED COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
26.0	<u>DRILLING OF HOLES AND FIXING OF REBARS WITH EPOXY</u> DRILLING IN EXISTING RCC CONSTRUCTION WITH PROVIDING AND LAYING OF EPOXY GROUT IN DRILLED HOLES FOR BELOW SPECIFIED ITEMS AS PER DRAWINGS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	12mm DIA BARS	RM		
ii)	16mm DIA BARS	RM		
iii)	20mm DIA BARS	RM		
27.0	<u>BITUMEN COATING</u> PROVIDING AND APPLYING 03 COATS OF BITUMEN GRADE 10 / 20 TO ACHIEVE 1200 MICRONS THICKNESS WITH 01 COAT OF PRIMER ON CONCRETE SURFACES EXPOSED TO EARTH. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQM		
28.0	<u>MANHOLE COVER (600mm X 600mm, HEAVY DUTY)</u> SUPPLYING, FIXING AND SETTING OF C.I. MANHOLE COVER AND FRAME BY CME OR EQUIVALENT PAK MADE INCLUDING ANGLE FRAME WITH LUGS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
29.0	<u>CORRUGATED G.I. SHEETS</u> SUPPLYING AND FIXING CORRUGATED GALVANIZED STEEL SHEETS FIXED TO TIMBER / CONCRETE OR STEEL FRAMING OR PURLINS WITH ONE AND A HALF CORRUGATION SIDE LAPS AND 150 mm END LAPS, FIXED WITH "U" BOLTS 10 mm DIA. FIBRE AND GALVANIZED, CURVED OR LIMPED WASHERS, AT CENTERS NOT EXCEEDING 300 mm. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	20 GAUGE	SQ.M	-	
ii)	22 GAUGE	SQ.M	-	
iii)	24 GAUGE	SQ.M	-	
iv)	26 GAUGE	SQ.M	-	
30.0	<u>HILTI BOLTS (CHEMICAL ANCHOR BOLTS)</u> SUPPLYING AND INSTALLING HILTI BOLTS, HIT-RE 500 V3 + HIT-V(5.8) MATERIAL AS PER MANUFACTURER'S INSTRUCTIONS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	M12	NOS.		
ii)	M16	NOS.		
iii)	M20	NOS.		



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR CIVIL WORKS



0	05-06-2018	Issued for Tender	MSH	SS	SMM
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR INFRASTRUCTURE WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
1.0	<u>GRADING WORKS</u>					
1.1	EXCAVATED SOIL FILL AS PER ITEM NO. 1.4.i)	7,000	CUM			
1.2	IMPORTED SOIL FILL AS PER ITEM NO. 1.4.ii)	7,000	CUM			
1.3	CUTTING AS PER ITEM NO. 1.3	10,000	CUM			
2.0	<u>ROADS</u>					
2.1	GRADED AGGREGATE BASE COURSE AS PER ITEM NO. 13.1	538	CU.M			
2.2	ASPHALT CONCRETE BASE COURSE LAYER AS PER ITEM NO. 13.2	2,150	SQ.M			
2.3	ASPHALT CONCRETE WEARING COURSE LAYER AS PER ITEM NO.13.3	2,150	SQ.M			
2.4	SUB BASE COURSE AS PER ITEM NO. 1.9	323	CUM			
2.5	PRECAST KERB STONES INCLUDING 1:3:6 AS PER ITEM NO 13.6	650	R.M			
2.6	COMPACTED EARTHFILL AS PER ITEM NO. 1.11	10	CUM			
2.7	STONE PITCHING AS PER ITEM NO. 1.6	5	CUM			
2.8	SURFACE DRESSING AS PER ITEM NO. 13.4	2,150	SQ.M			
3.0	<u>BRICK PAVING</u>		SQM			
3.1	BRICK PAVING AS PER ITEM NO. 1.10	290	SQM			
3.2	C. C. 1:4:8 AS PER ITEM NO. 2.1	22	CU.M			
4.0	<u>STORM WATER SYSTEM</u>					
4.1	EXCAVATION AS PER ITEM NO. 1.1	700	CU.M			
4.2	C. C. 1:4:8 AS PER ITEM NO. 2.1	35	CUM			
4.3	R.C.C. 3750 psi AS PER ITEM NO. 2.2	465	CUM			
4.4	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	28	TONS			
4.5	GRATING AS PER ITEM NO. 14.0	440	SQM			REFER DRAWING FOR DETAIL
4.6	POLYSULPHIDE JOINT SEALANT AS PER ITEM NO. 23	0.1	CUM			
4.7	C.S PIPES AS PER ITEM NO. 20.2					
a)	100 mm DIA PIPE	1	RM			
b)	150 mm DIA PIPE	1	RM			
c)	200 mm DIA PIPE	1	RM			
d)	250 mm DIA PIPE	1	RM			
e)	300 mm DIA PIPE	1	RM			
4.8	R.C.C PIPES AS PER ITEM NO. 20.3					
a)	100 mm DIA PIPE	1	RM			
b)	150 mm DIA PIPE	1	RM			
c)	200 mm DIA PIPE	1	RM			
d)	250 mm DIA PIPE	1	RM			
e)	300 mm DIA PIPE	1	RM			
4.9	STRUCTURAL STEEL AS PER ITEM NO. 10.0	7.20	TON			
4.10	MANHOLE COVER AS PER ITEM NO. 28.0	1	NOS.			
5.0	DEMOLITION WORKS					
a)	AS PER ITEM NO. 22.0 (i)	1	CUM			
b)	AS PER ITEM NO. 22.0 (ii)	1	CUM			
c)	AS PER ITEM NO. 22.0 (iii)	1	CUM			
TOTAL (PKR)						

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR BUILDING & SHED WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
1.0	<u>FIREWATER PUMP SHED (INCLUDING INSIDE PUMPS & DIESEL TANK FOUNDATIONS)</u>					
1.1	EXCAVATION AS PER ITEM NO. 1.1	230	CU.M			
1.2	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	75	CU.M			
1.3	C. C. 1:4:8 AS PER ITEM NO. 2.1	12.0	CU.M			
1.4	C. C. 1:3:6 AS PER ITEM NO. 2.5	30	CU.M			
1.5	RCC 1:2:4 IN FLOOR AS PER ITEM NO. 2.9	60	CU.M			
1.6	R.C.C. 3750 psi AS PER ITEM NO. 2.2	130	CU.M			
1.7	GROUT AS PER ITEM NO. 12.0.i)	0.60	CU.M			
1.8	GROUT AS PER ITEM NO. 12.0.ii)	0.16	CU.M			
1.9	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	17.5	TON			
1.10	PLINTH PROTECTION AS PER ITEM NO. 9.12	66	SQ.M			
1.11	GRATING AS PER ITEM NO. 14	1	SQ.M			
1.12	ANCHOR BOLTS AS PER ITEM NO. 11	400	KG			
1.13	STONE SOLING AS PER ITEM NO. 1.5	61	CU.M			
1.14	ISOLATION JOINT AS PER ITEM NO. 9.9	40	RM			
1.15	STRUCTURAL STEEL AS PER ITEM NO. 10.0	45	TON			
1.16	ANCHOR POCKETS AS PER ITEM NO. 17	38	NOS.			SIZE AS PER DRAWING
1.17	GI SHEET AS PER ITEM NO. 29.0 (i)	500	SQM			
1.18	BRICK MASONRY AS PER ITEM NO. 4.2	11.0	CU.M			
2.0	<u>UTILITY SHED</u>					
2.1	EXCAVATION AS PER ITEM NO. 1.1	125	CU.M			
2.2	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	40	CU.M			
2.3	C. C. 1:4:8 AS PER ITEM NO. 2.1	7.5	CU.M			
2.4	C. C. 1:3:6 AS PER ITEM NO. 2.5	18.5	CU.M			
2.5	C. C. 1:2:4 AS PER ITEM NO. 2.4	1	CU.M			
2.6	R.C.C. 3750 psi AS PER ITEM NO. 2.2	35	CU.M			
2.7	RCC 1:2:4 IN FLOOR AS PER ITEM NO. 2.9	37	CU.M			
2.8	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	5.00	TON			
2.9	GROUT AS PER ITEM NO. 12.0.i)	0.10	CU.M			
2.10	PLINTH PROTECTION AS PER ITEM NO. 9.12	52	SQ.M			
2.11	GRATING AS PER ITEM NO. 14	1	SQ.M			
2.12	ANCHOR BOLTS AS PER ITEM NO. 11	200	KG			
2.13	EMBEDDED ITEMS AS PER ITEM NO. 9.7	10	KG			
2.14	STONE SOLING AS PER ITEM NO. 1.5	37	CU.M			
2.15	STRUCTURAL STEEL AS PER ITEM NO. 10.0	27	TON			
2.16	ISOLATION JOINT AS PER ITEM NO. 9.9	20	RM			
2.17	DPC AS PER ITEM NO. 5.3	12.00	SQM			
2.18	BRICK MASONRY AS PER ITEM NO. 4.2	9.0	CU.M			

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR BUILDING & SHED WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
2.19	GI SHEET AS PER ITEM NO. 29.0 (i)	310	SQM			
3.0	<u>COMPRESSOR SHED</u>					
3.1	EXCAVATION AS PER ITEM NO. 1.1	300	CU.M			
3.2	C. C. 1:4:8 AS PER ITEM NO. 2.1	15	CU.M			
3.3	C. C. 1:3:6 AS PER ITEM NO. 2.5	40	CU.M			
3.4	RCC 1:2:4 IN FLOOR AS PER ITEM NO. 2.9	80	CU.M			
3.5	R.C.C. 3750 psi UPTO PLINTH LEVEL AS PER ITEM NO. 2.2	60.0	CU.M			
3.6	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	8.50	TON			
3.7	GROUT AS PER ITEM NO. 12.0.i)	0.21	CU.M			
3.8	PLINTH PROTECTION AS PER ITEM NO. 9.12	50	SQ.M			
3.9	GRATING AS PER ITEM NO. 14	1	SQ.M			
3.10	ANCHOR BOLTS AS PER ITEM NO. 11	325	KG			
3.11	STONE SOLING AS PER ITEM NO. 1.5	80	CU.M			
3.12	STRUCTURAL STEEL AS PER ITEM NO. 10.0	70	TON			
3.13	ISOLATION JOINT AS PER ITEM NO. 9.9	30	RM			
3.14	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	95	CU.M			
3.15	GI SHEET AS PER ITEM NO. 29.0 (i)	1180	SQM			
4.0	<u>CONTROL ROOM</u>					
4.1	EXCAVATION AS PER ITEM NO. 1.1	43	CU.M			
4.2	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	13.5	CU.M			
4.3	C. C. 1:4:8 AS PER ITEM NO. 2.1	3.0	CU.M			
4.4	C. C. 1:2:4 AS PER ITEM NO. 2.4	1.0	CU.M			
4.5	R.C.C. 3750 psi AS PER ITEM NO. 2.2	40	CU.M			
4.6	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	4.0	TON			
4.7	DPC AS PER ITEM NO. 5.3	8.20	SQM			
4.8	BRICK MASONRY AS PER ITEM NO. 4.2	28.0	CU.M			
4.9	<u>CEMENT PLASTER</u>					
a)	INTERNAL PLASTER AS PER ITEM NO. 5.1 (i)	205	SQ.M			
b)	EXTERNAL PLASTER AS PER ITEM NO. 5.1 (ii)	225	SQ.M			
4.10	ROOF SCREEDING AS PER ITEM NO. 5.2	94	SQ.M			
4.11	<u>COLOURING AS FOLLOWS:</u>					
a)	CEILING AS PER ITEM NO. 6.1	70	SQ.M			
b)	INTERNAL WALLS AS PER ITEM NO. 6.2	135	SQ.M			
c)	EXTERNAL AS PER ITEM NO. 6.3	225	SQ.M			
4.12	<u>TILE WORKS AS FOLLOWS:</u>					
a)	PROCELAIN TILES AS PER ITEM NO. 5.4 (i)	1	SQ.M			
b)	ANTI STATIC TILES AS PER ITEM NO. 5.4 (iv)	72	SQ.M			

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR BUILDING & SHED WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
4.13	ALUMINIUM DOORS, WINDOWS & VENTILATORS					
a)	ALUMINIUM DOORS AS PER ITEM NO. 7.2	1.2	SQ.M			
b)	ALUMINIUM WINDOWS AS PER ITEM NO. 7.1 (i)	13	SQ.M			
4.14	STEEL DOOR AS PER ITEM NO. 7.3. (i)	3	SQ.M			
4.15	RAIN WATER DRAIN PIPE / SPOUT AS PER ITEM NO. 9.4	5	R.M			
4.16	PLINTH PROTECTION AS PER ITEM NO. 9.12	22	SQ.M			
4.17	C. C. 1:3:6 AS PER ITEM NO. 2.5	3.5	CU.M			
4.18	C. C 1:2:4 FLOORING AS PER ITEM NO. 2.8 (a)	5	CU.M			
4.19	DEMOLITION WORKS					
a)	AS PER ITEM NO. 22.0 (i)	1	CUM			
b)	AS PER ITEM NO. 22.0 (ii)	1	CUM			
c)	AS PER ITEM NO. 22.0 (iii)	1	CUM			
4.20	DRILLING OF HOLES AND FIXING OF REBARS WITH EPOXY					
a)	AS PER ITEM NO. 26.0 (i)	1	RM			
b)	AS PER ITEM NO. 26.0 (ii)	1	RM			
c)	AS PER ITEM NO. 26.0 (iii)	1	RM			
TOTAL (PKR)						

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR EQUIPMENT FOUNDATIONS & PIPE SUPPORTS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
1.0	<u>TANK FOUNDATIONS</u>					
1.1	<u>FIREWATER TANK FOUNDATION</u>					
a)	EXCAVATION AS PER ITEM NO. 1.1	350	CU.M			
b)	C. C. 1:3:6 AS PER ITEM NO. 2.5	8.5	CU.M			
c)	C. C. 1:2:4 AS PER ITEM NO. 2.4	1.0	CU.M			
d)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	53	CU.M			
e)	BITUMEN COATING AS PER ITEM NO. 27.0	1	SQM			
f)	HDPE GEOMEMBRANE AS PER ITEM NO. 9.15	142	SQM			
g)	2" (SCH. 40) LEAK DETECTION PIPE AS PER ITEM NO. 20.1 (i)	9	RM			
h)	ASPHALT SAND LAYER AS PER ITEM NO. 1.8	135	SQM			
i)	JOINT SEALANT AS PER ITEM NO. 9.14	43	RM			
j)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	5	TON			
k)	COARSE SAND FILLING AS PER ITEM NO. 1.2	248	CU.M			
l)	GROUT AS PER ITEM NO. 12.0.i)	0.45	CU.M			
m)	PLINTH PROTECTION AS PER ITEM NO. 9.12	40	SQM			
n)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	88	CU.M			
o)	ANCHOR BOLTS AS PER ITEM NO. 11	364	KG			
p)	GRAVEL FILLING AS PER ITEM NO. 1.9	1	CU.M			
1.2	<u>DIESEL OIL STORAGE TANK</u>					
a)	EXCAVATION AS PER ITEM NO. 1.1	14	CU.M			
b)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	5	CU.M			
c)	C. C. 1:4:8 AS PER ITEM NO. 2.1	0.8	CU.M			
d)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	11.5	CU.M			
e)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	0.6	TON			
f)	C. C. 1:3:6 AS PER ITEM NO. 2.5	0.1	CU.M			
g)	GROUT AS PER ITEM NO. 12.0.i)	0.20	CU.M			
1.3	<u>INSTRUMENT AIR COMPRESSOR PACKAGE FOUNDATION</u>					
a)	EXCAVATION AS PER ITEM NO. 1.1	50	CU.M			
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	2.5	CU.M			
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	40	CU.M			
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	2.5	TON			
e)	GROUT AS PER ITEM NO. 12.0.i)	0.60	CU.M			
f)	GROUT AS PER ITEM NO. 12.0.ii)	0.30	CU.M			
g)	ANCHOR BOLTS AS PER ITEM NO. 11	45	KG			
h)	ANCHOR POCKETS AS PER ITEM NO. 17	1	NOS.			SIZE AS PER DRAWING
i)	EMBEDDED PLATES AS PER ITEM NO. 9.7	10	KG			
j)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	16	CU.M			

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR EQUIPMENT FOUNDATIONS & PIPE SUPPORTS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS	
1.4	<u>COMPRESSOR PACKAGE FOUNDATION(S)</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	300	CU.M			SIZE AS PER DRAWING	
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	14.5	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	268	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	11	TON				
e)	GROUT AS PER ITEM NO. 12.0.i)	2.25	CU.M				
f)	GROUT AS PER ITEM NO. 12.0.ii)	11	CU.M				
g)	ANCHOR BOLTS AS PER ITEM NO. 11	380	KG				
h)	ANCHOR POCKETS AS PER ITEM NO. 17	97	NOS.				
i)	EMBEDDED PLATES AS PER ITEM NO. 9.7	10	KG				
j)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	96	CU.M				
1.5	<u>INSTRUMENT AIR VESSEL FOUNDATION</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	55	CU.M				
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	2.60	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	42	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	3.8	TON				
e)	GROUT AS PER ITEM NO. 12.0.i)	0.55	CU.M				
f)	ANCHOR BOLTS AS PER ITEM NO. 11	42	KG				
g)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	17.50	CU.M				
1.6	<u>PIPE SLEEPERS/SUPPORTS/RACKS</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	208	CU.M				
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	7	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	69	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	7	TON				
e)	GROUT AS PER ITEM NO. 12.0.i)	0.10	CU.M				
f)	ANCHOR BOLTS AS PER ITEM NO. 11	255	KG				
g)	EMBEDDED PLATES AS PER ITEM NO. 9.7	1,425	KG				
h)	STRUCTURAL STEEL WORKS AS PER ITEM NO. 10.0	2.50	TONS				
i)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	73.00	CU.M				
j)	HILTI BOLTS AS FOLLOWS :						
-	M12 AS PER ITEM NO. 30 (i)	12	NOS.				
-	M16 AS PER ITEM NO. 30 (ii)	1	NOS.				
-	M20 AS PER ITEM NO. 30 (iii)	1	NOS.				
1.7	<u>PIG LAUNCHER FOUNDATION</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	4.5	CU.M				
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	0.2	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	1.1	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	0.1	TON				

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR EQUIPMENT FOUNDATIONS & PIPE SUPPORTS**

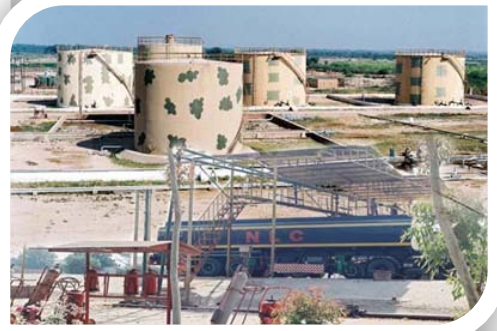
S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
e)	GROUT AS PER ITEM NO. 12.0.i)	0.005	CU.M			
f)	ANCHOR BOLTS AS PER ITEM NO. 11	14.0	KG			
g)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	1.5	CU.M			
h)	EMBEDDED PLATES AS PER ITEM NO. 9.7	15	KG			
TOTAL (PKR)						

ATTACHMENT – I

HSE MANUAL & HSE POLICY

Occupational Health, Safety and Environment SYSTEM MANUAL For Production Fields & Plant Functions

Based On The Latest Revisions Of ISO 14001 And OHSAS 18001 Standards



ORIGINAL ISSUE JUNE 25, 2007
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OGM-HSE-001(04A)



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HSE System Manual

For Production Fields & Plant Functions

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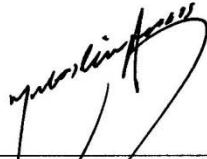

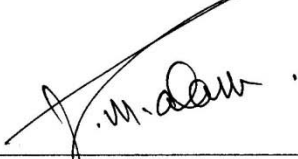
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1. Document Control:

Developed by:	Reviewed by:	Approved by:
		
Muhammad Mubashir Abbas Chief Engineer HSEQ	Nadeem Ahmed Ansari Manager In-Charge HSEQ	Shah Mahboob Alam MD & CEO

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2. Distribution List:

- Head Office
 - Chairman BOD
 - Managing Director & CEO
 - Company Secretary
 - ED Production
 - General Manager Process
 - General Manager Production Operations
 - All Managers (P&P)
 - All Managers (Production)
- Production Fields/Plants
 - All Field /Operation /Plant Managers
 - All Field/Plant HSE In-charges
 - All Sectional Heads of Field / Plant Operations
- Service Companies / Contractors
 - _____
 - _____
 - _____

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3. History of Amendments:

Rev. #	Date	Initiated by	Section	Nature of Amendment	Done by
1.	31.08.07	Mr. Mubashir	11.1.2.1	Identification of HSE Training Needs	Mr. Mubashir
2.	31.08.07	Mr. Mubashir	12.4.6.2	External Environmental Complaint Sheet	Mr. Mubashir
3.	31.08.07	Mr. Ilyas	13.1.5.2	Document Approval & Issue	Mr. Mubashir
4.	31.08.07	Mr. Mubashir	19.1.2	Reference Numbering System	Mr. Mubashir
5.	31.08.07	Mr. Mubashir	19.1.3	Record Approval & Issue	Mr. Mubashir
6.	31.08.07	Mr. Mubashir / Mr. Ilyas	19.1.10	In-House HSE Surveillance	Mr. Mubashir
7.	31.08.07	Mr. Mubashir	Annexure B	Document Change Request (DCR)	Mr. Mubashir
8.	04.12.08	Mr. Mubashir	6	HSE Policy	Mr. Mubashir
9.	04.12.08	Mr. Mubashir	7.1	HSE Hierarchy / Organogram	Mr. Mubashir
10.	04.12.08	Mr. Mubashir	8.1.1.3.1	Probability of Hazard Occurrence Category Definition	Mr. Mubashir
11.	04.12.08	Mr. Mubashir	12.1.3.3	Material Safety Data Sheets	Mr. Mubashir
12.	04.12.08	Mr. Mubashir	12.1.4	Communication through Standardized Color Coding	Mr. Mubashir
13.	04.12.08	Mr. Mubashir	16.2	Analysis of Data	Mr. Mubashir
14.	21.07.09	Mr. Mubashir	6	HSE Objectives & Goals	Mr. Mubashir
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17.	21.07.09	Mr. Mubashir	8.1.1.3	Table 3: Probability of Hazard Occurrence Category Definition for 'Actual Risk'	Mr. Mubashir
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21.	21.07.09	Mr. Mubashir	9.5.3.5	Frequency of Regulatory Requirements Matrix	Mr. Mubashir
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23.	21.07.09	Mr. Mubashir	11.1.4.4	Annual Emergency Drill Plan	Mr. Mubashir
24.	21.07.09	Mr. Mubashir	11.1.6	Awareness Sessions on Hygiene and Endemic/Epidemic Diseases	Mr. Mubashir

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39.	15.06.10	Mr. Mubashir	17.1.3.3 17.1.3.7	Pictorial evidence for CPRs	Mr. Mubashir
40.	15.06.10	Mr. Mubashir / Mr. Ilyas	21	Added New Section – 21: Change Control	Mr. Mubashir
41.	15.06.10	Mr. Mubashir	5	Definitions	Mr. Mubashir
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45.	15.06.10	Mr. Mubashir	Table 2	Competence of Operator – Probability of Hazard Occurrence Category Definition for 'Base Risk'	Mr. Mubashir
46.	15.06.10	Mr. Mubashir	5	Definitions	Mr. Mubashir
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52.	15.06.10	Mr. Abdul Rasheed	7	Responsibilities o Fireman	Mr. Mubashir
53.	15.06.10	Mr. Mubashir	7	Table: Contractor/Subcontractor HSE Responsibilities	Mr. Mubashir
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55.	15.06.10	Mr. Mubashir	11.1.1	Defensive Driving	Mr. Mubashir
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59.	15.06.10	Mr. Mubashir / Mr. Ilyas	16.3.1	Performance Monitoring of Personnel	Mr. Mubashir
60.	15.06.10	Mr. Mubashir	5	Definitions	Mr. Mubashir
61.	15.06.10	Mr. Mubashir / Mr. Ilyas	17.2	Procedure of Writing Formal Incident Report	Mr. Mubashir
62.	15.06.10	Mr. Mubashir	17.3	Procedure Of Registering Occupational Illnesses And Injuries	Mr. Mubashir
63.	15.06.10	Mr. Mubashir	16.1.1.5	Monitoring Activities, Frequencies and Responsibilities for the HSE Monitoring Plans	Mr. Mubashir
64.	15.06.10	Mr. Mubashir	18.1.3 (Table)	Review & Approval of HSE Monitoring Plans	Mr. Mubashir
65.	15.06.10	Mr. Mubashir	9.1.4 & 9.1.5	Salient Features of Environmental, Occupational Safety & Health Laws	Mr. Mubashir
66.	15.06.10	Mr. Mubashir	12.1.4.1.4	HazCom Equipment Table	Mr. Mubashir
67.	15.06.10	Mr. Mubashir	12.1.4.2	Product Safety Data Sheet	Mr. Mubashir
68.	15.06.10	Mr. Mubashir	12.1.5	Basic/Primary Identification Band (PIB) Safety/Secondary Identification Band (SIB)	Mr. Mubashir
69.	15.06.10	Mr. Mubashir	12.1.10	HSE Awareness Event	Mr. Mubashir
70.	15.06.10	Mr. Mubashir	14.1.2 – 14.1.5	Operational Controls (Process, Mechanical, Lifting, Electrical)	Mr. Mubashir
71.	15.06.10	Mr. Mubashir	15.1.7	T-Card & Mustering System	Mr. Mubashir
72.	15.06.10	Mr. Abdul Rasheed	Annexure C	Instructions for ATA	Mr. Mubashir
73.	15.06.10	Mr. Dastageer Shah	Annexure D	HSE Induction for Field Visitors	Mr. Mubashir

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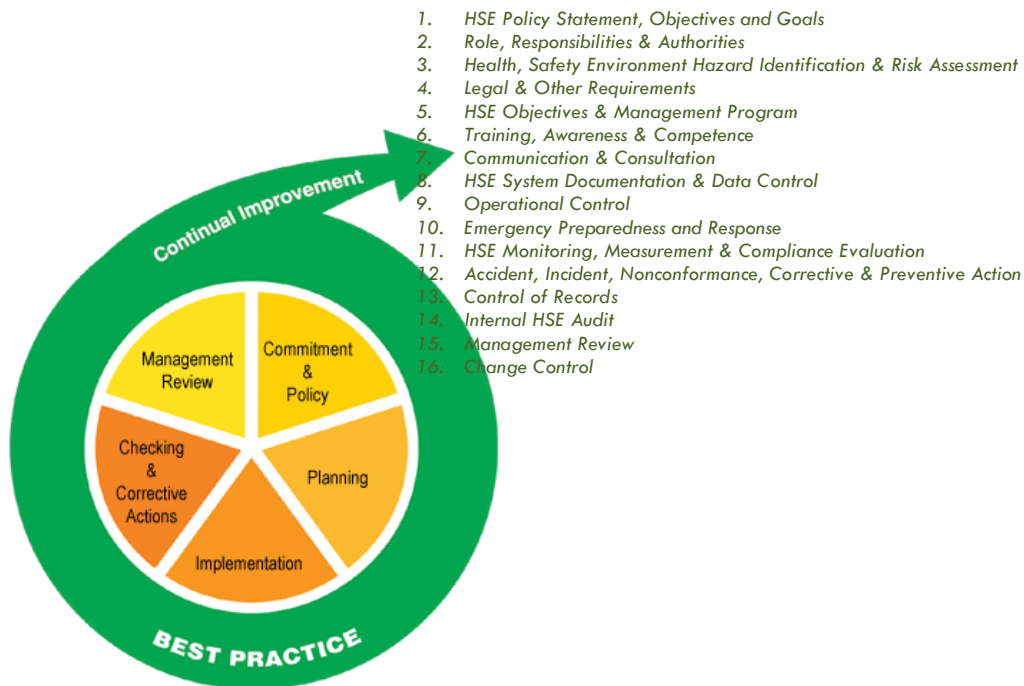
4. Preamble

OGDCL has developed and implemented the HSE System to improve its HSE performance and ultimately to reduce the adverse impact of its operations, activities, and services on 3Ps i.e. people, plant, and planet. The HSE System complies with the latest revisions of international standards ISO 14001 and OHSAS 18001 and its scope covers the production field & plant functions.

This document describes the way OGDCL is managed with respect to its stated HSE policies and strategic objectives. It ensures that the safety critical activities of the company in Pakistan are identified, controlled and that measurements are made and reported so as to enable monitoring of overall performance and identification of areas for improvement. This HSE System addresses the organizational structure and responsibilities of people, the management of resources and documentation required for sound safety performance for all OGDCL activities. The document provides the framework for planning of work activities, which include existing operations, management of changes and developing hierarchy of procedures both for the normal as well as abnormal conditions. The general policy statement is followed by the procedures to outline how the general system-policy is implemented.

This is a 'controlled' document and is subject to continual review and update as required.

Field / Functional Management is the PRIMARY IMPLEMENTER of HSE System Manual. However, the CUSTODIAN of HSE System Manual is the General Manager HSEQ who is responsible for updating this document as required on behalf of the Chairman or Managing Director & CEO of the company and checking / reporting the compliance level. The HSE System Manual is divided into various segments, corresponding to the main sections and subsections of ISO 14001 and OHSAS 18001 as exhibited diagrammatically.



HSE System Manual

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5

Definitions

HSE System Manual

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DEFINITIONS

A	
Acceptable Risk	Risk that has been reduced to a level that can be tolerated by the organization having regard to its legal obligations and its own HSE policy
Accident	Undesired event giving rise to death, ill health, injury damage or other loss
Actual Risk	Risk calculated considering the scenario pertaining to the effectiveness of HSE operational controls
Asphyxiant	A vapor or gas which can cause unconsciousness or death by suffocation (lack of oxygen).
B	
Base Risk	Risk calculated considering the scenario where no HSE operational controls exist
Basic Level Emergency	It is an emergency state in which an incident occurs which may not cause the normal operations to be shutdown. There is no immediate potential threat to the safety of personnel, assets, environment, and operations. Emergency equipment available on site can control this type of emergency situation. For e.g. <ul style="list-style-type: none"> • An injury or illness without Lost Workday Injury (LWI); • Minor fire; • Minor spill; • Electrical shock; • Person becomes unconscious in confined space. Note: For Basic Level Emergency condition, there is no need to gather at muster point.
C	
Carcinogen	A substance or agent capable of causing cancer or having the potential to cause cancer. Carcinogen (H) Known to cause cancer in humans. Carcinogen (A) Known to cause cancer in animals. Carcinogen (S) Suspected to cause cancer.
Cardio Pulmonary Resuscitation (CPR)	A combination of artificial respiration (mouth to mouth) and artificial circulation (external cardiac compression).
CNS Depressant	A chemical that may cause loss of functioning and possible damage to Central Nervous System (CNS). Central Nervous System depressants may include a majority of hydrocarbons in the refinery. Symptoms from overexposure are headache, dizziness, nausea, unconsciousness and possibly, death.
Combustible Liquid	A liquid having a flash point at or above 100 °F (37.8 °C).
Competence	The ability to perform a particular job in compliance with performance standards.
Competent Person	A person who is suitably qualified (whether by experience, training or both) to perform the work or function described in the relevant regulation.
Contingency Plan	A pre-established plan to mitigate an unusual situation which has potential for harm, which incorporates the best use of local as well as remote facilities and resources.
Continual improvement	Process of enhancing the HSE management system to achieve improvements in overall HSE performance in line with organization's HSE policy.
Confined Space	A confined space is a place which is substantially enclosed (though not always entirely), and where serious injury can occur from hazardous substances or conditions prevailing within the space or nearby (e.g. lack of oxygen)
Consequence (Severity)	Outcome of an event
Contributing Surface Cause	Major but not the root level cause of an incident (implicating or has potential to implicate) an injury or illness e.g. in case of a fall from a ladder contributing surface causes may be a) slippery floor, chemical leak, broken valve and/or untrained worker indicating <i>unsafe condition</i> and b) person did not inspect, ignored the hazard, failed to report the hazard and/or himself created the hazard indicating <i>unsafe behavior</i> .
Corrective & Preventive Action Request (CPR)	An HSEQ System Tool/Form for continuous improvement to timely document an issue or an emerging issue to enable focus on systematic investigation of discrepancies (violation, failures and/or deviations) in an attempt to prevent their recurrence (for corrective action) or to prevent occurrence (for preventive action).
Corrosive	A chemical that causes visible destruction of, or irreversible alterations in, living tissue.
D	
Dangerous Occurrence	Readily identifiable event with potential to cause an accident or disease to persons at work and the public or of significant actual or potential material damage. (Also see <i>Near Hit</i>)
Design Root Cause	Root level cause of an incident (implicating or has potential to implicate) an injury or illness e.g. in case of a fall from a ladder primary surface causes may be a) nonexistence of maintenance plan, flawed inspection plan and/or nonexistence of implementation strategy indicating <i>unsafe condition</i> and b) failing to provide tools, inadequate supervision, non-enforcement of rules and/or inconsistent training of the person indicating <i>unsafe behavior</i>
E	
Event	Occurrence of a particular set of circumstances
Environment	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelations
Environment Aspects	Element of an organization's activities, products or services that can interact with the Environment.
Environment Impact	Any change to the Environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products or services
Emergency Response Post	An operations centre established in a suitable location to manage the larger aspects of the emergency. In a high-impact emergency there may be a number of response posts established to support the response like any joint off-site regional response post, provincial government's response post, etc.
Emergency Planning Zone (EPZ)	An area surrounding a facility, pipeline, or well where personnel, residents or other members of the public may be at highest risk during the early stages of an uncontrolled release of toxic materials such as H2S or explosion or fire and the area for which the company must have a specific emergency response plan.

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Emergency Response Plan (ERP)	A comprehensive plan to protect the personnel, public, including criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies and establishing communications and coordination, that is to be followed by all parties in the event of an incident.
Ergonomics	The science of studying people at work, and designing tasks, jobs, tools, equipment, facilities, and the work environment so that people can be safe, healthy, effective, productive and comfortable.
Explosive	A chemical that causes a sudden, almost instantaneous release of pressure, gas or heat when subjected to sudden shock, pressure or high temperature.
Exposure	The measurement of time during which the subject is at risk from a hazard
F	
Fugitive Emissions	Emissions of gases or vapors from pressurized equipment due to leaks and various other unintended or irregular releases of gases, mostly from industrial activities.
Failure Mode and Effect Analysis (FMEA)	Failure mode and effect analysis is a tool that examines potential product or process failures, evaluates risk priorities, and helps determine remedial actions to avoid identified problems.
Fatalities	Deaths due to work related injuries or illnesses per year
Fatal Accident Frequency Rate (FAFR)	(Number of Fatalities due to work related injuries in a year / Total man hours) x 100,000,000
Fatality Rate (FR)	(Number of Fatalities due to work related injuries in a year / Total No. of Employees) x 1,000
First Aid Case (FAC)	An injury that requires simple treatment, such as cleaning and application of a small bandage, which does not require treatment by a medical professional
Fire Classes	<p>Class A - Ordinary Combustible Solids Wood, paper, cloth, plastics, rubber, coal, carbon based compounds etc.</p> <p>Class B - Flammable & Combustible Liquids/Gases Liquids: Petrol, oil, paint, thinners, kerosene, alcohol, etc... Gases: L.P.G., Butane, Acetylene, Hydrogen, natural gas and Methane etc ...</p> <p>Class C - Electrical Fires Computers, switchboards, power-boards, etc..</p> <p>Class D - Combustible Metals Magnesium, aluminium, sodium or potassium etc..</p>
Flammability Limits	Flammability limits, also called flammable limits, or <i>explosive limits</i> give the proportion of combustible gases in a mixture, between which limits this mixture is flammable. Gas mixtures consisting of combustible, oxidizing, and inert gases are only flammable under certain conditions. The lower flammable limit (LFL) (lower explosive limit) describes the leanest mixture that is still flammable, i.e. the mixture with the smallest fraction of combustible gas, while the upper flammable limit (UFL) (upper explosive limit) gives the richest flammable mixture. Increasing the fraction of inert gases in a mixture raises the LFL and decreases UFL.
Flammable Liquid	<p>A liquid with a flash point below 100 °F (37.8 °C). Further classification is as under:</p> <ul style="list-style-type: none"> • Class IA flammable liquids have a flash point below 73 °F and a boiling point below 100 °F • Class IB flammable liquids have a flash point below 73 °F and a boiling point greater than or equal to 100 °F • Class IC flammable liquids have a flash point greater than or equal to 73 °F and below 100 °F • Class II combustible liquids have a flash point greater than or equal to 100 °F and below 140 °F • Class IIIA combustible liquids have a flash point greater than or equal to 140 °F and below 200 °F • Class IIIB combustible liquids have a flash point greater than or equal to 200 °F
Flash Point	The lowest temperature of a flammable liquid at which it gives off sufficient vapors to form an ignitable mixture with the air near the surface of the liquid or within the container used
Fuel Load	The total quantity of combustible contents of a building, space, or fire area, including interior finish and trim, expressed in heat units or the equivalent weight in wood.
G	
Global Warning (Greenhouse Effect)	Global warming is when the earth heats up (the temperature rises). It happens when greenhouse gases (carbon dioxide, nitrous oxide, CFCs, methane, etc.) trap heat and light from the sun in the earth's atmosphere, which increases the temperature. The heat and light can get through the atmosphere, but it can't get out due to damage in the protective layer i.e. ozone.
H	
Hazard	Source or situation with a potential for harm in terms of injury or ill health, damage to property, damage to the workplace environment, or a combination of these
Hazard identification	Process of recognizing that a hazard exists and defining its characteristics
Health Surveillance	The monitoring of workers for the purpose of identifying changes in health status due to occupational exposure to a hazard, and includes biological monitoring.
HFR Rating	NFPA Hazard Rating(H for Health, F for Fire and R for Reactivity) as 0=Insignificant hazard; 1=Slight hazard; 2=Moderate hazard; 3=High hazard; 4=Extreme hazard
Housekeeping	Maintaining the working environment in a tidy manner so that, in particular, access and movement is not hindered.
HSE Management System Audit	A systematic and documented verification process of objectively obtaining and evaluating evidence to determine whether an organization's HSE management system conforms to the HSE management system audit criteria set by the organization, and for communication of the results of the process to management.
HSE Management System	The part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing and maintaining the HSE policy.
HSE objective	Overall HSE goal, arising from the HSE policy, that an organization sets itself to achieve, which is quantified where practicable.
HSE performance	Measurable results of the HSE management system, related to an organization's control of its HSE aspects, based on its HSE policy, objectives and targets
HSE policy	Statement by the organization of its intentions and principles in relation to its overall HSE performance

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	which provides a framework for action and for the setting of its HSE objectives and targets.
I	
Incident	Event that gave rise to an accident or had the potential to lead to an accident
Injury	Physical harm or damage to a person resulting from traumatic contact between the body of the person and an outside agency or from exposure to environmental factors.
Injury Rate	$(\text{No. of Injuries in a year} / \text{Total No. of Employees}) \times 1000$
Interested party	Individual or group concerned with or affected by the HSE performance of an organization.
Irritant	A chemical that causes reddening, swelling and pain short of actual tissue damage. Irritants are not corrosive. Their inflammatory effect is reversible.
J	
Job Hazard Analysis (JHA)	The process of carefully studying and recording each step of a job, identifying existing or potential job hazards (both safety and health), and determining the control measures to reduce or eliminate these hazards.
K	
Key Performance Indicator (KPI)	Performance indicator or key performance indicator (KPI) is a measure of performance commonly used to help an organization define and evaluate how successful it is, typically in terms of making progress towards its specific goals.
L	
Level – 1 Emergency:	<p>It is an emergency state in which an incident or series of Incidents which may cause the normal operations / activities to be temporary suspended or shut down. This emergency results an immediate potential threat to the safety of personnel, assets, environment, and operations. This type of emergency can be control by Emergency Team Member. The following conditions define as Level-1Emergency (but not limited to):</p> <ul style="list-style-type: none"> • An injury or illness which result Lost Workday Injury (LWI); • Moderate fire; • Moderate spill; • Small contained fire or explosion; • Electric shock/ electrocution; • Toxic/ H2S leakage; <p>Note: Gather at respective muster point in case of Level-1 Emergency.</p>
Level- 2 Emergency	<p>An emergency state in which an incident or series of incident may result in serious injury/ fatality, significant fire/ explosion, major equipment damage, gas / oil release, loss of controlled substance to the environment for which external support services may be required. The following condition defines as Level-2 Emergency (but not limited to):</p> <ul style="list-style-type: none"> • An injury or illness that may result in Lost Workday Injury (LWI) or poses a health threat to personnel; • Property or Equipments damaged due to the significant fire or explosion; • Excessive H₂S emission; • Major fire/ explosion; • Major chemical / oil spills; • Bomb threat; • Natural disaster <p>Note: Rush outside the plant boundary through emergency exit gate in case of Level-2 Emergency.</p>
Lost Workday Injury (LWI)	An injury that prevents the worker from performing his normal duties within 24 hours of the injury.
Lost Workday Injury Frequency (LWIF)	$(\text{No. of Lost Time Injuries in a year} / \text{Total Hours Worked}) \times 1,000,000$
M	
MSDS	Material Safety Data Sheet, Also called PSDS
Medical Treatment Case	An injury severe enough to require treatment by a medical practitioner (a physician or nurse), but does not cause the worker to miss any work.
Muster Point	The assembly point where the employees have to be gathered in a case of any emergency situation.
N	
Near Hit	An unplanned event that do not result in injury, illness, or damage - but has the potential to do so. Only a fortunate break in the chain of events prevents an injury, fatality or damage. Human error is commonly an initiating event, a faulty process or system invariably permits or compounds the harm, and is the focus of improvement. Other familiar terms for these events is a "close call", "dangerous occurrence", or in the case of moving objects, "near collision"
O	
Occupational Health Illness	Any illness suffered due to occupational matter like Noise Induced Hearing Loss, Food Poisoning, Musculoskeletal Disorder, etc.
Oxidizer	A chemical that initiates or promotes combustion in other materials causing fire through the release of oxygen or other gases.
P	
Permit to Work (PTW) System	A permit-to-work system is a formal written system used to control certain types of work that are potentially hazardous. A permit-to-work is a document which specifies the work to be done and the precautions to be taken. Permits-to-work form an essential part of safe systems of work for many maintenance activities. They allow work to start only after safe procedures have been defined and they provide a clear record that all foreseeable hazards have been considered.
PPE (Personal Protective Equipment)	<p>Category A: Basic PPE i.e. a) Coverall / Dangri, b) Warm Jacket / Leather Jacket, c) Safety Shoes, d) Saf Glasses, e) Hard Hat, f) Ear Muffs and g) Cotton Gloves.</p> <p>Category B: Specific PPE i.e. a) Gloves (Leather, Chemical Resistant, and Latex), b) Face Shields</p>

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	(Welding Shields and Goggles), c) Flame Resistant Clothes, d) Long Safety Shoes, e) Gas Mask, f) Chemical Apron and f) Safety Harness. Category C: Emergency PPE i.e. complete Turnout Gear/Fire Kit (Fire Suit), SCBA, APRs, and Safety Vests/Clothing with Reflective Material designed for high nighttime visibility.
Prevention of Pollution	Use of processes, practices, materials or products that avoid, reduce or control pollution, which may include recycling, treatment, process changes, control mechanisms, efficient use of resources and material substitution
Primary Surface Cause	Most superficial level of cause of an incident (implicating or has potential to implicate) an injury or illness e.g. in case of a fall from a ladder primary surface causes may be a) defective ladder indicating <i>unsafe condition</i> and b) hurriedness of the person indicating <i>unsafe behavior</i>
Product Safety Data Sheet	MSDS when prepared by the relevant team for our own products
Pyrophoric	A chemical that will ignite spontaneously in or at a temperature of 103 F (54.4 C or below).
R	
Reproductive Hazards	Chemicals that affect the reproductive capabilities of males, females and a developing fetus. Reproductive (M) – for males Reproductive (F) – for females Reproductive (D) – developmental hazard for fetus Reproductive (S) – suspect, effects seen at levels not expected in industry
Restricted Workday Injury (RWI)	An injury that restricts the worker from performing his normal duties but to continue within 24 hours of the injury
Risk	Combination of the likelihood and consequence(s) of a specified hazard event occurring.
Risk Assessment	Overall process of estimating the magnitude of risk and deciding whether or not the risk is tolerable.
Risk Criteria	Terms of reference by which the significance is assessed
Risk Evaluation	Process of comparing the estimated risk against given risk criteria to determine the significance of the risk
Risk Register	Record used to identify and assess various risks. Risk Assessment Sheet is the alternate term.
Root Cause Analysis (RCA)	A structured process that uncovers the physical, human, and latent causes of any undesirable event in the workplace.
S	
Safe Man Hours	Cumulative hours worked since the most recent Lost Workday Injury (LWI) took place in a certain site or location.
Safety	Freedom from unacceptable risk of harm
Sensitizer	A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.
Significant Environment Aspect	An environment aspect that has or can have a significant environment impact.
Spill Volume (Reportable)	Quantity of spills equal to or more than one barrel i.e. 159 liter of crude, refined products, and chemicals both on land and aqueous environment.
Short Term Exposure Limit (STEL)	The maximum permissible concentration of a material, generally expressed in ppm in air, for a defined short period of time (typically 5 or 15 minutes, depending upon the country). This "concentration" is generally a time-weighted average over the period of exposure. These values, which may differ from country to country, are often backed up by regulation and therefore may be legally enforceable.
T	
T-Card & Mustering System	Manual Card for the personnel to sign or swipe in and out of the plant areas used for tallying up all the personnel that have assembled at the different "Muster Points" during actual emergencies or mock drill sessions in order to check whether this equates to the total number of people on the entire plant.
Total Reportable (Injury) Case Frequency (TRCF)	$(\text{Total Reportable Injury Cases in a year} / \text{Total Exposed Hours}) \times 1000,000$
Total Reportable Occupational Illness Frequency (TROIF)	$(\text{Total Occupational Illnesses in a year} / \text{Total Hours Worked}) \times 1000,000$
Toolbox Talk Program	Toolbox talks are a program developed by companies to bring a HSE culture into the working environment. Instead of lengthy, somewhat rigid formal training sessions, employees take part in a 10-15 minute relaxed safety briefing. These talks take place directly in the workplace, whether it be a manufacturing floor or at a construction site
Total Reportable (Injury) Cases	Restricted Workday Injuries + Lost Workday Injuries+ Medical Treatment Cases
U	
Unstable (Reactive) Chemical	A chemical that reacts with water to release a gas that is either flammable or presents a health hazard
V	
Vesicant	A chemical which, if it can escape from the vein, causes extensive tissue damage, with vesicle formation or blistering
X	
Xenobiotic	A chemical (or, more generally, a chemical mix) which is not a normal component of the organism which is exposed to it. Xenobiotics, therefore, include most drugs (other than those compounds which naturally occur in the organism), as well as other foreign substances.

TERMINOLOGY

When reference is made for actions to be taken, the intent of the following words is:

- Shall, Will, Must means that an action is COMPULSORY
- Should, Would, If Possible means that an action is not compulsory but is RECOMMENDED
- May means that an action is OPTIONAL and no recommendation is made as to whether or not it is to be carried out

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HSE Policy Statement, Objectives and Goals

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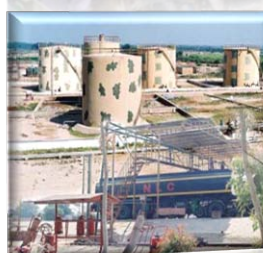
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Oil & Gas Development Company Limited

Health, Safety, Environment and Quality POLICY STATEMENT AND COMMITMENT



At OGDCL Health, Safety and Environmental (HSE) responsibilities are integral to the way the company operates. In carrying out all its activities, OGDCL ensures welfare of communities it operates in, protection of ecosystems and safety of its workforce. OGDCL believes in good HSE performance that can contribute to business success. OGDCL believes that responsibility for Health, Safety, and Environment cannot be delegated, it is a shared responsibility across the company.

As OGDCL continues its exploration and production activities basing its growth on a sound foundation of technical and financial prudence, it supports Health, Safety, and Environment initiatives by:

- ▣ Promoting a positive culture based on improving HSE performance;
- ▣ Complying with all legal and regulatory requirements;
- ▣ Eliminating hazards, practices and behaviors that could cause accidents, injuries or illness;
- ▣ Implementing controls to eliminate pollution and environmental harm;
- ▣ Providing training and resources for workforce to maintain safe systems of work;
- ▣ Integrating HSE management into all aspects of the organization;
- ▣ Employing contractors who aspire to the same HSE standards; and
- ▣ Reporting publicly and annually on HSE performance, measured against objectives and targets.

OGDCL shall continue to address the environmental and health impact of its operations by reducing waste, emissions, and discharges and by using energy efficiently. OGDCL strives to be good corporate citizen in every community in which it operates. Through observance and encouragement of this policy, the company aims to assist in protecting the environment and the overall well-being of all of its stakeholders, specifically, its employees, clients, shareholders, subcontractors, and communities.

2nd February 2010


SHAH MAHBOOB ALAM
Managing Director & CEO

APPLICABLE DOCUMENT

- ▣ HSEQ Policy Protocol

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Oil & Gas Development Company Limited

Health, Safety and Environment

OBJECTIVES & GOALS

In line with the HSEQ Policy Statement and Commitment,
our HSEQ Objectives and Goals are stated as follows:

1. No damage to our facilities, infrastructure and other assets
2. No harm to our human resources, communities, and clients
3. No unwarranted pollution into the natural environment
4. No extravagant use of energy resources
5. No dispensing of our products having prohibited composition



SHAH MAHBOOB ALAM
Managing Director & CEO

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Role, Responsibilities & Authorities

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7.1 STRUCTURE AND RESPONSIBILITIES

7.1.1 General

Successful handling of HSE matters is a line responsibility, requiring the active participation of all levels of management and supervision. OGDCL stresses to all employees their individual and collective responsibility for HSE performance. Employees are responsible for following the HSE policies and procedures and understanding risk assessment, mitigation and its components. Employees learn the environmental risks associated with each E&P activity. Employees are also responsible for reporting any potential non-compliance events, hazard, or environmental incidents which may occur. OGDCL shall stress to all employees their individual and collective responsibility for health, safety and environment performance. OGDCL shall also ensure that personnel are competent and have the necessary authority and resources to perform their duties effectively. Roles and responsibilities are given below:

7.1.2 MD & CEO

- ☐ To ensure HSE Management System is developed and implemented in line with the intentions of the global HSE Management System.
- ☐ To ensure HSE policy is implemented at all levels of the company.
- ☐ To ensure decisions from the HSE reviews are implemented.
- ☐ To ensure staff appraisal and disciplinary codes are monitored against the requirements of the HSE Management System.
- ☐ To ensure participation and involvement in HSE is encouraged at all levels.
- ☐ To ensure plan for achieving HSE objectives and targets are being implemented.
- ☐ To motivate staff by owning direct commitment to HSE policies and procedures.
- ☐ To ensure necessary resources (financial or otherwise) are available with all company staff to achieve local and corporate HSE goals.

7.1.3 Executive Directors

- ☐ To ensure corporate goals of company are achieved by the adoption of local policies and procedures.
- ☐ To ensure decisions from the HSE reviews are implemented.
- ☐ To ensure staff appraisal and disciplinary codes are monitored against the requirements of the HSE Management System.
- ☐ To ensure participation and involvement in HSE is encouraged at all levels.
- ☐ To ensure objectives and plans for achieving HSE objectives and targets are being implemented.
- ☐ To motivate staff by owning direct commitment to HSE policies and procedures.
- ☐ To ensure necessary resources (financial or otherwise) are available to staff to achieve local and corporate HSE goals.
- ☐ To ensure suppliers' selection criterion strictly calls for HSE compliance standards.

7.1.4 General Manager / Manager HSEQ

7.1.4.1 Management of HSEQ Function

- ☐ Keeping track of all the existing projects related to HSEQ.
- ☐ Evaluation of new projects related to HSEQ.
- ☐ Recommendation for new roles related to HSEQ in the company.
- ☐ Adaptation of new HSE tools & technologies
- ☐ Approval/Implementation of new HSEQ procedures in the E&P lifecycle.
- ☐ Initiating and coordinating various pollution prevention, energy conservation and waste treatment/disposal programs.
- ☐ Ensuring distribution of HSEQ resources to the sites on behalf of top management and as custodian of HSEQ.
- ☐ Monitoring the effectiveness of HSEQ programs and recommending actions for improvement.

7.1.4.2 Management of HSEQ Projects

- ☐ Sponsoring HSEQ initiatives in the company.
- ☐ Reviewing the identified hazards and their operability based on PFDs, P&IDs, Layout plans, Equipment lists, Process data sheets and Operating and maintenance philosophy.
- ☐ Providing technical input to Safety Cases of ultimate concern.
- ☐ Examine the scope and authenticity of environmental studies.
- ☐ Performing walkthroughs of various sites on HSEQ related

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- ☐ Risks and Exposures in all phases of E&P lifecycle and monitor the implementation and maintenance of risk management / mitigation measures.
- ☐ Reviewing and monitoring Cost and Effort related to HSEQ matters on various projects, and take appropriate actions on serious resource concerns.
- ☐ Reviewing the process capability and resources at various sites to investigate and analyze potential/actual losses and hurdles toward continual improvement of the systems.

7.1.4.3 Management of Emergency

- ☐ To ensure fire and evacuation procedures are followed and updated for the office and staff accommodation.
- ☐ To ensure first aid medical facilities are available and medical evacuation procedures are in place.
- ☐ To ensure office premises and company rented houses are maintained in safe condition.
- ☐ To ensure fire prevention equipment is provided and tested as per manufacturer's guidelines.
- ☐ To ensure company owned or rented vehicles are maintained and driven safely.
- ☐ To ensure compliance to office safety, ergonomics issues and housekeeping at all levels working under administrative control.

7.1.4.4 Investigation and Analysis

- ☐ Ensuring adequate emergency response resources are place and staff trained for emergency response.
- ☐ Conducting and / or coordinating incident / accident investigations of serious nature.
- ☐ Conducting and reviewing HSE audits of critical nature.
- ☐ Ensuring modern, updated and valid methodologies are used to gather, interpret and monitor HSEQ parameters.
- ☐ Ensuring database of key performance indicators is maintained: Key statistics are reported, reviewed and followed up on time.

7.1.4.5 Liaison and Administration

- ☐ Establishing and maintaining a solid working relationship with HSEQ team members.
- ☐ Providing advice and assistance to HSEQ team on pertinent matters.
- ☐ Communicate with other GMs on different development projects.
- ☐ Acting as liaison between the company and governmental agencies affecting the HSE programs such as CIM, EPA, or similar state, federal and International agencies. Keep current on changes in regulations and their effects on the company.
- ☐ Working closely with insurance carriers to minimize claims.
- ☐ Ensuring auditing and inspection requirements and compliance both at a local and corporate level.
- ☐ Participating in the activities of local, state and industry for the exchange and development of ideas and best practices relating to HSEQ issues.
- ☐ Coordinating the site occupation/restoration issues pertaining to community matters.
- ☐ Providing overall supervision and functional support to company doctors.

7.1.4.6 Representing HSEQ in Executive Meetings

- ☐ Providing insights on a corporate level on the issues related to HSEQ.
- ☐ Providing input on the strategy for the projects in terms of HSEQ role.
- ☐ Correlating HSE statistics from team members and reporting company's total figures to the Managing Director.

7.1.4.7 Providing Assistance to HRM

- ☐ Reviewing and providing feedback for the new HRM policies.
- ☐ Performance evaluation of Managers / Chiefs and mentoring for how to improve upon the existing weaknesses and deficiencies.
- ☐ Member of the interview panel for new hiring.
- ☐ Reviewing and coordinating the HSE training programs refresher courses, and training material.
- ☐ Administrating the HSEQ motivational and incentive Programs.

7.1.5 HSEQ Team Head Office

7.1.5.1 Environment Function

- ☐ To conduct Initial Environmental Examination (IEE) studies of various projects of the E&P lifecycle by visiting relevant sites/fields and gathering updated secondary data.
- ☐ To facilitate third parties to conduct Environmental Impact Assessment (EIA) Studies till

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conclusion of the project.

- ☞ To coordinate with Environmental Protection Agencies (EPA) for the acquisition of NOC.
- ☞ To coordinate with all the relevant stakeholders and arrange public hearing as a result of the Environmental Impact Assessment (EIA) Studies.
- ☞ To crosscheck at various sites that whether environmental aspects and impacts are maintained and significant impacts are mitigated as per the environmental study reports.
- ☞ To facilitate third parties to carry out monitoring of key environmental parameters and NEQS at various sites/fields.
- ☞ To plan and schedule to check whether the waste management/ minimization and water management plans are maintained at concerned sites/fields.
- ☞ To provide guidance where required on the establishment of HSE Objectives and action plans in perspective of the corporate plans and / or visions.
- ☞ To propose corrective & preventive actions to rectify the nonconformities and advice appropriate measures to control the reoccurrence of non-conformances, and follow up to verify the effectiveness of actions taken.
- ☞ To statistically analyze the Environmental Studies related Key Performance Indicators, exhibit findings in the HSE performance/activity reports and apprise top management of the prevailing level of maturity and progress on HSE matters.

7.1.5.2 Occupational Health & Safety Function

- ☞ To participate in the employment of risk assessment and management through QRA, PSR and HAZOP studies in a lifecycle of a project.
- ☞ To identify and address hazards based on Process Flow Diagrams (PFDs), Piping and Instrumentation Diagrams (P&IDs), Layout plans, Equipment lists, Process data sheets and Operating and maintenance philosophy.
- ☞ To participate in the preparation and reviews of Safety Cases.
- ☞ To perform environmental modeling including air emissions dispersion & noise pollution modeling and liquid effluents analysis in order to examine the data for environmental studies.
- ☞ To plan and schedule walkthroughs of various sites on HSE related Risks and Exposures in all phases of E&P lifecycle and monitor the implementation and maintenance of risk management / mitigation measures.
- ☞ To provide guidance where required on the establishment of HSE Objectives and action plans in perspective of the corporate plans and / or visions.
- ☞ To propose corrective & preventive actions to rectify the nonconformities and advice appropriate measures to control the reoccurrence of non-conformances, and follow up to verify the effectiveness of actions taken.
- ☞ To design training modules and impart trainings on Health, Safety, & Environment related software modules / simulations and gauge effectiveness of the trainings.
- ☞ To statistically analyze the risk related Key Performance Indicators, exhibit findings in the HSE performance/activity reports and apprise top management of the prevailing level of maturity and progress on HSE matters.
- ☞ To search for modifications, advancements and/or modern trends and tools in the HSE systems.

7.1.5.3 QA/QC Function

- ☞ To plan and schedule Internal HSE Audits, surveillance visits, and walkthroughs of various sites on HSE matters and monitor the implementation and maintenance of applicable regulatory and statutory laws and standards.
- ☞ To prepare/update checklists for the evaluation of HSE related Risks and Exposures in all phases of E&P lifecycle and inspect the sites for the level of compliance/mitigation measures.
- ☞ To conduct HSE Surveillance Audits of HSE Management Systems at various sites based on the requirements of Integrated Management System (ISO 9001, ISO 14001 and OHSAS 18001 standards).
- ☞ To conduct Surveillance Audits of the Laboratory Management Systems at various laboratories based on ISO 17025 standard.
- ☞ To inspect the validity of measuring devices and methodologies used at various sites for monitoring air emissions, liquid effluents, and noise.
- ☞ To assess the process capability and resources at various sites to investigate and analyze potential/actual losses and hurdles toward continual improvement of the systems.
- ☞ To monitor the operations and service related parameters for the processing components and utilities.

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- ☞ To analyze productive time, non-productive time and invisible lost time performance.
- ☞ To examine maintenance management optimization of the resources for the inspection and maintenance functions.
- ☞ To provide guidance where required on the establishment of HSE Objectives and action plans in perspective of the corporate plans and / or visions.
- ☞ To propose corrective & preventive actions to rectify the nonconformities and advice appropriate measures to control the reoccurrence of non-conformances, and follow up to verify the effectiveness of actions taken.
- ☞ To design tailored training modules and impart trainings on Health, Safety, Environment, & Quality matters and gauge effectiveness of the trainings.
- ☞ To statistically analyze the entire HSE related Key Performance Indicators, exhibit findings in the HSE performance/activity reports and apprise top management of the prevailing level of maturity and progress on HSE matters.
- ☞ To search for modifications, advancements and/or modern trends and tools in the HSE systems.
- ☞ To liaise with consulting firms, third party auditors, certification firms, and accreditation bodies.
- ☞ To facilitate in the surveillance audit of the existing or potential suppliers and subcontractors as per the technical specifications.

7.1.7 P&P and Production Management

- ☞ To effectively participate in the HSE central reviews.
- ☞ To ensure every subordinate under his control conforms to corporate HSE policies and procedures.
- ☞ To ensure hazard analysis is timely conducted, significant impacts are mitigated and risk is management.
- ☞ To review and participate in the approval of waste management or minimization plans.
- ☞ To review and participate in the approval of water management plans.
- ☞ To review and participate in the energy conservation plans.
- ☞ To ensure every subordinate is provided with a safe, healthy and comfortable environment to work.
- ☞ To approve the training needs of their staff based on HSE management system

7.1.8 Field and Plant Management

- ☞ To play leading role for excellence of HSE
- ☞ To ensure HSE Management System is in place prior to undertaking any work activity
- ☞ To review, for all field operations, that all HSE and security critical activities and hazards are identified, risks are assessed and control measures are in place
- ☞ To review and approve Product Safety Data Sheet (PSDS)
- ☞ To review and approve Job Hazard Analysis (JHA) where required
- ☞ To review and approve the HSE risk analysis activities
- ☞ To ensure all modifications are made through change control protocols
- ☞ To review and approve operational controls
- ☞ To ensure operations are optimized to minimize HSE hazards
- ☞ To ensure operational controls, including work instructions, maintenance programs and training, for activities associated with significant HSE Risks are implemented
- ☞ To review and approve ERPs
- ☞ To review and approve work instructions, permit systems, etc.
- ☞ To designate persons who are authorized to issue various types of work permits in the plant and production areas.
- ☞ To ensure HSE Management System management programs for achieving HSE objectives and targets is implemented
- ☞ To ensure all incidents are properly investigated and actions taken to prevent recurrence.
- ☞ To ensure all contractors follow OGDCL HSE policies and standards
- ☞ To ensure emergency-preparedness to handle potential emergencies
- ☞ To periodically review activities under control to look for underlying unsafe conditions, unsafe act auditing to prevent incidents
- ☞ To ensure all staff and contract employees are familiar with both local and corporate HSE requirements
- ☞ To ensure effective plans are established to handle emergency break downs.

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- ☐ To ensure pollution control, waste management and energy conservation measures are established and taken
- ☐ To examine the results of certification / inspection of lifting equipment, electrical installations, etc. from the relevant third party
- ☐ To ensure safety & health requirements are well-enforced and informed during service companies / new employees / visitors / guests reporting or visiting the site

7.1.9 Field / Plant Departmental and Sectional In-charges (and Relievers)

- ☐ To ensure safe & sound working environment by following HSE policies and relevant procedures in the department / section.
- ☐ To do Job Hazard Analysis (JHA) where required.
- ☐ To participate in the HSE hazard identification, risk assessment and objectives formulation.
- ☐ To ensure availability of updated MSDS, SOP, Work Instructions, Forms etc.
- ☐ To ensure excellent housekeeping in the operational areas under them.
- ☐ To ensure weekly safety talks are conducted in line with the schedule given by the site Field HSE I/C and feed back to HSE Section.
- ☐ To ensure all incidents are reported and investigated as per prescribed manners.
- ☐ To generate CPR in case of any noncompliance is observed.
- ☐ To prepare Product Safety Data Sheet (PSDS) of the outgoing products in consultation with the relevant stakeholders. (*Laboratory Function only*)
- ☐ To do analysis of drinking water, emission gases, rain / plant channel water, etc. with respect to the environmental monitoring plan where required. (*Laboratory Function only*)
- ☐ To maintain file (original) of Hazardous chemicals / materials and MSDSs. (*Stores Function only*)
- ☐ To maintain a backup file of Hazardous chemicals / materials and MSDSs. (*User + Medical Department*)
- ☐ To ensure that action plans related to relevant objectives are being properly followed and implemented.
- ☐ To maintain a supply of personal protective equipment (PPE) as necessary.
- ☐ To ensure allotted PPEs are in fine working conditions.
- ☐ To participate in the fire and emergency drills
- ☐ To ensure timely certification / inspection of lifting-equipment, electrical installations, etc. from the relevant third party with respect to the safety monitoring plan where required.
- ☐ To ensure effective plans are followed to handle emergency break downs.
- ☐ To ensure all containers of hazardous chemicals / materials in the designated area are properly labeled and secured.
- ☐ To ensure timely and rightly disposal of waste chemicals / containers / bottles, etc.
- ☐ To maintain record (original) of waste disposal (*Stores Function only*)
- ☐ To act as PTW Issuing Authority for all types of the work permits for carrying out various types of jobs in the operating areas of the plant (*respective Shift Engineer only*) and in the production areas (*Senior-most designated Production Engineer only*) to ensure that:
 - The equipment has been suitably prepared for safe implementation of the job for which the work permit is issued.
 - The job area has been inspected and all necessary precautions have been taken.
 - In case of Hot Work Permit, Confined Space Entry Permit and the Radiography Permit, the HSEQ Representative has also signed the work permit.
 - In case of Excavation Work Permit, I/C Electrical and I/C Instruments have also signed the permit.
 - In the case of Electrical Work Permit, In-charge Electrical or in his absence, his representative has also signed the permit.
 - The Receiving Authority fully understands the requirements of the work permit and the safety precautions to be taken.
 - All process conditions remain safe during the period of the implementation of the job and in compliance with JHA where applicable.

7.1.10 HSE Field Team / HSE Field Management Representative

- ☐ To apprise HSEQ Department about HSE operations in the field and the specific HSE requirements.
- ☐ To ensure Operating Departments have current copy of the related documents.
- ☐ To act as Secretary of HSE Field Committee and convene HSE Committee Reviews.
- ☐ To formulate HSE objectives and action plan in collaboration with the departmental In-charge.
- ☐ To identify the training needs of the field based on HSE management system to perform their activities safely
- ☐ To provide HSE training to all new employees at orientation.

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- ☞ To develop short training courses and impart in plant trainings on HSE issues.
- ☞ To assist departments / sections in meeting their HSE related responsibilities and objectives.
- ☞ To conduct surveillance visits of the operations on regular basis to check compliance with the HSE system.
- ☞ To process and maintain record of Corrective and Preventive Actions.
- ☞ To maintain a backup file of Hazardous chemicals / materials and MSDSs.
- ☞ To post and maintain adequate "Notice to Employees" in areas where notices are usually posted.
- ☞ To provide technical review of hazards associated with various operations, methods, and purchased items.
- ☞ To maintain record of document change requests and change control requisitions.
- ☞ To provide assistance to other departments / sections in the preparation of HSE operating procedures / work instructions.
- ☞ To maintain record (copy) of waste disposal
- ☞ To participate in the emergency response planning process and develop ERPs.
- ☞ To arrange / conduct and maintain record of fire and emergency drills
- ☞ To participate in Job Hazard Analysis (JHA) where required.
- ☞ To participate in the HSE hazard identification, risk assessment, and objectives formulation.
- ☞ To provide assistance in the implementation of change control protocols.
- ☞ To ensure HSE Monitoring Plans are followed.
- ☞ To review Product Safety Data Sheet (PSDS).
- ☞ To maintain ERP Post.
- ☞ In the case of Hot Work Permit to ensure that:
 - The Issuing Authority has carried out the required explosivity tests.
 - The adjoining area where the job has to be performed is safe from fire prevention point of view.
 - Arrangements have been made for fighting any accidental fire.
 - A Standby Fireman has been assigned.
- ☞ In the case of Confined Space Entry Permit to ensure that:
 - The Issuing Authority has carried out the required explosivity and oxygen tests.
 - Emergency equipment is available.
 - Emergency rescue arrangements have been made.
 - A Standby Person has been assigned.
- ☞ In case of Radiography Permit to ensure that:
 - Radiation zone has been adequately cordoned off.
 - A Standby Person has been assigned to warn un-authorised persons.
- ☞ In case of Excavation Work Permits, to ensure that In-charge Electrical and/or In-charge Instruments have looked into the matter that there are no underground cables or instrument wires in the area of excavation is to be done.
- ☞ In case of Electrical Work Permits, to ensure that In-charge Electrical or his assigned representative has looked into the matter that all relevant electrical circuits have been suitably isolated and have been locked as per requirements.

Responsibility, authority and accountability for coordinating implementation and maintenance of the HSE Management System is assigned to HSE Field In Charge to act as HSE Field Management Representative of the concerned area. But the appointment shall not reduce the responsibility of individuals for implementing the HSE Management System in their areas. The application of the HSE Management System to a specific operation shall always be the responsibility of line management.

7.1.11 (Job) Supervisor

- ☞ To act as receiving authority for the PTW related to Hot Work Permit, Vessel Entry Permit or Radiography Work Permit of the relevant job either within the Plant or in the Production Area.
- ☞ To ensure that:
 - He signs the work permit when receiving it.
 - The Performing Technician fully understands the scope of the job and the safety precautions required as per work permit.
 - The safety precautions and the safe working conditions as specified on the work permit are followed by the Performing Technician and by the other members of the work party.
 - The work permit is revalidated as necessary.
 - The Performing Technician fulfils his specified duties as per work permit procedure.

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- On the completion of the job, the Receiving Authority will sign the copy of the work permit and exchange it with the original as per procedure.

7.1.12 (Performing) Technician

Performing Technician is the person, who has been designated for the execution of the specific job, alone or along with other company employees or along with 3rd party personnel. The Performing Technician may belong to any craft i.e. mechanic, pipe fitter, machinist, instrument mechanic, electrician etc.

- ☞ To act as receiving authority (for the work permits other than Hot Work Permit, Vessel Entry Permit or Radiography Work Permit) whenever a supervisor of the Performing Technician has either not been assigned or is not available on duty.
- ☞ To ensure not to start the job until received the work permit.
- ☞ To ensure that the copy of the work permit is prominently displayed at the job site during the duration of the job.
- ☞ To ensure the scope of the job and the safety precautions required as per work permit.
- ☞ To ensure safety precautions and safe working conditions as specified on the work permit and ensure that these are also followed by the other members of the work party.
- ☞ To get the work permit revalidated as necessary.
- ☞ To ensure that on the completion of the job, the job area is cleaned thoroughly and various guards are installed.
- ☞ To ensure that when work is performed in a confined space, all tools and equipment is taken out at the conclusion of the job.
- ☞ To hand over the work permit to the Receiving Authority on work completion.
- ☞ In the absence of the Receiving Authority, to sign the completion of the job on the work permit, hand the copy back to the Issuing Authority in exchange for the original.

7.1.13 Fireman

- ☞ To undertake drills and physical training and taking part in training on techniques, use of equipment and related matters
- ☞ To conduct mock-up emergency exercises and evacuation drills with respect to emergency drill plan
- ☞ To maintain the level of physical fitness necessary to carry out all the duties of a firefighter
- ☞ To assess situations quickly and deciding on the best course of action
- ☞ To respond immediately and safely to emergency calls / unforeseen circumstances
- ☞ In the event of a fire, first sound the alarm and then attempt to extinguish the fire.
- ☞ To attend emergency incidents including fires, road accidents, spillages of dangerous substances, natural disasters and other incidents
- ☞ To rescue trapped people and to minimize distress and suffering, including giving first aid before ambulance crews arrive;
- ☞ To clean up and checking the site after dealing with an incident
- ☞ To assist / write full incident reports
- ☞ To perform inspections as per HSE Monitoring Plans
- ☞ To maintain fire lorry, fire pump, and associated equipment
- ☞ To monitor the job area from the point of view of fire hazards during hot jobs that:
 - location of the nearest fire alarm get determined.
 - Ensure adequate arrangements for fire fighting equipment.
 - remain in the area whilst work is in progress.
 - check that sparks and other hot debris are being effectively contained.
 - to stop the work if he is not satisfied with the fire prevention precautions, and with the containment of the hot debris.

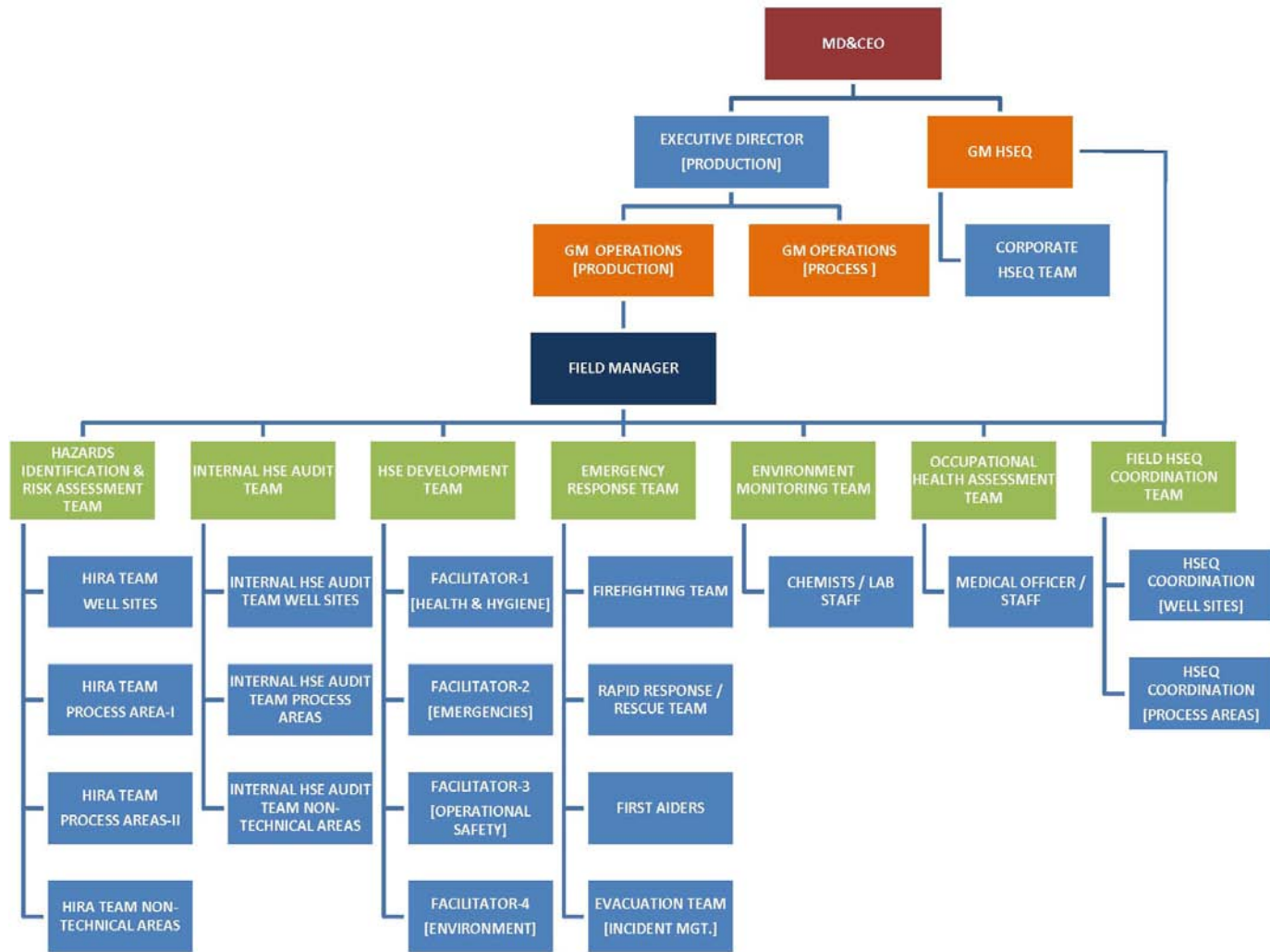
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7.2 HSE Management System Team – Functional Setup (based on the Working Methodology of "Large" Production Fields/ Processing Plants)



In addition, there is an important team termed as **HSE Field Management Review Committee** comprises of all Sectional ICs having Field HSE IC as the Secretary.

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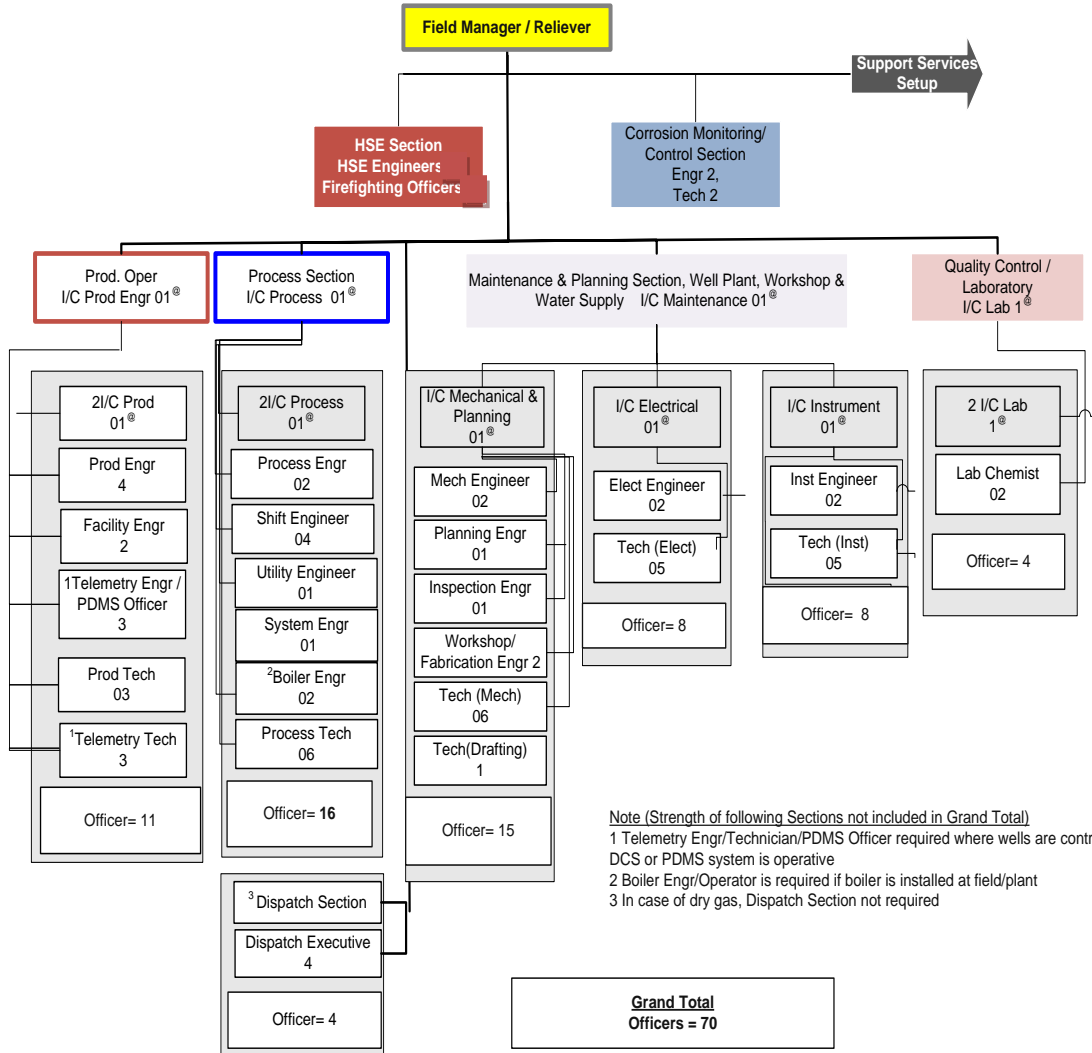
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7.3 Operational Hierarchy

Operating Fields Organogram
 Dehy/Compression (Centrifugal)/LPG Plant/Acid Gas Removal



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7.4 HSE Cognizant Procurement Cycle

Step No.	Phase	Target	OGDCL	Contractor
Step 1	<u>Risk Assessment</u>	Major hazards related to the work shall be identified as scope/depth that OGDCL management needs to involve in next phases.	Indenting Department shall initiate the risk assessment and takes into account Technical, HSE and other domain's input if needed.	N/A
Step 2	<u>Pre-qualification</u>	Major hazards shall be identified with assurance that they can be managed. Confirmation of major hazards with outline targets criteria and methods for control. Confirmation that the pre-qualified contractors can achieve targets.	Indenting Department shall work with Supply Chain Management (SCM), HSE and Technical domain to collect information of nominated contractors and pre-qualified accordingly. The typical activities are to review contractor's HSE MS, previous HSE performance record and to set up HSE criteria.	Respond to pre-qualification: Discuss HSE responsibilities and staffing.
Step 3	<u>Tender Period</u>	Preparation of Technical, Commercial, Quality Control and HSE Plans.	Indenting Department shall work with SCM, HSE and Technical domain, respond to clarification requests. The typical activities shall be to meet with contractor reps, site visits, communicate OGDCL's HSE System to contractors, etc.	Prepare contract HSE Plan: Clarification requests, Meetings, Site Visits.
	<u>Evaluation and Contract Award</u>	Confirmation that contractor HSE Plan meets OGDCL criteria. Agreement with contractor on methods to be used, performance measurement criteria and audit/review strategy.	Indenting Department shall ensure that HSE requirements be included in the contract. Typical activities shall be to evaluate bids, raise clarifications on contractor's HSE Plan.	Respond to clarifications / meetings.
Step 4	<u>Mobilization</u>	Confirmation that contractor's HSE Plan has achieved pre-execution targets.	Indenting Department shall be responsible for this phase. The typical activities may include pre-mobilization meeting, confirmation of contractor's HSE Plan, activities supervision, pre-execution audit.	Kick-off meeting, Confirm HSE Plan activities, Supervision, Induction, Training, Meetings, Inspections, Pre-execution status achievement.
	<u>Kick-off</u>	Assurance and verification that contractor systems are performing in line with contractor's HSE Plan.	Indenting Department shall be responsible. The typical activities may include kick-off meetings, communicate HSE requirements with fields supervisors, confirm the preparation of people and equipments are in line to contract requirements, etc.	Supervision, Inspection, Induction, Training/Drills, Toolbox-Talks, performance reviews, Investigation of incidents, Auditing, Correction of defects.
Step 5	<u>Work in progress</u>	Management of work activities, Milestone Review.	Field management shall be responsible. The typical activities may include routine walk through, site inspection/ observation, investigation of incidents, auditing etc.	Supervision, routine HSE management, such as HSE meeting, inspections, corrective action tracking, etc.
Step 6	<u>Evaluation/Close-out</u>	Analysis and feedback of OGDCL and Contractor HSE Performance.	Indenting Department and field management shall be responsible. The typical activities shall include Close-out meeting, communicate to contractor, feedback for future contract HSE Plans/Contract clauses.	Close-out report and feedback (to own management).

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8

Health, Safety Environment Hazard Identification & Risk Assessment

The purpose of this procedure is to provide a system and instructions, and to assign responsibilities for identifying, documenting, updating and evaluating Health Safety and Environmental (HSE) Hazards and related risks. This procedure applies to all the activities, products and services of production field and plant functions that can impose HSE hazards; whether they are carried out or generated in-house, purchased, or subcontracted.

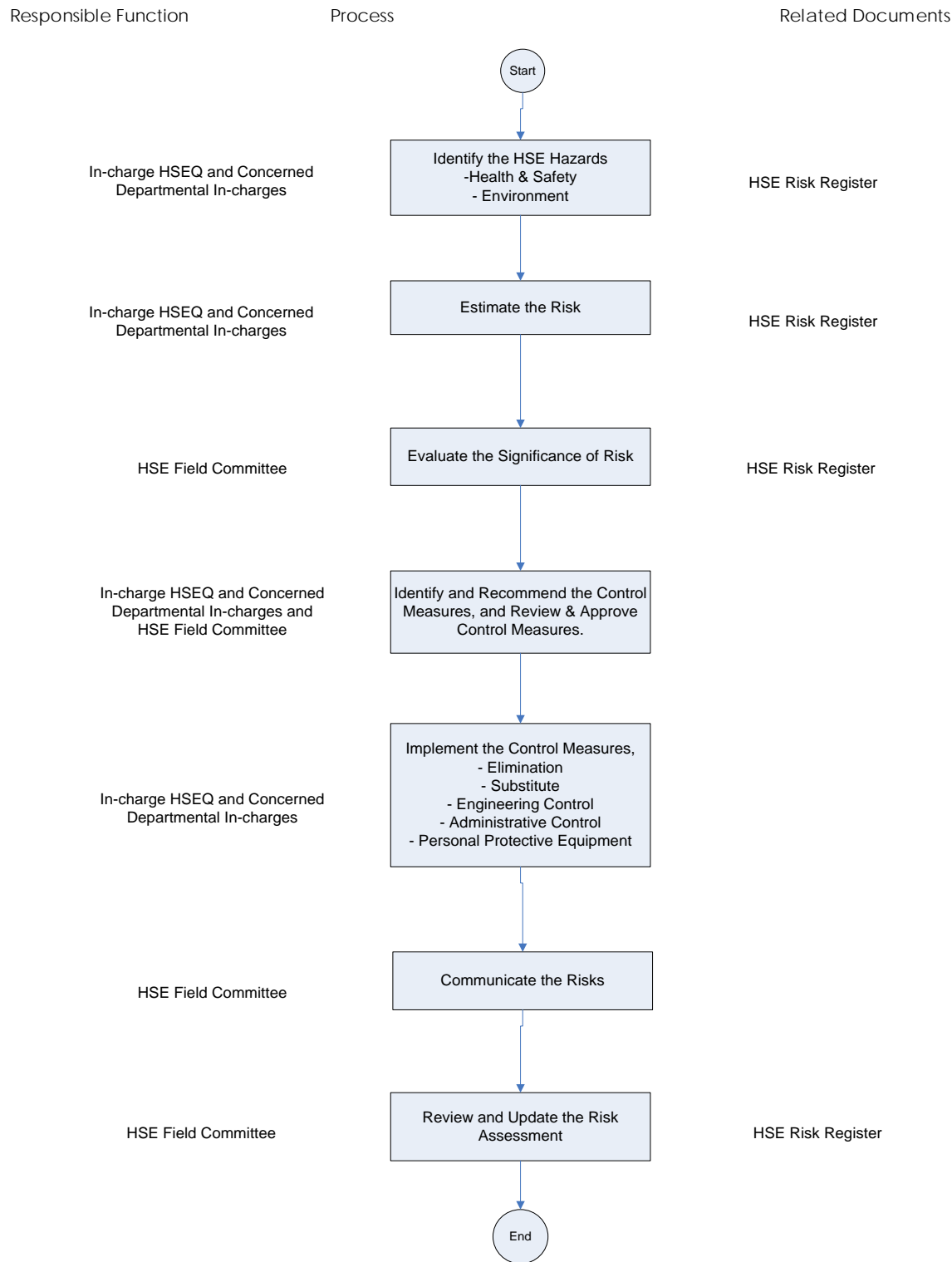
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FLOWCHART FOR HSE HAZARD IDENTIFICATION, RISK ASSESSMENT AND RISK CONTROL



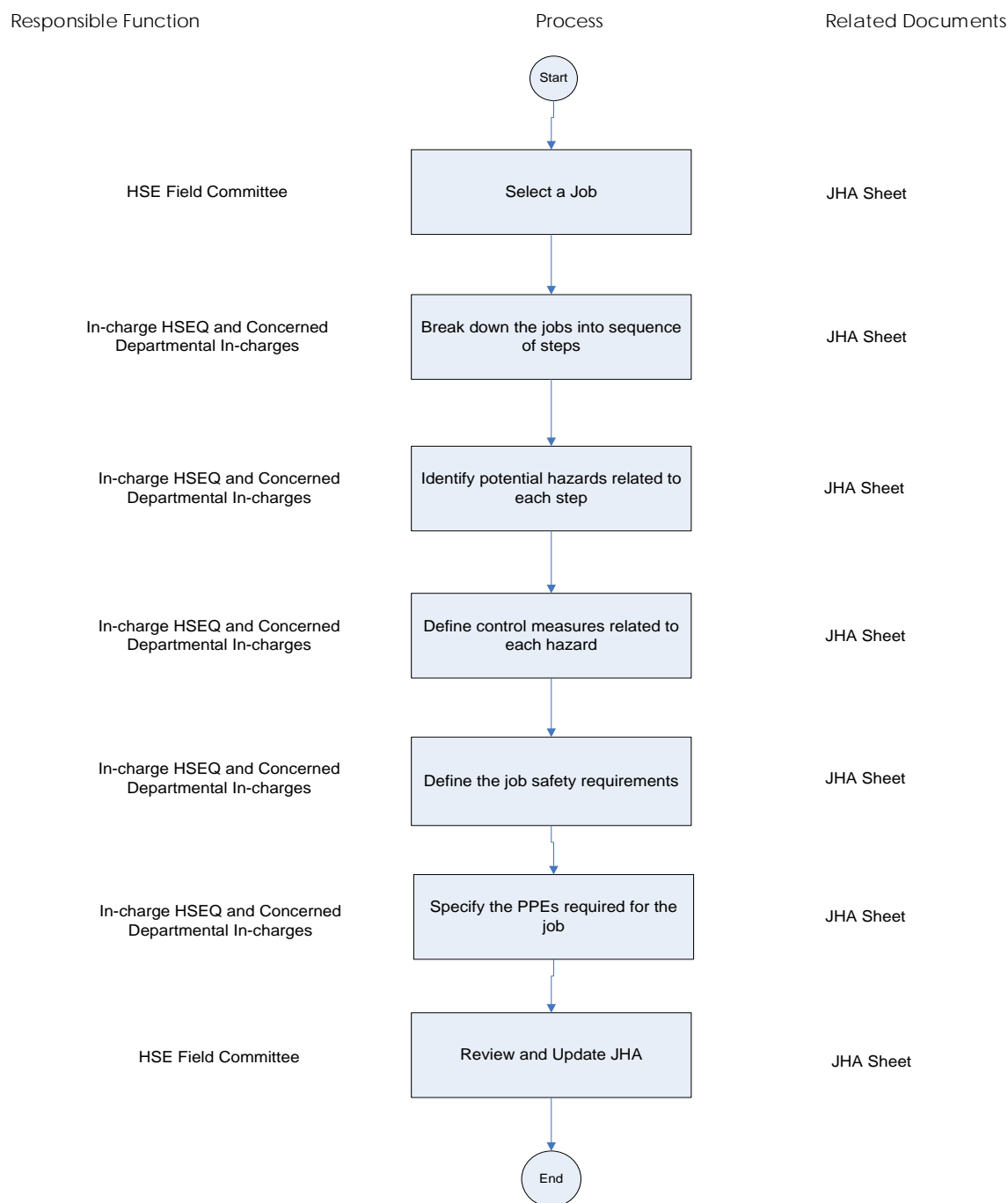
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FLOWCHART FOR JOB HAZARD ANALYSIS (JHA)



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8.1. PROCEDURE

8.1.1. HSE Risk Assessment Planning

- 8.1.1.1. Depending upon the variety of operations and complexity of jobs in any area, HSE Risk Assessment Plan shall be developed on annual basis.
- 8.1.1.2. However HSE Risk Assessment Plan shall not necessarily be revised when activities take place that affect the risk ratings.

8.1.2. Identification of Product/Process Quality/Characteristics

- 8.1.2.1 Preferably the following quality/characteristics of Natural Gas shall be taken into account before/while identifying the associated HSE hazards:

- a) Heating Value (calorific value)
- b) Hydrocarbon Dew Point Temperature
- c) Acid Gases
 - c.1 CO₂ (Carbon dioxide)
 - c.2 H₂S (Hydrogen sulfide)
 - c.3 CH₃SH (Methanethiol or Methyl mercaptan)
 - c.4 C₂H₅SH (Ethanethiol or Ethyl mercaptan)
- d) Other gases
 - d.1 N₂
 - d.2 He
- e) Water
 - e.1 Water vapor
- f) General Contaminants
 - f.1 Sulphur
 - f.2 Mercury
 - f.3 Radon
 - f.4 Polonium

- 8.1.2.2 Preferably the following quality/characteristics of Condensate Oil shall be taken into account before/while identifying the associated HSE hazards:

- a) Temperature deg. F
- b) Specific Gravity
- c) Specific Gravity @ 60/60 deg. F
- d) API Gravity
- e) API Gravity @ 60/60 deg. F
- f) Water %
- g) Sludge %
- h) Sand %
- i) Base Sediment & Water (BSW)
- j) Salt *per thousand barrels* (PTB) or in ppm
- k) Reid Vapor Pressure (RVP) psi @ 100 deg. F

- 8.1.2.3 Preferably the following quality/characteristics of LPG shall be taken into account before/while identifying the associated HSE hazards:

- a) Specific Gravity @ 60/60 deg. F
- b) Reid Vapor Pressure (RVP) psi @ 100 deg. F
- c) Residue by Volume %
- d) Methanol %
- e) Degree of Corrosivity

- 8.1.2.4 Quality/characteristics of the products as prescribed in the following formal agreements shall be conformed with by using pertinent Test Method and Equipment at the pre-defined Test Frequencies:

- a) Gas Sale/Purchase Agreement (GSA)
- b) Condensate Oil Sale/Purchase Agreement (COSA)
- c) LPG Sales/Purchase Agreement (LSA)

- 8.1.2.5 Process design information like block flow diagram or simplified process diagram; the process chemistry; the maximum intended inventory; temperature, pressure, flow and composition limits; and the consequences of deviations shall be consulted.

- 8.1.2.6 In addition, Mechanical Design Information shall be consulted as mentioned below:

- a) Materials and specification of construction, piping and instrument diagrams: the classification of electrical areas; design of the relief and ventilation systems: and a description of the shutdown and interlock system.
- b) Accepted consensus codes and standards to which the mechanical design conforms and the extent to which it does not
- c) Quality control procedures
- d) Maintenance procedures and work practices that ensure mechanical integrity of equipment

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8.1.3 Identification of HSE Hazards

8.1.3.1 Environmental Hazards

8.1.3.1.1 Environmental hazards shall be identified by HSEQ Department / Section in consultation with concerned Departmental Heads in the company and outside experts where required. While identifying environmental hazards, following factors shall be considered:

a. **Physical Environment**

- Water
- Air
- Noise
- Soil/Land
- Natural Resources
- Energy

b. **Biological Environment**

- Flora
- Fauna

c. **Social Environment**

- Local Community
- Employees
- Cultural Heritage

d. **Emergency Situations**

- Fire
- Spillage/Leakage
- Explosion
- Toxic Gas Leakage
- Flood
- Burst Gas Pipe Line etc.

8.1.3.1.2 HSEQ Department / Section and the concerned departmental heads shall review the relevant activities, processes and services in the related department or section and prepare a list of identified environmental hazards on the "HSE Risk Register" against each activity, process and service. After the review by departmental heads, the HSEQ Department / Section shall compile a final comprehensive list of all environmental hazards on the "HSE Risk Register".

8.1.3.2 Occupational Health & Safety Hazards

8.1.3.2.1 OH&S hazards shall be identified by HSEQ Department / Section in consultation with departmental heads in OGDCL and outside experts where required. Following hazards shall be considered while identifying Occupational Health & Safety Hazard:

a. **Physical hazards**

- Electrical (Shock/burn)
- Hazardous/Stored Energy
- Radiations (ionizing or non-ionizing)
- Revolving or Rotating entities
- Moving entities (on floor or overhead)
- Falling objects
- Ejection (flying pieces or parts)
- Improper storing/stacking (falling materials)
- Improper floor or surface (tripping/slipping)
- High pressure points
- High temperature points/surfaces
- Work at heights (falls)
- Confined Space (toxic gases/suffocation)
- Obstructions/Collisions/Contacts/Impacts (sharp edges, low head-rooms)
- Vibration
- Natural Hazard (lightning, flood, earthquake)
- Drowning
- Violence or robbery

b. **Chemical hazards**

- Explosion
- Fire (electric/chemical/fuel)

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- Combustible materials
 - Flammable materials
 - Oxidizing materials
 - Corrosive/irritating materials
 - Dust/Particles
 - Fumes/Vapors
 - Toxic Gases
 - Mist/Fog
 - Frost bite
 - c. **Ergonomics hazards**
 - Improper Light (Glare/Poor light)
 - Improper Work Temperature/Humidity (hot/cold/chill)
 - Improper Ventilation
 - Manual lifting, handling or shifting
 - Repetitive movements
 - Poor Posture
 - Poor workplace design/layout
 - Congested workplace
 - Long sittings/duration of work
 - Improper work rest cycles
 - Stressful tasks
 - Noise
 - d. **Biological hazards**
 - Animal/Insect bite or sting
 - Infections (blood/needles)
 - Bacteria/Viruses
 - Unhygienic conditions
 - Food Contamination
 - Clinical Waste
 - Contagious diseases
 - Algae or diseased plants
- 8.1.3.2.2 HSEQ Department / Section and the concerned departmental heads shall review the relevant areas in the related department or section and prepare a list of identified Occupational Health & Safety Hazards on the "HSE Risk Register" against each activity, process and service. After the review by departmental heads, the HSEQ Department / Section shall compile a final comprehensive list of all Occupational Health & Safety hazards on the "HSE Risk Register".
- 8.1.3.3 Estimation of HSE Hazards by Risk Assessment Method**
- 8.1.3.3.1 After identifying the HSE Hazards, the related impacts shall be identified and the significance of each hazard estimated. Risk Assessment Methodology shall be used for evaluating the significance of Base and Actual HSE Hazards.
- Base Risk Calculation**
- 8.1.3.3.2 For *Environmental hazards* Severity (Table 1A) and Probability (Table 2) ratings are assigned to environment Hazards while for *Health and Safety hazards* Severity (Table 1B) and Probability (Table 2) ratings are assigned to Health & Safety Hazards.
- 8.1.3.3.3 For all those hazards which have more than one impact the 'base' risk rating is done as a combined effect. For all identified hazards the related impacts are identified from the above mentioned types. Any hazard may have more than one type of impact so all possible impacts of hazards are identified.
- 8.1.3.3.4 For all HSE Hazards relevant 'Base Risk' Ratings are obtained by multiplying Severity and Probability.
- Actual Risk Calculation**
- 8.1.3.3.5 For *Environmental hazards* Severity (Table 1A) and Probability (Table 3) ratings (*considering the existing control measures*) are assigned to environment Hazards while for *Health and Safety hazards* Severity (Table 1B) and Probability (Table 3) ratings (*considering the existing control measures*) are assigned to Health & Safety Hazards.
- 8.1.3.3.6 For all those hazards which have more than one impact the 'actual' risk rating is done as a combined effect. For all identified hazards the related impacts are identified from the above mentioned types. Any hazard may have more than one type of impact so all possible impacts of hazards are identified.
- 8.1.3.3.7 For all HSE Hazards relevant 'Actual Risk' Ratings are obtained by multiplying Severity and

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Probability.

8.1.1.4 HSE Risks Evaluation

8.1.1.4.1 After estimating the probability and severity of risk relate to each HSE hazard, the results of estimation shall be compared against the "Assessment Criteria Matrix" given in the Table 4 to determine the level / significance of the risk. Based on risk evaluation, the actual risks are classified as follows:

- a. **High (Actual) Risks (Unacceptable):** These risks are unacceptable. Substantial improvements in risk controls are necessary, so that the risk is reduced to a tolerable or acceptable level. The work activity should be halted until risk controls are implemented that reduces the risk so that it is no longer very high. If it is not possible to reduce risk the work should remain prohibited.
- b. **Moderate (Actual) Risks (Tolerable):** Consideration should be given as to whether the risks can be lowered, where applicable, to a tolerable level, and preferably to an acceptable level, but the costs of additional risk reduction measures should be taken into account. The risk reduction measures should be implemented within a defined time period. Arrangements should be made to ensure that the controls are maintained, particularly if the risk levels are associated with harmful consequences.
- c. **Low (Actual) Risks (Acceptable):** These risks are considered acceptable. No further action is necessary other than to ensure that the controls are maintained.

8.1.1.4.2 The "HSE Risk Register" shall then be presented to the HSE Field and/or Central Committee for review and approval.

8.1.1.4.3 All HSE hazards whose related impacts are rated as High Risks shall be significant.

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Table 1A: Severity Category Definition for Environment

Severity Scale	1	2	3
Likely Physical (Air/Water/Noise) Description	Rare excursions beyond regulatory limits	Intermittent excursions beyond regulatory limits	Continuous excursions beyond NEQS or other regulatory limits
Likely Physical(Soil) Description	Negligible impact on soil	Limited impact on soil	Large-scale damage to soil and/or contamination of ground water
Severity Scale	1	2	3
Likely Physical(Natural & Energy Resources) Description	Comprehensive monitoring of consumption of energy and natural resources being done, and benchmarks identified for consumption of energy and natural resources	Partial monitoring of consumption of energy and natural resources being done, and some benchmarks identified for consumption of energy and natural resources	No system in place for monitoring of consumption of energy and natural resources, and no benchmarks defined for consumption of energy and natural resources
Severity Scale	1	2	3
Likely Biological Description	No lasting effect on plant and animal life with minimal impact on Ecosystem	Limited impact on plant or animal life with little effect on natural landscape or impairment of ecosystem	Serious impacts on plant or animal life with mass-scale deforestation, destruction of natural habitat, threat to endangered species, migration of animals, or impairment of ecosystem
Severity Scale	1	2	3
Likely Social (Community or Public) Description	Negligible effect on surrounding community or public	Limited effects on surrounding community resulting in isolated complaints or concerns by community or NGOs	Serious effects on surrounding community resulting in large-scale complaints, protests, or media campaigns by community or NGOs
Severity Scale	1	2	3
Likely Social (Employees) Description	Negligible health and safety effects	Limited health & safety effects resulting in isolated complaints from employees	Serious and long-lasting health & safety issues related to employees resulting in high employee turnover or strong union protests
Likely Social (Cultural Heritage) Description	Negligible impact on national monuments or cultural heritage	Limited effects on national monuments or cultural heritage resulting in disfigurement which can be restored	Serious effects on national monuments or cultural heritage causing irreversible damage or disfigurement of buildings
Severity Scale	1	2	3
Likely Emergency (General) Description	Insignificant emergency condition having negligible effects on physical, biological, or social environment	Small-scale emergency condition having limited effects on physical, biological, or social environment	Large-scale emergency condition resulting in serious effects on physical, biological, or social environment
Likely Emergency (Oil Spill) Description	Slight loss of containment (spill equals to 1 barrel or less)	Minor loss of containment (spill less than 100 barrel): Confined to the work place with little ability to control	Significant loss of containment (spill greater than 100 barrel): Confined to the work place but with no ability to control

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Table 1B: Severity Category Definition for Health and Safety

Severity Scale	1	2	3
Likely Human (Injury) Description	Minor Injury requiring simple medical treatment and not affecting the work performance	Major Injury resulting in disability or prolonged absence from work	Fatal injury causing death (Single/Multiple)
Likely Human (Disease) Description	Temporary Illness having limited health effects which are reversible	Permanent disease causing irreversible health damage (loss of sight, hearing loss.)	Fatal disease causing death (Single/Multiple)
Likely Assets Description	Minor damage to OGDCL property (less than Rs. 100,000) with no effect on plant operations	Major damage to OGDCL property (more than Rs. 100,000) resulting in operational loss of any key function of plant	Significant damage to OGDCL property (more than Rs. 10 million) resulting in plant shutdown
	Minor damage to private property resulting in no or simple compensation	Major damage to private property resulting into compensation	Major damage to private property resulting into heavy compensation / litigation / bad repute

Table 2: Probability of Incident Occurrence Category Definition for 'Base Risk'

Likelihood Scale	1	2	3	4
Incident Occurrence	Highly Unlikely	Unlikely	Likely	Very Likely
PROCESS AGE	The process systems or sub system element is new and known to withstand design conditions	.....	.....	The process systems or sub system element is old and known to have severe fatigue
DESIGN STANDARDS	Systems or sub system elements are designed for a more severe duty than they experience	.....	.....	The systems or sub system elements were constructed to standards lower than the current norm
QUALITY OF COMPONENTS	The quality of components is better than the industry norm	.....	.....	Severe service conditions apply, e.g. highly corrosive
COMPETENCE OF OPERATOR	The operators are well-trained and skilled to operate the process systems or sub system element	.....	.....	The operators are untrained and unskilled to operate the process systems or sub system element

Table 3: Probability of Incident Occurrence Category Definition for 'Actual Risk'

Likelihood Scale	1	2	3	4
Incident Occurrence	Highly Unlikely	Unlikely	Likely	Very Likely
OPERATION CONTROLS	The operational controls are effective and known to withstand their intended purpose	The operational control are in place and are reviewed as per plans	The operational control are in place and are not routinely reviewed	No or insufficient operational controls are in place

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Table 4: Assessment Criteria Matrix for Actual Risks

		Chance of Happening (Probability)			
		Very Unlikely	Unlikely	Likely	Very Likely
Impact (Severity)	High	3	6	9	12
	Medium	2	4	6	8
	Low	1	2	3	4

High Risk (Unacceptable)	8 – 12
Moderate Risks (Tolerable)	4 – 6
Low Risks (Acceptable)	1 – 3

8.1.1.5 HSE Risks Control Measures

8.1.1.5.1 HSE objectives and related management plans shall be established for High Risks and as well as for Moderate Risks.

8.1.1.5.2 For all HSE objective following risk control measures may be used:

- a. **Engineering Controls** – focuses on the source of risk and at designing the job and environment to eliminate the hazards or reduce the exposure to hazard:
 - Availability of technology to reduce the impact of liquid, air, noise emissions and solid waste on environment
 - Design of a workplace
 - Automation/material handling devices
 - Machine guard, interlocks, lockouts, warning devices
 - Isolation/enclosure
 - Use of technology for reducing emergency situations
 - Limitation (safety valves)
 - Ventilation (general dilution/local exhaust)
 - Storage
 - Air and effluent monitoring devices
 - Communication devices, etc.
- b. **Administrative Controls** – focuses on limiting the exposure to hazards by controlling work schedule, changing work habits, improving sanitation or hygiene practices, etc.
 - Purchasing criteria (tools, equipment, chairs, etc)
 - Policies and procedures
 - Training
 - Organizing and planning work
 - Rotation of workers
 - Safety plan/procedure
 - Signage, Warnings, etc.
- c. **Personal Protective Equipment (PPE)**
 - Hard hat
 - Goggles
 - Hearing Protection
 - Safety boots
 - Respiratory protective equipment
 - Fall protection, etc.

8.1.1.5.3 Controlling hazards:

Field management shall not rely exclusively on PPE for protection from hazards. PPE shall be used, where appropriate, in conjunction with engineering controls, guards, and safe work practices and procedures.

8.1.1.5.4 Assessment and selection:

Field management needs to consider certain general guidelines for assessing the hazardous situations that are likely to arise under foreseeable work activity conditions and to match employee PPE to the identified hazards. The field management shall designate the Departmental / Sectional ICs, HSE Rep. or some other qualified person to exercise common sense and appropriate expertise to assess work activity hazards and select PPE by registration onto Personal Protective Equipment

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- Need Assessment Matrix.
- 8.1.1.5.5 In order to assess the need for PPE the following steps shall be taken:
- a. Survey. A walk-through survey of the area shall be conducted in question to identify sources of hazards by considering the following categories:
 - (1) Impact
 - (2) Penetration
 - (3) Compression (roll-over)
 - (4) Chemical
 - (5) Heat
 - (6) Harmful dust
 - (7) Light (optical) radiation
 - (8) Drowning
 - (9) Falling
 - b. Sources. During the walk-through survey the HSE Rep. shall observe:
 - (1) Sources of motion; for example, machinery or processes where any movement of tools, machine elements or particles could exist, or movement of personnel that could result in collision with stationary objects.
 - (2) Sources of high temperatures that could result in burns, eye injury or ignition of protective equipment.
 - (3) Types of chemical exposures.
 - (4) Sources of harmful dust.
 - (5) Sources of light radiation, for instance, welding, brazing, cutting, heat treating, furnaces, and high intensity lights.
 - (6) Sources of falling objects or potential for dropping objects.
 - (7) Sources of sharp objects which might pierce or cut the hands.
 - (8) Sources of rolling or pinching objects which could crush the feet.
 - (9) Layout of work place and location of co-workers.
 - (10) Any electrical hazards.
 - (11) Review injury/accident data to help identify problem areas.
- 8.1.2 **Job Hazard Analysis (JHA)**
- 8.1.2.1 In order to identify hazards associated with a specific job, Job Hazard Analysis shall be done. Jobs with the worst accident history shall have priority and should be analyzed first. JHA will be based upon following factors:
- a. **Frequency of Accidents:** a job has repeatedly caused accidents is a candidate for JHA.
 - b. **Rate of Disabling Injuries:** Every job that has disabling injuries should be given a JHA.
 - c. **Severity Potential:** Some jobs may not have a history of accidents but may have the potential for a severe injury.
 - d. **New Jobs:** Analyses of new jobs and jobs where changes have been made in processes and procedures should follow.
- 8.1.2.2 The concerned departmental head shall review a specific job in the related department or section in the light of existing control measures by breaking down the jobs into sequence of steps.
- 8.1.2.3 Potential hazards related to each step shall be identified and control measures related to each hazard defined.
- 8.1.2.4 The job safety requirements shall be defined and the PPEs required for the job shall also be specified.
- 8.1.2.5 Eventually, a 'Job Hazard Analysis (JHA) Sheet' shall be reviewed by HSEQ Department / Section and made available to employees for all jobs in the workplace.
- 8.1.3 **HSE Risk Communication**
- 8.1.3.1 HSE Field and/or Central Committee shall be responsible for communicating the HSE hazards and its associated risks at all levels of employees and contractors where applicable. The communication of HSE hazards and risks shall be done by issuing/arranging/applying:
- a. HSE Risk Register
 - b. Material Safety Data Sheets
 - c. Product Safety Data Sheets
 - d. Posters/Displays/Signboards
 - e. Training Sessions
 - f. Toolbox Talks/Safety Talks
 - g. JHA Sheets
 - h. Permit to Work System
- 8.1.4 **Updating the HSE Hazards, Impacts and Risk Assessment Ratings**
- 8.1.4.1 At least once in a year, HSEQ Department / Section shall review the HSE Risk Register and update them based on the achievement of HSE objectives.
- 8.1.4.2 In addition, HSE Hazards and related risk assessment ratings shall be updated based on the following activities:
- a. Changes in processes and technology, and introduction of new processes;
 - b. Significant expansion or reduction of capacity;
 - c. New suppliers and subcontractors;

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


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- d. Facilities addition or relocation;
 - e. Changes in the surrounding community;
 - f. Changes in laws and regulations (that would promote higher awareness of certain aspects);
 - g. Temporary projects, such as construction, installation of equipment, and so forth
- 8.1.4.3 For the management of change, the organization shall also identify the HSE hazards associated with the changes in the organization, HSE Management System and other activities.
- 8.1.4.4 Departmental Heads shall be responsible for identifying changes in activities, processes and services that either create new HSE hazards or invalidate previously identified HSE hazards. New HSE hazards shall also be identified through the HSE Field and/or Central Committee Reviews or by internal or external audits of the HSE Management System.
- 8.1.4.5 New HSE Hazards, and requests to delete obsolete HSE hazards, shall be communicated to the HSEQ Department / Section.
- 8.1.4.6 HSEQ Department / Section shall review the proposed HSE hazards for relevance and records the new HSE Hazards in the "HSE Risk Register".

8.2 ASSOCIATED DOCUMENTS

-  HSE Risk Register
-  Personal Protective Equipment Need Assessment Matrix
-  Job Hazard Analysis (JHA) Sheet

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9

Legal & Other Requirements

The purpose of this procedure is to provide a system and instructions, and to assign responsibilities for identifying federal, state, and local HSE legal and regulatory requirements that apply to the company, and other requirements to which the company subscribes. This procedure applies to all activities, process and services that may be regulated by National Health & Safety and Environmental Acts, Rules and Regulations, or through any legal and other requirement to which the production field and plant functions may subscribe.

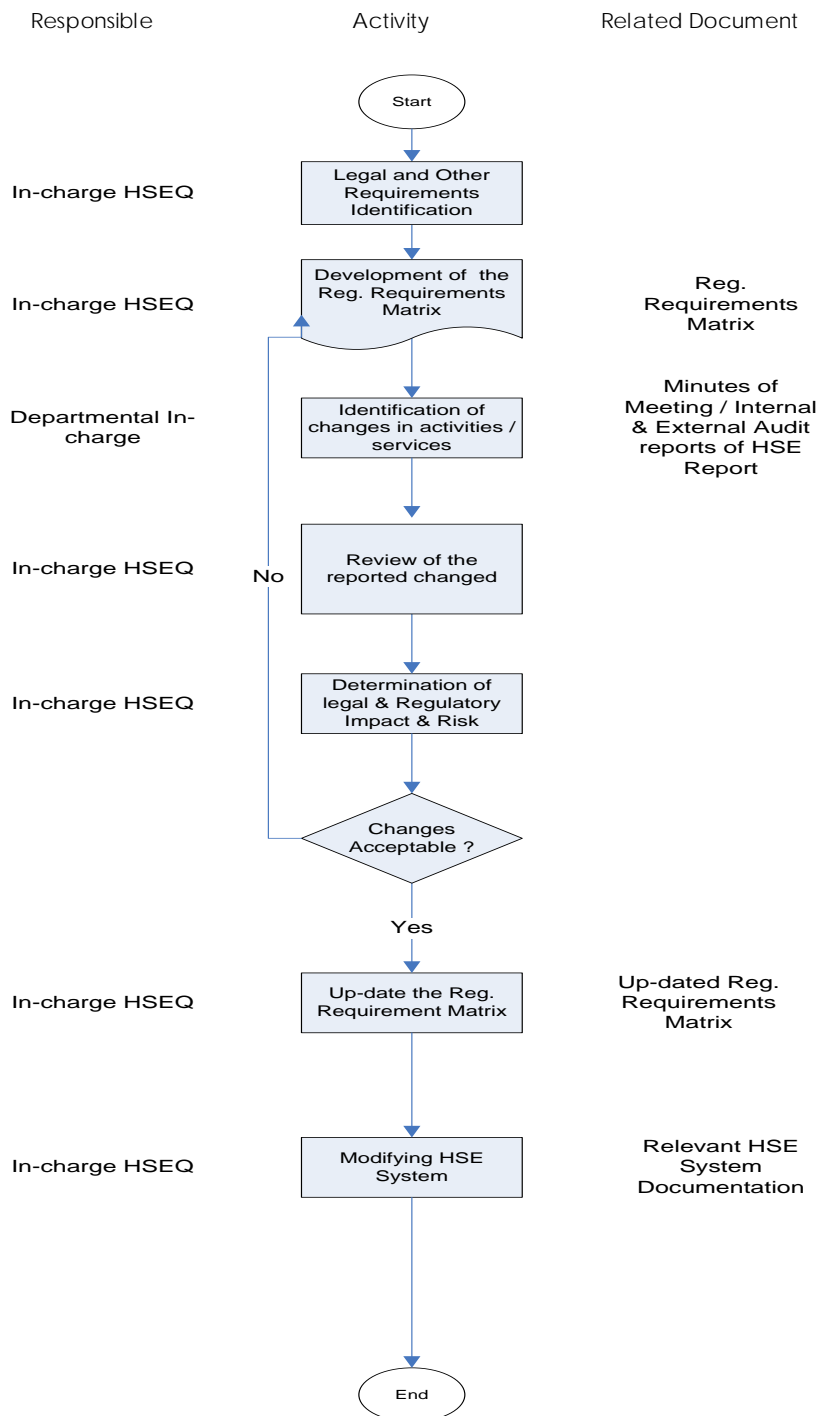
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FLOWCHART FOR LEGAL AND OTHER REQUIREMENTS PROCESS



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9.1. PROCEDURE

9.1.1 Identification of Legal & Regulatory Requirements

- 9.1.1.1 HSEQ Department shall be responsible for identifying the applicable regulatory and other requirements.
- 9.1.1.2 HSE Regulatory Requirements shall include the national regulations related to Environment and Health & Safety. These may include:
 - a. DGPC Guidelines
 - b. Oil & Gas Safety Regulations (Mines Act)
 - c. IEE/EIA Regulations (Pakistan Environmental Protection Act)
 - d. Exploration and Production Rules (Petroleum Act)
 - e. National Environmental Quality Standards [NEQS] Rules [Pakistan Environment Act]
 - f. Electricity Rules [Electricity Act]
 - g. Wildlife Protection Ordinance [Federal/ Provincial]
 - h. Factory Act
- 9.1.1.3 All applicable laws, regulations and other requirements shall be listed in the Regulatory Requirements Matrix, which is maintained by the HSEQ Department.

9.1.2 Access to Regulatory and Other Requirements

- 9.1.2.1 Information related to regulatory and other requirements shall be obtained by contacting the regulatory bodies, browsing the official websites or through industrial associations.
- 9.1.2.2 HSEQ Department shall track legislative and regulatory developments applicable to the oil and gas industry and area where the facility is located. The information shall be acquired from internal and external sources.
- 9.1.2.3 HSEQ Department shall respond to the applicable changes by updating the Regulatory Requirements Matrix.
- 9.1.2.4 HSE Department / Section shall implement, or modify relevant HSE Management Programs accordingly.

9.1.3 New & Modified Activities & Services

- 9.1.3.1 Changes to, and development of new activities, processes and services may change OGDCL legal and regulatory obligations. Such changes include:
 - a. Changes in processes and technology, and introduction of new processes;
 - b. Increase, reduction, or modification of the point of sources of emissions and discharges;
 - c. Changes in the inventory of chemicals and other regulated substances;
 - d. Significant expansion or reduction in business activities;
 - e. Facilities addition or relocation;
 - f. Temporary projects, such as construction, installation of new equipment etc.
- 9.1.3.2 Departmental heads shall be responsible for identifying changes in activities, processes and services that may change the facility's legal and regulatory obligations, and to communicate the changes to the HSEQ Section.
- 9.1.3.3 Relevant changes may also be identified by the HSE Field and/or Central Committee reviews or by internal or external audits of the HSE System.
- 9.1.3.4 The GM / Manager HSEQ shall review the reported changes and determine their legal and regulatory impact and risk. When the change triggers new regulatory requirements, the Regulatory Requirements Matrix shall be updated accordingly.

9.1.3.5 In addition, the Regulatory Requirements Matrix shall be reviewed at least once every year.

9.1.4 Salient Features of Environmental Laws

- 9.1.4.1 As authorized by the Environmental Protection Ordinance, no project owner/proponent of an oil and gas exploration, development and production project shall commence construction or operation unless filed with the respective (provincial) Environmental Protection Agency an Initial Environmental Examination (IEE) or where the project, is likely to cause an adverse environmental effect, an Environmental Impact Assessment (EIA).
- 9.1.4.2 The project owner/proponent shall submit for review an IEE or an EIA for approval by the respective Environmental Protection Agency (provincial).
- 9.1.4.3 The project owner/proponent shall classify exploration and development projects as either Category A or Category B to determine whether a project should be classified as Category A or Category B. The respective Environmental Protection Agency (provincial) shall concur with the classification of the project before submission of an EIA or an IEE by the project owner/proponent.
- 9.1.4.4 The Project owner/proponent shall classify a project as Category A or Category B. Consistent with World Bank guidelines, the following screening criteria shall be used to classify projects:
 - a. Category A: In general, certain types of projects either have, or are likely to have adverse impacts that may be sensitive, irreversible, and diverse. Category A includes projects which have one or more of the following

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attributes that make the potential impacts significant: direct pollutant discharges that are large enough to cause degradation of air, water or soil; large-scale physical disturbance of the site and/or surroundings; extraction, consumption, or conversion of substantial amounts of forest and other natural resources; measurable modification of hydrologic cycle; hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances.

Category A Examples - An EIA should address one or more of the following exploration/production activities:

- I. Initial exploration activities in a new area not currently producing hydrocarbons. Activities would include proposed seismic operations and exploratory drilling.
 - II. Initial production operations in a new Field which is not currently producing hydrocarbons.
 - III. Installation of processing or refining facility.
 - IV. Any proposed production operation that would vent produced gases to the atmosphere on a routine or continuous basis.
 - V. Any proposed production operation that would release untreated produced water to the ground, groundwater, or body of surface water.
 - VI. A major pipeline installation to transport hydrocarbons from the field to a processing or refining site in a different location.
- b. Category B: Category B projects often differ from Category A projects of the same type only in scale. Small-scale projects of the same type may fall into Category B.

Category B Examples - An IEE could address one or more of the following exploration/production activities:

- I. Ongoing drilling of development wells in a producing field.
- II. Installation of new equipment or facilities in an existing and producing field - such as installation of storage tanks, pumps, and minor processing equipment.
- III. Installation onsite distribution lines or gathering systems that transport oil and gas from the field to a centralized processing or refining facility also located within or adjacent to the same field.
- IV. Periodic emergency flaring operations.
- V. Release of treated produced water that test below the proposed required standards for release to the environment.

9.1.4.5 After it concurs with the classification of the project:

- a. Project owner/proponent shall submit to the respective Environmental Protection Agency (provincial) a complete EIA for a Category A project.
- b. Project owner/proponent shall submit to the respective Environmental Protection Agency (provincial) a complete IEE for a Category B project.

9.1.4.6 The project owner/proponent shall also file the EIA or IEE with DGPC as part of the Development Plan required by the 1986 Exploration and Production Rules.

9.1.4.7 If after completing an EIA or an IEE, the project owner/proponent concludes that no significant adverse effects will result from the proposed project, the proponent shall sign and date a Finding of No Significant Impact (FONSI). The respective (provincial) Environmental Protection Agency must also sign and concur with the FONSI prior to project commencement by issuing the No Objection Certificate (NOC).

9.1.4.8 A single EIA or IEE for the range of operations within a concession will be adequate. Provided all eventual operations have been anticipated and addressed. In some cases, Category B activities may already be addressed in the original EIA. In these cases, no further EIA or IEE should be required unless the respective Environmental Protection Agency (provincial) determines that the development plan, required under the 1986 Exploration and Production Rules, has changed drastically enough to warrant an EIA or IEE to address ongoing operations and projects.

9.1.5 Salient Features of Occupational Health & Safety Laws

9.1.5.1 Reporting of Accidents

- a. *Fatal and Serious Accidents (LTI based)*
 - I. Inform CIM forthwith by phone/fax/telegraph.
 - II. Notice on Form-VIII within 48 hours.
 - III. If death results from an accident reported earlier, immediately inform CIM by phone/fax/telegraph and also the written notice required within 48 hours.
 - IV. Final report on Form-IX within 3 months.
 - V. Notice of occupational disease required under Sec-20A and Reg-11 on form-X
- b. *Minor Accident (Generally involving First Aids)*
 - I. Report on Form-VIII within 15 days.

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9.1.5.2 Notices & Returns

- a. *Commencement Notice*: At least 15 days before the commencement of operations on Form-VII [Sec-14, Reg-4]
- b. *Abandonment Notice*: Within 7 days of the abandonment [Reg-5]
- c. *Reopening Notice*: Within 7 days of the date of reopening [Reg-6]
- d. *Change in Name/Ownership*: Within 7 days [Reg-7]
- e. *Appointment or change in address of Agent/Manager*: Within 7 days [Reg-8]
- f. *Annual Returns*:
 - i. On Form-I, II, III, IV & V: Before 21st day of February in each year
 - ii. In case of abandonment or change of ownership, within one month of abandonment or change. [Reg-3]
- g. *Half-yearly Returns*: Copies of entries of Register maintained as per Schedule-E to the Consolidated Mines Rules, 1952 within 14 days at 30th June and 31st December each year [Sec-20(3)]

9.1.5.3 Records Under Consolidated Mines Rules

- a. Register of Employees on Schedule-A.
- b. Register of Minor Accidents On Schedule-E
- c. Register of Overtime on Schedule-F
- d. Register of Annual Leave with wages on Schedule-G
- e. Register of Casual, Sick, Festival leaves on Schedule-H.

9.1.5.4 Records Under Safety Regulations

- a. Copies of all appointments of supervisors/ competent persons made by the manager [Reg-17].
- b. Inspection of machinery, equipment and fittings [Reg-18].
- c. Record of pressure tests of casing conducted under Reg-166.
- d. Record of tests performed on BOP [Reg-188].
- e. Record of pressure tests of pipelines performed under Reg-194(9), 202(3) and 209.
- f. Record of tests of protective devices installed on pipelines (on monthly basis) [Reg-208(3)].
- g. External inspection of storage tanks (six-monthly) [Reg-222].
- h. Record of H₂S monitoring [Reg-240].
- i. Record of evacuation in case of increased concentration of H₂S [Reg-241(2)].
- j. Record of issue and return of explosives to magazine [Reg-294].
- k. Record of inspection of fire fighting equipments (to be tested/examined once a week) [Reg-355].
- l. Record of fire-fighting drills (to be conducted at least once a week) [Reg-356(2)].

9.2 ASSOCIATED DOCUMENTS

-  Regulatory Requirement Matrix

9.3 APPLICABLE DOCUMENTS

-  Copies of Applicable Laws and Regulations

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10

HSE Objectives & Management Program

The purpose of this procedure is to provide a system and instructions, and to assign responsibilities for setting HSE Objectives & Targets, and establishing management programs to achieve HSE objectives and targets; This procedure applies to all activities, process and services that may cause significant HSE risk at production fields and plants.

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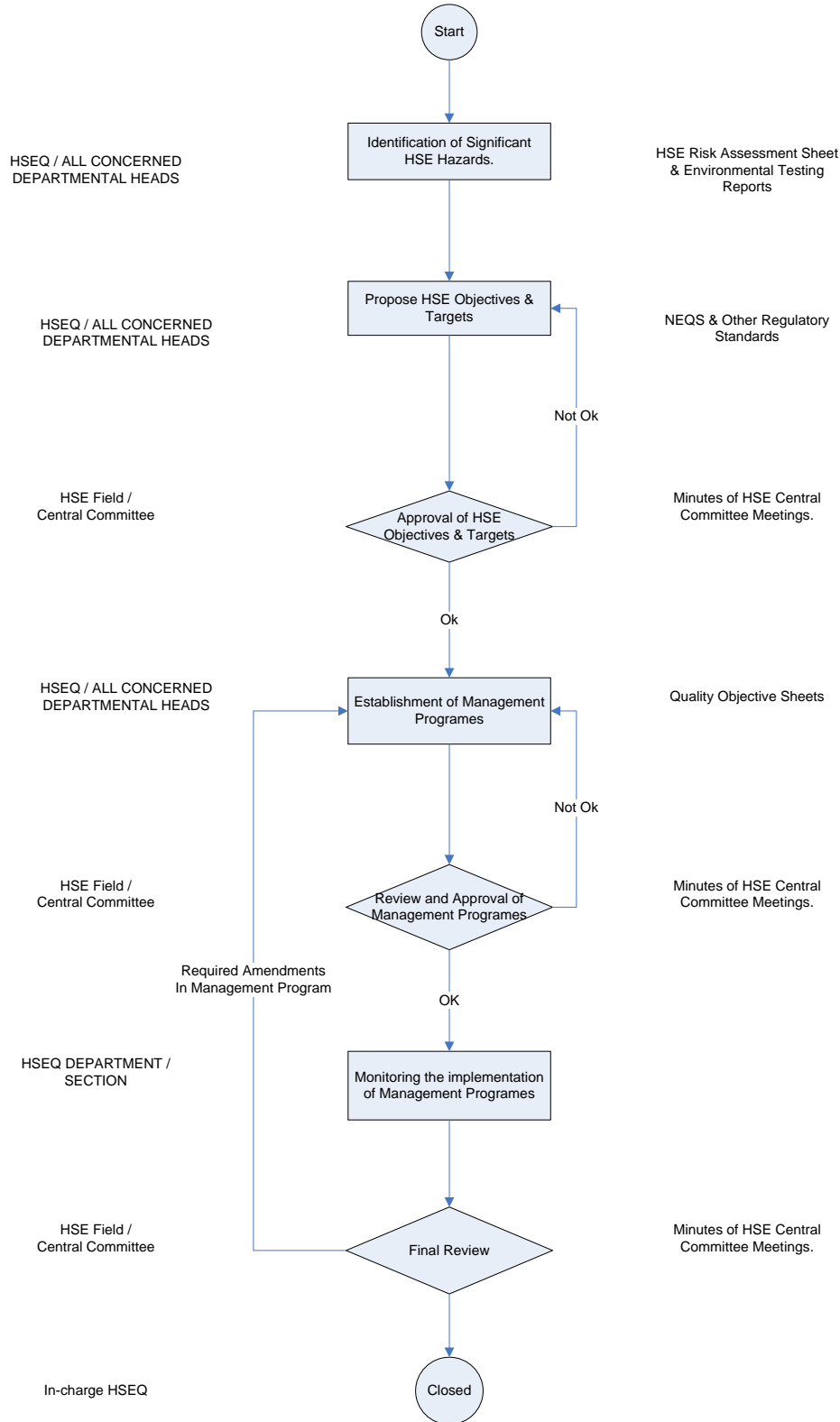
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FLOWCHART FOR SETTING HSE OBJECTIVE AND MANAGEMENT PROGRAMMES

Responsible Activity

Related Document



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10.1 PROCEDURE

10.1.1 Setting HSE Objectives and Targets

- 10.1.1.1 Based on the results of HSE Risk Assessment activities, significant HSE hazards shall be identified by HSEQ Department / Section according to a defined rating system, explained in the Health, Safety and Environment Hazards Identification and Risk Assessment Section. (All HSE hazards whose related impacts are rated as High Risks are significant, HSE objectives shall be established for High Risks and as well as for Moderate Risks.)
- 10.1.1.2 HSEQ Department / Section in consultation with the departmental heads, then shall set the HSE Objectives & Targets to control the significant HSE Hazards and related risks. While establishing objectives and targets risk control hierarchy shall be used;
- Engineering Control
 - Administrative Control
 - PPEs
- 10.1.1.3 The objective shall define the goal to be achieved given in subjective terms and the Target is the measurable and specific indicator related to objective.
- 10.1.1.4 While setting objectives and targets, following factors shall be considered:
- Results of HSE risk assessment
 - Financial constraints
 - Operational constraints
 - Business constraints
- 10.1.1.5 The HSE Objectives shall be reviewed by the concerned departmental In-charge and then discussed in the HSE Field and/or Central Committee, where they are approved.
- 10.1.1.6 The approved HSE Objectives shall be kept with the HSEQ Department / Section and displayed on notice boards, bulletin boards, and / or electronic / print media for easy access to employees and stakeholders.

10.1.2 Establishing HSE Management Programs

- 10.1.2.1 For each HSE objective and associated targets, the concerned departmental head in consultation with HSEQ Department / Section shall establish the management program (strategy) to achieve the objective and target. The HSE Management Programs shall be defined on the Objective Sheet, which includes:
- HSE objective and targets that are to be achieved;
 - Areas/departments where the program needs to be implemented;
 - Methods and means to achieve the objective.
 - Responsibility for defining and implementing the program.
 - Timeframe for completing the program and/or its elements or phases;
- 10.1.2.2 The HSE Field and/or Central Committee shall review and discuss the HSE Management Programs for implementation. Planning, implementation and review of HSE Management Programs shall offer reassurance with regard to:
- protection of the HSE and ongoing compliance with regulatory requirements,
 - ongoing training of field personnel,
 - minimization of the volume and toxicity of the wastes and prevention of accidents &
 - appropriateness / feasibility of the program itself.
- 10.1.2.3 After approval, the HSE Programs shall be assigned to the concerned departments for implementation.
- 10.1.2.4 HSEQ Department / Section shall monitor the progress of HSE Programs on fortnightly basis or as deem practical depending upon the nature of case and reports it to the management immediately or in the HSE Field and/or Central Committee Reviews.


10.1.3 Final Review and Closeout

- 10.1.3.1 When a HSE Management Program achieves its objectives and targets, the results shall be reported to the HSE Field and/or Central Committee, which reviews and verifies the implementation of the management program and if found satisfactory, shall close out the management program.
- 10.1.3.2 The achievement of HSE Objectives and Targets shall also be reported in the HSE Field and/or Central Committee Reviews.


10.1.4 Amendment of Management Programs

- 10.1.4.1 All projects related to new developments or to new or modified activities, processes and services shall be reported to the HSEQ Department / Section. Such projects include:
- Significant expansion or reduction of facility;
 - New suppliers and subcontractors;
 - Temporary projects, such as construction, installation of new equipment.
- 10.1.4.2 The HSE Field and/or Central Committee shall review the proposed changes and determine whether the HSE Management Program needs to be amended or updated to address the change.

10.2 ASSOCIATED DOCUMENTS

-  HSE Objective and Management Planning Sheet

10.3 APPLICABLE DOCUMENTS

-  Monthly HSEQ Report

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11

Training, Awareness & Competence

The purpose of this procedure is to provide a system and instructions, and to assign responsibilities for Determining HSE System awareness and training needs; and implementing awareness programs and providing training. This procedure applies to all HSE System Awareness and Training programs. HSEQ Department / Section is primarily responsible for HSE Awareness and Training at production fields and plants.

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11.1 PROCEDURE

- 11.1.1 The objective of HSE System awareness and training program shall be formulated to ensure that all personnel know:-
- The importance of the HSE policy, procedures, and the HSE System, and their roles in achieving the policy and maintaining the HSE System;
 - Actual and potential impact of their work on environment and health & safety, potential consequences of departure from procedures, and benefits of improved personal performance;
 - Emergency preparedness and response requirements.
- 11.1.2 **Identification of HSE Training Needs**
- 11.1.2.1 HSE Monthly Reports shall be a regular ongoing source of determining the HSE performance levels and identifying the HSE training needs of the personnel.
- 11.1.2.2 At the start of each year, the HSEQ Department / Section, in consultation with the department heads, shall review the current HSE performance levels and identify the HSE training and awareness needs of the personnel. Following factors shall be taken into account while identifying the training needs:
- Changes in the HSE System, such as new or revised procedures, or changes in the HSE policy;
 - Changes in processes, or operations;
 - Changes in applicable laws, regulations, and other requirements;
 - New significant HSE issues, objectives, or targets;
 - New management programs;
 - Results of Internal HSE Audits of the HSE System;
 - Non-compliance against applicable laws, regulations, and other requirements;
 - Non-attainment of specified HSE performance, or decreasing performance;
 - Inadequate performance of individuals or groups of personnel.
- 11.1.2.3 Based on the identified training needs, HSEQ Department / Section shall prepare a biannual / annual HSE Training Plan.
- 11.1.2.4 Trainings shall be in any format like demonstrations, mockup drills, classroom instruction, and participation in external seminars or conferences.
- 11.1.2.5 HSEQ Department / Section shall follow-up the implementation of HSE Training Program and report the progress to the HSE Field and/or Central Committee.
- 11.1.2.6 Participation in all specific training and general orientation training shall be recorded. The records shall be maintained by HSEQ Department / Section.
- 11.1.2.7 General Awareness on HSE shall also be communicated through banners/postings, HSE awareness programs/events, etc.
- 11.1.3 **HSE Awareness Sessions**
- 11.1.3.1 HSEQ Department / Section shall carry out in-house training sessions (on annual basis, need basis or both) of management and departmental In-charges on the understanding and enforcement of company's HSE Management System.
- 11.1.3.2 HSEQ Department / Section shall provide HSE Orientation Training to all new and existing employees. It shall present basic concepts, principles, and requirements of the HSE System, discuss the company's HSE policy, the company's significant HSE issues, objectives, and targets.
- 11.1.4 **Training on Emergency Preparedness and Response**
- 11.1.4.1 All employees shall receive training in firefighting techniques and equipment to address the fire safety concerns.
- 11.1.4.2 Personnel assigned with specific responsibilities in implementing emergency response procedures shall be trained in how to carry out the tasks and activities assigned to them.
- 11.1.4.3 These trainings shall include operating emergency equipment, using personal protective equipment, coordinating evacuation, notifying external emergency services, and so forth.
- 11.1.4.4 The Field HSEQ Department / Section shall ensure that all personnel designated for specific emergency response activities are adequately trained using the in-house facilities.
- 11.1.4.5 The Field HSEQ Department / Section shall prepare an annual Emergency Drill Plan which shall include various probable scenarios.
- 11.1.5 **First Aid Trainings**
- 11.1.5.1 Every field employee shall have a training of basic first aid.
- 11.1.5.2 This practice shall be implemented in fields, where the Field Doctors develop a plan for all the field employees, so that every field employee undergoes a basic first aid training.
- 11.1.5.3 Field Doctor shall conduct the training.
- 11.1.5.4 The contents of the course shall be designed according to the needs of the field e.g. the topics like chemical injuries, heat stroke, snakebite etc.
- 11.1.5.5 Field Emergency Response Team shall also be designated Advance First Aiders. The Advance First Aid team may provide additional medical training, which equips them with the skills to assist Field Doctor in emergency situations. The course contents may be designed by the Field Doctor in coordination of HSE with particular emphasis on the techniques and aspects of care considered important when escorting a seriously ill, injured casualty e.g. monitoring of vital signs, transportation of casualty (s), triage etc.
- 11.1.5.6 A scenario basis refresher training of one day shall also be conducted on a fortnight basis

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- and periodic drills shall be conducted with fire fighting team.
- 11.1.6 Awareness sessions on Hygiene and Endemic/Epidemic Diseases**
- 11.1.6.1 Relevant employees shall have awareness sessions on hygiene and endemic/epidemic diseases. The contents of the sessions shall be selected according to the ongoing / situational health concerns.
- 11.1.7 Defensive Driving**
- 11.1.7.1 The field management shall support and encourage defensive driving. All employees required to drive a company vehicle shall be required to participate in a company sponsored defensive driving course.
- 11.1.8 Trainings on Operational Controls**
- 11.1.8.1 HSE Department / Section shall arrange short training sessions to ensure effective implementation of operational controls which may include as follows:
- Control of emissions to air, water and land
 - Solid waste management
 - Conservation of energy and natural resources
 - Noise Control
 - Mechanical Integrity
 - Maintenance and inspection of machine and equipment
 - Availability and Applicability of MSDS
 - Use of Work Permits
 - Availability and use of PPEs
 - Control of entry into Confined Spaces
 - Chemical Handling
 - Safe use of overhead cranes and other hanging equipment
 - Design of workplace, processes, machinery, and related activities
 - Control of suppliers and contractors
 - Use of explosion-proof devices & equipment
 - Others
- 11.1.9 Competence and Skill Training**
- 11.1.9.1 HSE and all other department Heads shall be responsible for ensuring that personnel whose work can cause a significant HSE Hazard are sufficiently competent and skilled in performing their work.
- 11.1.9.2 Personnel who have proven experience in operating relevant processes and equipment shall not be required to undergo any training.
- 11.1.9.3 Competence acquired through experience shall be identified and recorded in the form of experience certificates or biodatas, which are maintained by HSEQ Department / Section.

11.2 ASSOCIATED DOCUMENTS

-  HSE Training Plan
-  Emergency Drill Plan
-  Training Attendance Sheet
-  Training Evaluation Form
-  Training Certificates

11.3 APPLICABLE DOCUMENTS

-  Monthly HSEQ Report
-  HSE Monitoring Plans

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Communication & Consultation

The purpose of this procedure is to provide a system and instructions, and to assign responsibilities for internal and external communication regarding HSE issues. This procedure applies to all activities related to HSE communication and consultation at production fields and plants.

Internal communication regarding HSE issues may include:

- a) Policies, procedures, and work instructions;
- b) Significant aspects, risks & hazards, objectives, targets, and management programs;
- c) Feedback on HSE performance status and results;
- d) Suggestions and feedback from personnel.

External communication with external interested parties regarding HSE issues may include:

- a) Requests for information,
- b) Complaints,
- c) Regulatory and compliance issues,
- d) Registration issues,
- e) Communication of the HSE policy,
- f) Any other issue related to the, health safety and environment.

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12.1 PROCEDURE

12.1.1 Internal Communication

The internal communication channels used for communicating HSE information shall include:

- a. Training & Awareness Sessions
- b. Toolbox Talk Program
- c. HazCom [Displays/Posters including Labels, MSDS, etc.]
- d. Standardization through Color Coding Schemes
- e. Area Classification
- f. Website/Newsletters/ Inter Office Memos/ Bulletin & Notice Boards
- g. Meeting Minutes [HSE Field and/or Central Committee]
- h. HSE Awareness Weeks

12.1.2 Communication of HSE Policies, Procedures & Work Instructions

- 12.1.2.1 HSE policy shall be documented in the HSE System Manual and is posted in main locations around the site of OGDCL. Revisions of the policy shall be communicated through memos. Personnel shall also be made aware of the significance of policy through training sessions and informal meetings.
- 12.1.2.2 Procedures and Work Instructions shall formally be issued to relevant departments and sections and controlled.
- 12.1.2.3 HSE Policy, Operational Procedures and Work Instructions shall be communicated to the suppliers and subcontractors to promote the HSE awareness and to ensure that the HSE Procedures and Work Instructions are followed by suppliers and subcontractors.

12.1.3 Toolbox Talk Program

- 12.1.3.1 Annual Toolbox Talk Program shall be developed as a series of numbered discussion topics on Safety, Health and Environmental issues instead of lengthy (somewhat rigid) formal training sessions, employees to take part in a 10-15 minute relaxed HSE briefing.
- 12.1.3.2 Toolbox Talk shall be done on every week.
- 12.1.3.3 Topic shall be chosen that is relevant to the audience; one that shall create a discussion; a two-way communication; either an in-internal topic shall be used e.g. an incident that happened on site the week before, new work hazards, or one generated from the Toolbox Talk Programme.
- 12.1.3.4 The talks shall take place directly in the workplace, whether it is a production site, plant area, and workshop or at a construction site where between 4 and 10 in number shall be the most effective audience.
- 12.1.3.5 Toolbox Talks shall be monitored for their effectiveness to generate interest in the topic by building up the discussion point by point.
- 12.1.3.6 Signatures from delegates shall be obtained to confirm attendance and to maintain record.

12.1.4 Communication of Hazardous Materials / Chemicals / Process

12.1.4.1 Incoming Materials / Chemicals

- 12.1.4.1.1 It shall be ensured that all original containers of hazardous chemicals or materials entering the department are properly labeled with the product name; Hazard warnings, including the target organ / physical effects; and Name and address of the manufacturer, distributor or supplier.
- 12.1.4.1.2 Hazardous warnings (labels) shall include HFR Ratings for Health, Fire and Reactivity hazards as follows:
 0=Insignificant hazard; 1=Slight hazard; 2=Moderate hazard; 3=High hazard; and 4=Extreme hazard.
- 12.1.4.1.3 Effective information and training shall be provided on hazardous chemicals or materials in the work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area.
- 12.1.4.1.4 Material Safety Data Sheets (MSDS) shall be made available and maintained as follows:
 - a. Original with the work area (HazCom file)
 - b. Copy with the Materials / Store Department (Backup HazCom file)
 - c. Copy with the HSEQ Department / Section (Central HazCom file)
 - d. Copy with the Medical Rep. / Doctor (Emergency HazCom file)
- 12.1.4.1.4 Each department shall develop & update its own HazCom Equipment Table and display it at area's Bulletin & Notice Board as per following format:

Area	Equipment Description	Chemical being Used	MSDS #	H - F - R	Hazard
	1.				
	2.				

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12.1.4.2 Outgoing Product

- 12.1.4.2.1 Laboratory IC shall prepare the Product Safety Data Sheets (PSDS) in consultation with the relevant stakeholders based upon the properties of the product to be delivered to the client.
- 12.1.4.2.2 PSDS shall include the following contents:
 - a. Product and company identification
 - b. Composition/information on ingredients
 - c. Hazards identification
 - d. First aid measures
 - e. Fire fighting measures
 - f. Accidental release measures
 - g. Handling and storage
 - h. Exposure controls/personal protection
 - i. Physical and chemical properties
 - j. Stability and reactivity
 - k. Toxicological information
 - l. Ecological information
 - m. Disposal considerations
 - n. Transport information
 - o. Regulatory information
 - p. Other information
- 12.1.4.2.3 HSE Section shall review the PSDS for its completeness especially in accordance with the regulatory requirements.
- 12.1.4.2.4 Subsequently the field management shall approve it.
- 12.1.4.2.5 The PSDS shall be disseminated / conveyed to the downstream customers including product transporters to timely & effectively respond to daily exposure situations as well as to emergency situations.
- 12.1.4.2.6 The PSDS shall be reviewed six monthly and the new revision shall only become in effect once the properties of the product has changed in a significant manner.
- 12.1.4.2.7 Product Safety Data Sheets (MSDS) shall be made available and maintained as follows:
 - a. *Original* with the work area (HazCom file)
 - b. Copy to the Product Transporter / Purchaser
 - c. Copy with the Commercial Department (Backup HazCom file)
 - d. Copy with the HSEQ Department / Section (Central HazCom file)
 - e. Copy with the Medical Rep. / Doctor (Emergency HazCom file)

12.1.5 Communication through Standardized Color Coding

Standardization shall be accomplished in all facilities as follows:

- 12.1.5.1 All process equipment and pipework apart from Fire Fighting System shall be finished in either Light Grey or White along its entire length as the decorative colour.
- 12.1.5.2 The fluid contents of all flow-lines shall be identified by tapes which are appropriately colored; The nature of the pipe contents shall be identified by means of a Three Band Colour Code Identification Band System (CCIB). The outer bands, which will be the same colour, are the Basic/Primary Identification Bands (PIB) and the middle band is the Safety/ Secondary Identification Band (SIB):
 - a. The Basic/Primary Identification Band (PIB) colour determines the type of fluid, e.g. Oil, Gas, Chemical or Water.

Type of Fluid	Basic/Primary Identification Band (PIB) Colour
Water (Raw;Potable;Storm;Treated;Produced)	Green
Steam	Crimson Red
Firefighting	Signal Red
Oils (Combustible Liquids)	Dark Brown
Chemicals	Orange
Gases (Gaseous or Liquefied)	Yellow
Acids & Alkalis	Purple
Air (Utility; Service, Instrument)	Light Blue
Process Effluents (Drain;Vent;Flare)	Black

- b. A Safety/Secondary Identification Band (SIB) colour is added to the middle of the PIB, to identify the fluid conveyed more precisely. The SIB, used in conjunction with the PIB's, is designed to provide a unique combined Colour Code Identification Band (CCIB) for each fluid that is being conveyed.

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Hazard / Sign	Safety/Secondary Identification Band (SIB) Colour
Safety	Grass Green
Attention	Golden Yellow
Danger	Signal Red
Mandatory	Blue
Alert	Yellow
Electrical Service	Orange
Traffic Lines	White

- 12.1.5.3 The additional use of Coloured Labels giving the full or abbreviated product description, temperature, pressure, and other details necessary to identify any potential hazard, together with the appropriate visual aids and hazard pictorial symbols, shall be applied where deem appropriate.
- 12.1.5.4 In addition to being Colour Coded, each process sub-system, pipeline and valve shall be individually identified by marking them in accordance with the Equipment Identification and Tag Numbering System.
- 12.1.5.5 The line number and the flow direction shall be stencilled on each pipe section and pipeline together with the CCIB, to provide the pipework with unique traceability.

12.1.6 Communication through Area Classification

12.1.6.1 The classification of areas shall be made an essential design consideration: A thorough analysis shall be undertaken by the responsible designers, chemical or electrical engineers to a) acquire such equipment which is to not create sources of ignition capable of igniting these mixtures and b) determine the correct hazardous locations classification. Process plants at the design phase shall be divided into Zones or Divisions as mentioned below according to the likelihood of a potentially explosive atmosphere being present:

Zone Classification	Definition of zone or division	Division Classification
Zone 0 (gases) Zone 20 (dusts)	An area in which an explosive mixture is <u>continuously present</u> or present for long periods	Class I Division 1 (gases) Class II Division 1 (dusts)
Zone 1 (gases) Zone 21 (dusts)	An area in which an explosive mixture is <u>likely to occur in normal operation</u>	Class I Division 1 (gases) Class II Division 1 (dusts)
Zone 2 (gases) Zone 22 (dusts)	An area in which an explosive mixture is not likely to occur in normal operation but in accidental events or <u>abnormal operation</u> of equipment	Class I Division 2 (gases) Class II Division 2 (dusts) Class III Division 1 (fibres) Class III Division 2 (fibres)

12.1.7 Communication of HSE Hazards, Objectives and Management Programs

- 12.1.7.1 Information about HSE hazards and related risks, objectives, targets, and management programs shall be communicated to the relevant departments and sections through distribution of memos, minutes of meetings, reports and other such documents; and through HSE System awareness training.
- 12.1.7.2 Special safety precautions shall be required during the Annual Turn Around (ATA) of the processing plants as given in the annexure.

12.1.8 Feed Back on HSE System and HSE System Performance

- 12.1.8.1 Various HSE procedures shall require collecting documents, information and data on environmental aspects and risks/hazards, implementation of management programs, progress toward achieving objectives and targets, HSE performance status and results, compliance with legal and regulatory requirements, and other activities of the HSE System.
- 12.1.8.2 This feedback information and data shall periodically be reported to the HSE Field and/or Central Committee in review meetings, and shall be used in making decisions regarding the HSE objectives, targets, and management programs.

12.1.9 Suggestion and Feedback from Personnel

- 12.1.9.1 Personnel at all levels shall be encouraged to report problems and their concerns with HSE issues and the HSE System, and offer suggestions on how to improve HSE performance.
- 12.1.9.2 They may communicate those HSE issues to their immediate departmental heads or directly to the HSEQ Department / Section.
- 12.1.9.3 Departmental Heads shall be required to bring all relevant issues to the attention of the HSEQ Department / Section.

12.1.10 HSE Awareness Events

- 12.1.10.1 HSE Awareness Event shall be arranged as a regular Corporate Feature each year.
- 12.1.10.2 The objective of this field-wide event shall be:

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- a. to promote best HSE practices and acknowledge the existing ones;
- b. to reinforce HSE messages & increase employees awareness;
- c. to promote a healthy lifestyle a benefit to the employees;
- d. to provide better communication opportunities to employees on issues of work and safety; and
- e. to enable learning through fun.

12.1.11 External Communication

- 12.1.11.1 All communication from interested parties, whether written or verbal, received at site or any office shall be forwarded to the GM / Manager HSE.
- 12.1.11.2 External Environmental Complaint Sheet (EECS) shall be established and made available in the reception / security office for interested parties to lodge their complaint, if any: EECS shall provide the following information:
 - a. Particulars (Name, Address, Contact No.) of the complainant
 - b. Type / Nature of Complaint
 - c. Summary of the Complaint
 - d. Time and Date of Entry
 - e. Mode by which complaint was communicated / registered
 - f. Any Reference of the Litigation given in the complaint
- 12.1.11.3 HSEQ Department / Section shall maintain documents related to external communication with the interested parties.
- 12.1.11.4 GM / Manager HSE shall review HSE related incoming communication and determine which other departments should be informed or involved, what response should be given to the originator (if any), and whether any internal actions should be considered to address the issues raised in the communication. All inquiries from interested parties shall be responded in same manner on which they were logged.



12.1.12 External Communication of the HSE Policy

- 12.1.12.1 The full text of HSE policy shall be available to the public. The policy shall be displayed both inside and outside the office at appropriate locations. Any requests for the HSE policy shall be responded to by mailing / emailing a copy of HSE policy. Nevertheless HSE Policy shall be made available in company's official website.

12.1.13 External Communication of Significant Aspects or Risks

- 12.1.13.1 The HSE Field and/or Central Committee while reviewing the HSE System shall consider whether information on significant HSE Hazards and related risks is required to be communicated externally.
- 12.1.13.2 The decision shall be recorded in the minutes of this review.
- 12.1.13.3 In case the Management Review Committee decides to communicate the significant HSE Hazards and related risks to interested parties, HSEQ Department / Section shall make arrangements for external communication. The decision may be revised at any subsequent review/meeting.

12.2 ASSOCIATED DOCUMENTS

-  External Environmental Complaint Sheet (EECS)
-  Inter office Memos

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HSE Management System Documentation & Data Control

To ensure that all the HSE Management System, documents are properly reviewed and approved prior to issue, are available at the point of use, and changes to documents are properly authorized and controlled. This procedure is applicable to all the documentation related to HSE Management System. This procedure applies to all departments of the production fields and plants.

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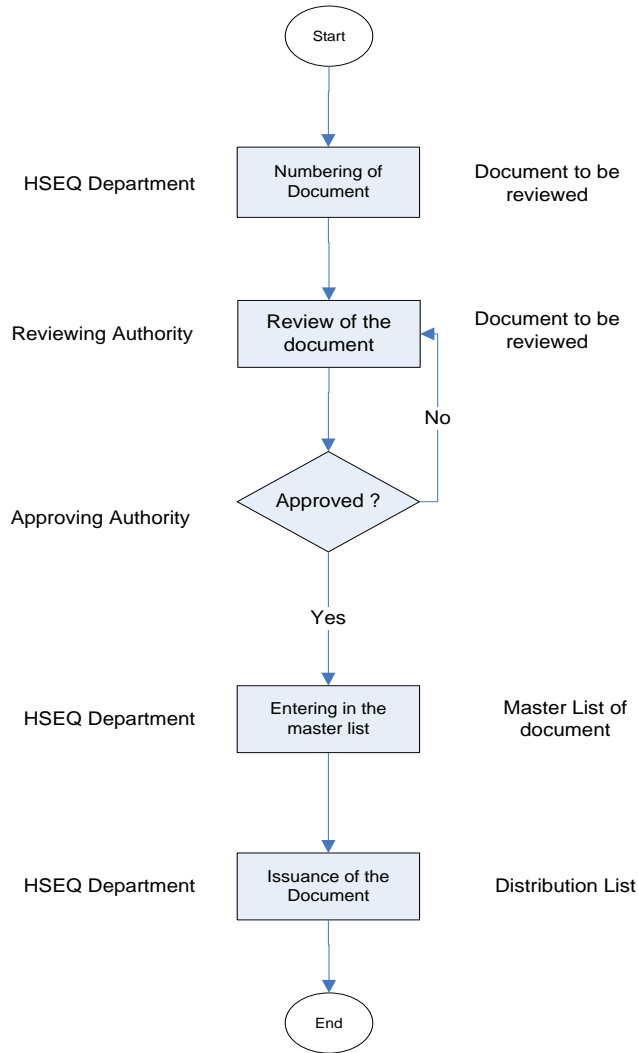
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DOCUMENT APPROVAL & ISSUANCE PROCESS

Responsible	Activity	Related Document
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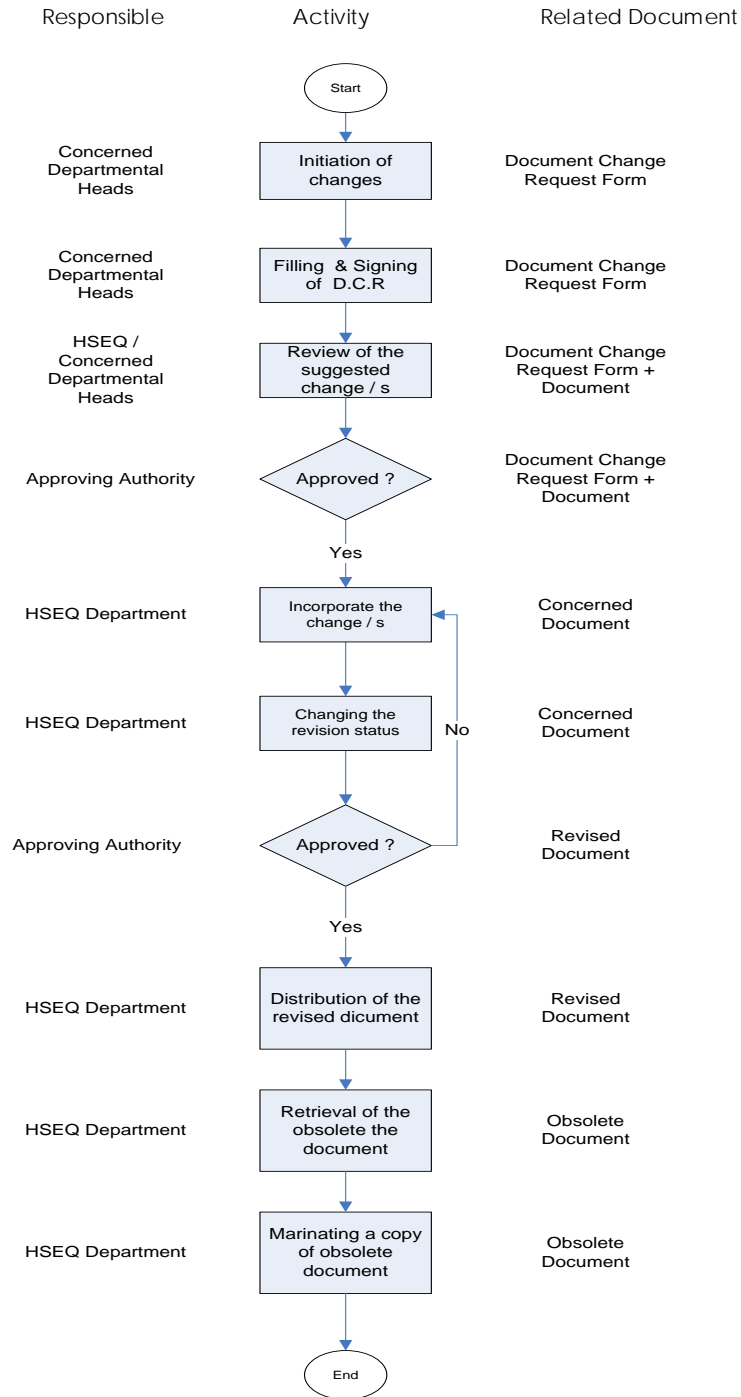
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CHANGES & AMENDMENT PROCESS IN DOCUMENT



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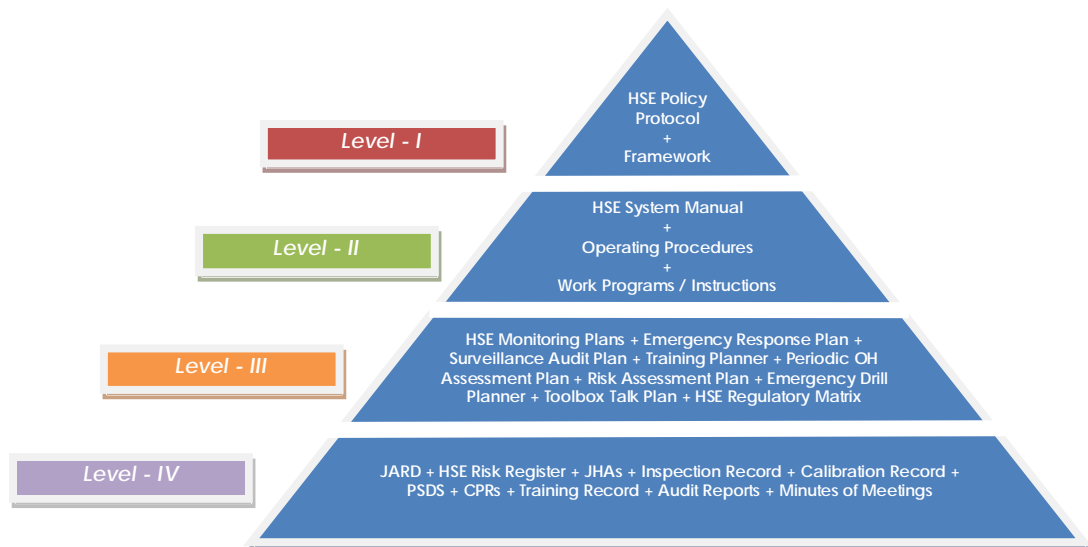
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13.1 PROCEDURE

13.1.1 The HSE Management System shall comprise of the HSE Policy and Objectives, HSE System Manual, Hierarchical Chart, Job Descriptions, Operational Control Procedures, Operational Control Work Methods, Operational Control Inspection or Maintenance Programs, Emergency Response Plans (ERPs), HSE Forms and Records, and other related documents, regulations, standards, reports, etc. including Technical Manuals describing the operational controls for equipment.



13.1.2 Document Numbering

Following format shall be implemented at organizational and unit level for controlling all HSE documents.

Control of Manual

Format:-**OGM/Location Name - Name of Department - Serial# (Revision #)**

Example:-OGM/ HSE-001 (00A) or OGM/QPR-HSE-001 (00A)

Control of Forms

Format:-**OGF/Location Name - Name of Department - Serial# (Revision #)**

Example:-OGF/ HSE-001 (00) or OGF/QPR-HSE-001A (00)

Control of Operational Control Procedure

Format:-**OGO/Location Name -Name of Department- Serial# (Revision #)**

Example:- OGO/ HSE-001 (00) or OGO/QPR-HSE-001A (00)

Control of Operational Control Work Instruction

Format:-**OGW/Location Name -Name of Department- Serial# (Revision #)**

Example:-OGW/ HSE-001 (00) or OGW/QPR-HSE-001A (00)

Control of Operational Control Inspection & Maintenance Plan

Format:-**OGI/Location Name -Name of Department- Serial# (Revision #)**

Example:- OGI/ HSE-001 (00) or OGI/QPR-HSE-001A (00)

Control of Checklist

Format:-**OGC/Location Name -Name of Department- Serial# (Revision #)**

Example:- OGC/ HSE-001 (00) or OGC/QPR-HSE-001A (00)

Control of PSDS

Format:-**OG-PSDS/Location Name - Name of Department - Serial# (Revision #)**

Example:- OG-PSDS/QPR-HSE-001A (00)

Where,

OGM = OGDC System Manual (/Location abbreviation where required)

OGF = OGDC Form (/Location abbreviation where required)

OGO = OGDC Operational Procedures (/Location abbreviation where required)

OGW = OGDC Work Instruction (/Location abbreviation where required)

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OGI = OGDC Inspection and Maintenance Program (/Location abbreviation where required)
 OGC = OGDC Checklist (/Location abbreviation where required)
 OG-PSDS = OGDC Product Safety Data Sheet (/Location abbreviation where required)
 QPR = Qadirpur Location
 HSE= HSEQ Department / Section Head Office
 001A= A three digit Serial Number of Procedure, Form, Work Instruction, Inspection and Maintenance Plan, Checklist (with Serial Alphabet only in case of additional relevant document to achieve continuity)
 (00A) = A two digit Revision Number for the Manual, Procedure, Form, Work Instruction, Inspection and Maintenance Plan, Checklist (with Serial Alphabet only in case of minor changes where approval of I/C HSE is sufficient)

13.1.3 Document Approval & Issue

- 13.1.3.1 After the preparation and numbering of documents, these shall be reviewed and approved by the competent authorities.
- 13.1.3.2 The following personnel shall be the reviewing and approving authorities related to various HSE system documents:

Type of Document	Prepared by	Reviewed by	Approved by
Company HSE Policy	HSEQ Department Head Office	HSE Central Committee	Chairman / CEO / MD
Company HSE Objectives & Action Plan	HSEQ Department Head Office	HSE Central Committee	Chairman / CEO / MD
HSE System Manual	HSEQ Department Head Office	GM HSEQ	Chairman / CEO / MD
HSE Job Descriptions	HR Department Head Office	HSEQ Department Head Office	ED HR
HSE Hierarchy Chart	HSEQ Department Head Office	GM HSEQ	ED HR
Operational Control Procedures	HSEQ Department Head Office	HSEQ Department Head Office	GM HSEQ
Emergency Response Plans	Field HSE Section	HSEQ Department Head Office	GM HSEQ
Operational Control Work Instructions	All Department / Section In-charges	HSE Field Committee	Field Manager Plant Manager
Operational Control Inspection and Maintenance Plans	All Department / Section In-charges	HSE Field Committee	Field Manager Plant Manager
PSDS	Field Lab. Section	HSE Field IC	Field Manager Plant Manager

- 13.1.3.3 These shall then be entered in the Master List of documents along with their revision number and retention period by the HSEQ Department / Section and then issued to the concerned personnel as per distribution list.
- 13.1.3.4 A controlled document shall meet the following conditions:
- It must be numbered or coded according to the defined numbering scheme
 - It must be reviewed and approved before issue
 - Changes to these documents must be authorized and controlled
- 13.1.3.5 All the controlled documents shall be identified as "Controlled Copy, Do Not Duplicate" typed in red color (font seen in soft copy), on the left bottom corner on all pages of the document, and "For Internal Use Only" to avoid their unauthorized copying and usage.
- 13.1.3.6 Uncontrolled documents or copies shall not contain any "controlled document" identification.

13.1.4 External Documents

- 13.1.4.1 Following documents used in OGDCL shall be of external origin:
- HSE standards and other standards/specifications
 - HSE related federal and provincial acts, laws and regulations
 - Copies of management systems related applicable legislation/act/regulation
 - Technical manuals, machine manuals and process diagrams /drawings

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- 13.1.4.2 Concerned Departmental Heads shall be responsible for controlling external documents related to their Department.
- 13.1.4.3 Whereas HSEQ Department / Section shall be responsible for maintaining current copies of management systems related applicable Standards and current copies of Legislations/Acts/Regulations.
- 13.1.4.4 The external origin documents shall not be required to be coded or approved.
- 13.1.4.5 Related person enters the external origin document in the List of External Documents, shall stamp it "EXTERNAL DOCUMENT" with Red Ink and maintains distribution record of copies of external documents.
- 13.1.5 Changes / Amendment In Documents**
 - 13.1.5.1 The Departmental Heads shall initiate changes in HSE Management System document by filling in Document Change Request (DCR). The DCR shall at least include a description of change requested and the reason for change.
 - 13.1.5.2 The DCR signed by the concerned Departmental Head shall be sent to HSEQ Department / Section. HSE Head, in consultation with the concerned Departmental Heads, shall review the nature of change requested. It shall then be sent to the approving authority who approves/rejects the DCR.
 - 13.1.5.3 After the approval, HSEQ Department / Section shall incorporate the changes in the concerned document and describe the nature of change on the amendment sheet. The revision number of the document shall be incremented and the revised document shall get approval from the concerned approving authority.
 - 13.1.5.4 The revised document shall then be distributed to all the concerned persons in the distribution list and the obsolete documents retrieved. Obsolete documents shall either be destroyed or stamped "OBSOLETE" with Red Ink to properly identify it. One copy of obsolete document shall be maintained for record purposes with the HSEQ Department / Section.

13.2 ASSOCIATED DOCUMENTS

-  Master List of Documents
-  List of External Documents
-  Document Change Request (DCR) Form
-  Distribution Log Sheet

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14

Operational Control

The purpose of this procedure is to provide methods, systems, processes, and equipment to protect the Environment, Health and Safety including operational criteria, procedures, work instructions, inspection and preventive maintenance programs, and to assign responsibilities to combat the documented Health Safety and Environmental (HSE) Hazards and related risks. This procedure applies to all the activities, products and services of production field and plant functions that can impose HSE hazards: whether they are carried out or generated in-house, purchased, or subcontracted.

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14.1 PROCEDURE

14.1.1 General

14.1.1.1 Special control measures shall be implemented to control operations and activities associated with significant environmental aspects and OH&S risks.

14.1.1.2 These operational controls shall include documented procedures, work instructions, and/or methods/systems/processes/equipment to monitor and safeguard the Environment, Health and Safety as mentioned below:

- a) **Operational Plans & Procedures** shall be established where their absence could lead to deviation from HSE policy, objectives, or targets; or could cause significant HSE impact.
- b) **Work Methods/ Instructions** shall stipulate the operational criteria for carrying out operations having significant HSE aspects and risks.
- c) **Inspection and/or Maintenance Programs** shall be developed and implemented for equipment, machines and systems associated with significant HSE aspects and risks, and emergency response programs.

14.1.2 Process/ Production Controls, Energy Conservation and Natural Resource Consumption

The main elements that take part in the energy conservation of the process/production activities shall be considered primarily as Temperature, Pressure and Volume controls.

14.1.2.1 In order to assess the process/ production controls, energy conservation and natural resource consumption, hazard identification & risk assessment shall be carried out.

14.1.2.2 To maintain the mechanical integrity, Safety Monitoring Plan shall be used as the core document to monitor various parameters.

14.1.2.3 However, the major parameters shall be verified/ validated through a certified testing agency.

14.1.2.4 Subsequently, pertinent Operational Controls shall be developed/documentated and updated accordingly.

14.1.2.5 Only qualified operators/ technicians/ inspectors employing standardized tools shall be permitted to work on the process/ production systems and equipment.

14.1.2.6 Record of calibrations and inspections shall be maintained by the Mechanical Section.

14.1.3 Controls for Mechanical Integrity

14.1.3.1 In order to assess the mechanical integrity of the process equipment like vessels, pipelines, etc., hazard identification & risk assessment shall be carried out.

14.1.3.2 To maintain the mechanical integrity, Safety Monitoring Plan shall be used as the core document to monitor various parameters.

14.1.3.3 However, the major parameters shall be verified/ validated through a certified testing agency.

14.1.3.4 Subsequently, pertinent Operational Controls shall be developed/documentated and updated accordingly.

14.1.3.5 Only qualified operators/ technicians/ inspectors employing standardized tools shall be permitted to work on the mechanical systems and equipment.

14.1.3.6 Record of calibrations and inspections shall be maintained by the Mechanical Section.

14.1.4 Lifting and Hoisting Controls

14.1.4.1 In order to assess the lifting & hoisting integrity of the equipment and machineries like cranes, hoists, etc., hazard identification & risk assessment shall be carried out.

14.1.4.2 To maintain the lifting & hoisting integrity, Safety Monitoring Plan shall be used as the core document to monitor various parameters.

14.1.4.3 However, the major parameters shall be verified/ validated through a certified testing agency.

14.1.4.4 Subsequently, other pertinent Operational Controls shall be developed/documentated and updated accordingly.

14.1.4.5 Only qualified operators/ technicians/ inspectors employing standardized tools shall be permitted to work on lifting and hoisting systems and equipment.

14.1.4.6 Record of calibrations and inspections shall be maintained by the Mechanical Section.

14.1.5 Electrical & Instrumentation Controls

14.1.5.1 In order to assess the integrity of the electrical driven equipment, machineries and gadgets, hazard identification & risk assessment shall be carried out.

14.1.5.2 To maintain the safety of electrical, electronic and instrumentation infrastructure, Safety Monitoring Plan shall be used as the core document to monitor various parameters.

14.1.5.3 However, the major parameters shall be verified/ validated through a certified testing agency.

14.1.5.4 Subsequently, other pertinent Operational Controls shall be developed/documentated and updated accordingly.

14.1.5.5 Only qualified operators/ technicians/ inspectors employing standardized tools shall be permitted to work on electrical systems and equipment.

14.1.5.6 Record of calibrations and inspections shall be maintained by the Electrical and Instrumentation Sections.

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14.1.6 Permit to Work (PTW) System

- 14.1.6.1 PTW System shall provide a system for the control of potentially hazardous jobs in order to ensure that various types of maintenance and inspection work are carried out in a safe manner and without risks to the personnel and equipment.
- 14.1.6.2 PTW System shall ensure proper understanding of the details of the job to be performed, hazards involved and various precautionary measures to be taken, before commencing the job, during the execution of the job and on the completion of the job.
- 14.1.6.3 PTW System shall be applicable to all types of maintenance, repairs, modifications, construction, dismantling or radiography work carried out by the employees of the company as well as by any contractors.
- 14.1.6.4 Following types of work permits shall generally be in use;

Permits	Background Colour
Cold Work Permit	Blue Colour
Sour/Hot Work permit	Red Colour
Electrical Work Permit	Green Colour
Confined Space/Vessel Entry Work Permit	Grey Colour
Radiography Work Permit	Yellow Colour
Excavation & Civil Work Permit	Brown Colour
Working at Height Permit	Pink Colour
Vehicle Entry Permit	Purple Colour
Blanket Work Permit	White Colour

- 14.1.6.5 No maintenance, repairs, modifications, excavation, construction, radiography or confined space entry shall be carried out without a valid work permit by the employees of the company or by any contractors.
- 14.1.6.6 If during the course of its work, a confined space is encountered that has not been previously identified, the space must be immediately brought to the attention of the HSE representative, and entry to be delayed until HSE representative has examined the space.
- 14.1.6.7 Where applicable, locks and tags (standardized) shall be used to control the start-up of equipment that is being serviced or maintained. At no time any locks or tags to be overridden that are encountered during the performance of work.
- 14.1.6.8 The hierarchy of controls & types of lock out/ tag out devices is given below:

Type of control	Device type	Comments
Engineering	Physical Restraint Devices	-Used in conjunction with clasps, locks and tags. -Used to protect personnel and machinery in conjunction with tags.
Engineering	Isolation Clasp	-Used in conjunction with multiple locks and tags. -Each lock on a clasp represents an individual associated with the task.
Engineering	Isolation Padlocks	-Used to protect personnel and machinery in conjunction with tags. -May only be removed by the personnel or function that placed and signed the tag.
Administrative	Danger Tag (Red White and Black Tag)	-Used to protect personnel from machinery which is not in service. -May only be removed by the personnel who placed and signed the tag. -May be removed once equipment is deemed safe or the individual has completed his task. -Multiple tags must be used, one for each individual isolation. -Tagged equipment must not be used.
Administrative	Caution Tag (Yellow and Black Tag)	-Used for out of service machinery. -May be removed by appropriate service people, personnel, or supervisor after consultation and once equipment is deemed safe for repair and testing purposes. -May be used by any person to indicate a fault in machinery. -If out of service equipment is to be worked on, Lock Out / Tag Out shall be used in place of caution tag.

- 14.1.6.9 Field management in conjunction with the HSE Section shall be responsible for implementing and maintaining Lock-out/ Tag-out system.

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14.1.7 Handling, Segregation and Disposal of Waste

- 14.1.7.1 Waste shall be classified as hazardous and nonhazardous by identifying the physical, chemical and toxicological properties. This information may be found via Material Safety Data Sheets (MSDS), manufacturer's information, process knowledge, historic information or lab analyses.
- 14.1.7.2 A system to categorize waste streams according to their health and environmental hazards shall then be developed.
- 14.1.7.3 Designated drums, containers, bins, etc with specific labels shall be placed as Collection Method for the Waste Generating Areas. Color coding of drums, containers, bins, etc. for various types of waste shall be as follows:

Waste Type	Bin Color
Hazardous Waste	Red Color
Food Waste	Green Color
Wood Waste	Brown Color
Glass Waste	Yellow Color
Plastic Waste	Blue Color
Metal Waste	Grey Color
Paper Waste	White Color

- 14.1.7.4 Responsibility shall be defined to Collect and Drop every segregated waste in the Designated Scrap Yard and to further dispose as per the following steps:

Step #	Activities	Responsible Person	Related Document
1	Proper placement of generated waste in a designated place / (waste drum / bin).	Actual Waste Generating Section	Recording of waste into the Section's Waste Register Record
2	Inform to Camp Maintenance Section / Housekeeping Supervisor in case of Common Scrap Item Inform to Material Management Section in case of Valued / Hazardous Salvage Waste.	Actual Waste Generating Section	Recording of waste into the Section's Waste Register Record
3	Segregation and shifting of Valued / Hazardous Salvage Waste into the Designated Salvage Waste Yard.	Actual Waste Generating Section	Waste Consignment Note
4	Weighing of waste / note down its quantity and other necessary information.	Housekeeping Supervisor (for Common Scrap Waste) Material Management Section (for Valued / Hazardous Salvage Waste)	Common Scrap Waste Disposal History Sheet (by Housekeeping Supervisor) Waste Consignment Note
5	Placement of Valued / Hazardous Waste into the designated section of Salvage Waste Yard.	Material Management Section	Approved Waste Segregation / Placement Plan (developed by Material Management Section)
6	Disposal of Common Scrap Waste as per the Waste Management Plan.	Local Waste Picker through Field Level Committee	Common Scrap Waste Disposal History Sheet (by Housekeeping Supervisor)
7	Disposal of Valued / Hazardous Salvage Waste as per the Waste Management Plan.	Auction → Material Management Approved 3 rd party contractor → HSE	Salvage Waste Disposal History Sheet (by Material Management Section / HSE)
8	Checking compliance.	HSE Surveillance Audit Team	HSE Inspection Report / Audit Report

- 14.1.7.5 To properly address each segregated waste, the most suitable Disposal Method; Frequency of Disposal; and Disposal Responsibility shall be determined by documenting in the Waste Management Procedure (Plan) where the acceptability of each disposal option for the different ecological domains shall be determined by virtue of evaluation which shall include: environmental considerations; location; engineering limitations;

IMPORTANT:- IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.

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- regulatory restrictions; operating feasibility; economics; potential long-term liability; etc.
- 14.1.7.6 HSE Department / Section shall maintain the list and location of waste drums / bins and the waste disposal (evidence) record.
- 14.1.8 PPE Required Area**
- 14.1.8.1 Locations where engineering and/or administrative controls are not installed or are insufficient, PPE areas or boundaries shall be designated. Once the line is crossed it shall be considered the "PPE Required Area".
- 14.1.8.2 The PPE may be required in certain locations posted. Employees shall be required to adhere to PPE requirement postings.
- 14.1.9 Other Operational Controls**
- 14.1.9.1 Besides the above mentioned Operational Controls, each control shall be specifically documented in an Operational Control Form providing the following information in a nutshell:
- Name of Operation
 - Related/Sub Activities
 - List of Operational Controls and References
 - Description of Actions to be Taken if Controls Fail
 - Related Records
 - Responsibilities of Relevant Personnel
 - Status of Related Trainings
- 14.1.9.2 HSEQ Department / Section shall be responsible for reviewing and, as necessary, revising operational control and procedures by calling the HSE Field and/or Central Committee meeting, particularly once impact is seen.

14.2 ASSOCIATED DOCUMENT

- Operational Control Form

14.3 APPLICABLE DOCUMENTS

- Operational Controls – Plans, Procedures and Permits
- Operational Controls – Work Methods / Instructions
- Operational Controls – Inspection and Maintenance Programs

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15

Emergency Preparedness and Response

The purpose of this procedure is identify potential accidents and emergency situations, and identify roles to develop appropriate response plans for preventing and mitigating associated environmental impacts and OH&S risks. This procedure applies to all the activities, products and services of production field and plant functions that can impose emergency situations; whether they are carried out or generated in-house, purchased, or subcontracted.

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15.1 PROCEDURE

15.1.1 General

- 15.1.2 Emergency situations may include:
- Fire
 - Spillage/Leakage
 - Explosion
 - Electrical Shock
 - Toxic Gas Leakage
 - Burst Gas Pipe Line
 - Well Blowout (Drilling Phase)
 - Snake Bite
 - Natural Calamity / Disaster (like Floods)
- 15.1.3 Each potential hazard shall be evaluated to determine whether emergency response plans are required and where relevant, appropriate emergency plans and procedures are developed.
- 15.1.4 Emergency equipment needs shall be identified and equipment provided in adequate quantity.
- 15.1.5 Emergency equipment shall be tested at specified intervals for continuing operability. Emergency equipment shall include:
- Fire/Smoke/Heat Detection & Alarm systems
 - Emergency lighting and power
 - Means of escape
 - Safe refuges
 - Critical isolation valves, switches, and cut-outs
 - Firefighting equipment
 - First aid equipment (including emergency showers, eyes wash stations, etc.)
 - Communication facilities

15.1.6 When performance of emergency equipment falls below desirable level, the HSE Representative shall initiate corrective or preventive actions, and shall establish appropriate objectives and targets to ensure continuing operability of emergency equipment.

- 15.1.7 An appropriate T-Card & Mustering System shall be established to facilitate easy identification of workforce's location during emergency situations.
- 15.1.8 Emergency preparedness and response procedures shall be documented.
- 15.1.9 All personnel shall be made aware of the procedures.
- 15.1.10 Practical drills shall be carried out according to a predetermined schedule for all the probable emergency situations.
- 15.1.11 HSEQ Department / Section shall be responsible for reviewing and, as necessary, revising emergency procedures, particularly after each occurrence of accidents and emergencies.

15.1.2 Emergency Levels

Following emergency levels shall be followed to deal with the emergency conditions / situations based on the severity and requirement of resource to handle an emergency situation; however, an emergency level can be incremented if an appropriate control measure or response could not be applied:

Emergency Level	Evacuation	Emergency Declaration
Basic Level	No evacuation required	No emergency declaration
Level-1	Gather at respective muster point(s)	Emergency declaration through siren and lights
Level-2	Rush outside the from emergency exit gate(s)	Emergency declaration through siren, lights and public announcement

15.1.3 Emergency Teams

Emergency teams shall be divided into two teams as follows:

- Emergency Response Team
 - Emergency Location Incharge (FM)
 - Emergency Area Incharge of Plant (PM) / Area Incharge of Well Site (OM)
 - Incident Coordinator
(I/C Process for Plant) / (I/C Well Services and I/C Production Facility For Well Site) / (I/C Material Management for Store) / (I/C Camp Maintenance for Camp) / (I/C Admin for Admin Block) / (I/C HSE for Office Area)
 - Emergency Response Team Leader (I/C HSE)
 - Incident Controller
(I/C Maintenance, I/C Security, I/C Transport, Medical Doctor)
 - Emergency Coordinators (Shift Incharge)
 - Emergency Informer / Observer
- Headcount Team
- Fire Fighting Team
- Evacuation & Rescue Team
- First Aiders

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15.1.4 Emergency Response Control Center / Post




















15.1.4.1 A designated Emergency Response Control Center or Post shall be established at every "key" (major / vital) location and equipped with the following:

- a. Production site and facility layout and community maps, including roads, evacuation routes and the locations of community facilities nearby.
- b. Utility drawings, including fire, water, & electric systems. Storage and use locations of explosives, hydrocarbons, other flammable and toxic materials.
- c. Emergency communication equipment and lists of contact numbers for key emergency and management personnel, local emergency response officials, and government agencies to be notified.
- d. A list of emergency response equipment, with locations on- and off-site.
- e. Appropriate reference materials, including specific emergency plans.
- f. A current list of employees in the event counting is necessary.


15.1.5 Emergency Response (Action) Plan (ERP)

15.1.5.1 An Emergency Response (Action) Plan (ERP) in the shape of Manual shall be available at every work site to direct initial efforts to contain and respond to emergencies.

15.1.5.2 Emergency Response (Action) Plan (ERP) shall provide the following minimum information:

- a. Identities of all personnel in authority, and a clear delineation of the lines of authority. The ERP must identify specific roles and responsibilities of personnel required to effectively respond to any emergency. Key personnel and responders and their alternates must also be identified. One or more functions can be assigned to an individual, depending on the complexity of the potential response to an emergency. The following responsibilities must be assigned to specific personnel as applicable
 -  field incident command,
 -  public safety coordination, including evacuation and sheltering,
 -  security (roadblocks, rovers, etc.),
 -  air quality monitoring,
 -  on-site safety and ignition, and
 -  communications with the responders and media/public communication.
- b. Important telephone numbers and a list of personnel with specific expertise for a range of specific emergencies.
- c. Identity and contact numbers for local emergency response facilities and officials.
- d. Instructions for alarm systems.
- e. Implementation plan for evacuation: Maps included in the ERP must be sized to provide a clear representation of the entire mapped area. Maps must clearly identify
 -  Emergency Planning Zone (EPZ) boundaries being used
 -  residence locations and urban density within the EPZ, including those residences bordering the EPZ or on dead-end roads requiring egress through the EPZ
 -  provincial, local, and access roadways and dead-ends
 -  topographical features, including lakes, rivers, streams, and any significant elevation feature that could affect either dispersion of a sour gas release or the ability to evacuate members of the public campgrounds, recreation areas, churches, schools, hospitals, and any other publicly used facilities within the mapped area
 -  locations of emergency shutdown devices
 -  railways and airports for the full map area
 -  corporate boundaries (hamlets, villages, towns, etc.) for the full map area
 -  a legend, scale, and north indicator
 -  potential roadblock locations
- f. Location of emergency equipment: A wide range of equipment shall be required to effectively respond to an emergency. The ERP must include a list of the following types of equipment:
 -  communications equipment (number, types of equipment, and radio frequencies)
 -  roadblock kits (number and contents)
 -  flameproof ignition equipment (maintained on site)
 -  gas monitoring equipment (number and type)

15.2 APPLICABLE DOCUMENTS

-  Emergency Response Plan (ERP) Manual

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HSE Monitoring, Measurement & Compliance Evaluation

OGDCL monitors and measures performance of operations and activities that can cause a significant HSE impact, and evaluates its compliance with applicable laws and regulations. Measuring and test equipment used for verification of HSE performance is calibrated and properly controlled. This procedure applies to monitoring, measuring and compliance activities related to health, safety, and environment emanating from materials, products/services, and / or processes in the field & plant functions of the company.

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16.1 PROCEDURE

16.1.1 General

- 16.1.1.1 HSE performance shall be regularly monitored with regard to significant aspects and risks, and for evaluating compliance with HSE laws and regulations.
- 16.1.1.2 HSE monitoring and measurement shall include both proactive and reactive monitoring. It shall include *Type of Measurement* like:
- Monitoring of emissions to air
 - Monitoring of effluents to water and land
 - Monitoring of mechanical integrity of equipment
 - Monitoring of lifting/hoisting & hanging equipment
 - Monitoring of electrical equipment/appliances & accessories
 - Inspection of safety, emergency and fire equipment
 - Monitoring of employees health
 - Monitoring of noise level
 - Monitoring of lighting level
 - Monitoring of safety tags, signs, labels, color coding, etc.
 - Monitoring of energy and natural resources consumption
- 16.1.1.3 For each parameter/characteristic to be monitored, the Field HSE Representative shall determine:
- the measurement or test method (Reference Standard)
 - frequency of measurement
 - sample point for that parameter
 - acceptance criteria (Acceptable Limit for that parameter)
 - responsibility for measurement
 - measurement apparatus or equipment to be used to measure that parameter and the manner for recording results
- 16.1.1.4 Based on these parameters, HSE Representative shall prepare HSE Monitoring Plans.
- 16.1.1.5 The monitoring activities, frequencies and responsibilities for the HSE Monitoring Plans shall be set as given below:

#	Item/ Element	Prioritized Monitoring Activity	Recommended Monitoring Frequency	Primary Responsibility
Emergency Equipment				
1.	Fire Extinguishers (DCP, Foam, CO ₂ and Water DCP Trolley, CO ₂ Trolley)	a. Functional Reliability b. Visual Inspection	a. Quarterly b. Weekly	HSE
		Hydrostatic (Water Jacket) Test of Cylinder	5 Yearly	HSE
2.	CO ₂ Flooding System	Solenoid Valve Logic Function & Relevant Components	Annually	Inst.
		External Cleaning & general check	Quarterly	HSE
3.	CO ₂ Suppression System	Pressure Test & Generic Condition	Quarterly	HSE
4.	Mobile Foam Unit	Functional Reliability	Quarterly	HSE
5.	Fire Water Pumps	General Inspection	Monthly	Mechanical
		Reliability of E&I parts and Automation Logics	Bi-Annually	Inst.
		Engine/ Mechanical Parts	As per OEM recommendation	Mechanical
6.	Fire Water Line Flushing	General Inspection & Cleanliness	Quarterly	HSE
7.	Fire Hose Cabinets	General Inspection & Cleanliness	Quarterly	HSE
8.	Fire Hydrant Monitors	Operability (Function) Check	Quarterly	HSE
9.	Fire Hoses and Assemblies	a. Operability (Function) Check b. Proof Pressure Test of Hoses and Hose Assemblies	a. Quarterly b. 5 Yearly	HSE
10.	Heat, Smoke & Fire Detectors	Calibration / Functional Reliability	Annually / Quarterly	Inst.
11.	Fire & Gas Alarm System	Functional Reliability	Bi-Annually	Inst. / Telemetry
12.	Sprinkling System	Operability (Functional) Check	Quarterly	HSE
		Pneumatic Control Valves	Bi-Annually	Inst.

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		& Relevant Systems		
13.	Emergency Alarm System/ Siren (Call & Muster Points)	Physical Inspection	Monthly	HSE
		Function Test	Quarterly	HSE through E&I
14.	Fire Blanket	Physical Inspection	Quarterly	HSE
15.	Fire Buckets	Physical Inspection	Monthly	HSE
16.	Fire Lorry / Responder Vehicle	Operational Reliability (Engine)	Monthly	HSE/ TPT
		Physical Operational Reliability (Equipment)	Monthly	HSE
17.	Ambulance	Physical & Operational Reliability	Monthly	Medical
18.	First Aid Box	First Aid Box Items	Monthly	HSE / Medical
19.	Emergency Exit & Light	Cleaning and Maintenance (Physical Inspection)	Monthly	HSE
20.	Emergency Signage & Layout Diagram	Physical Inspection / Availability	Monthly	HSE
21.	Wind Socks	Physical Condition	Monthly	HSE
22.	Breathing Apparatus	Physical & Operational Reliability	Monthly	HSE
23.	Emergency Shower & Eye Wash	Physical & Operational Reliability	Monthly	HSE
24.	Spill Control System (Leak tape, absorbent, container, pump, etc.)	Physical Inspection	Monthly	HSE
Safety Infrastructure				
25.	Personnel Protective Equipment (PPE)	Physical Inspection / Availability	Daily	Respective Section
			Monthly	HSE
26.	Company Maintained & Hired Vehicles	Vehicle Fitness	Annually	Admin. / TPT
			Vehicle Inspection	Monthly	Admin. / TPT
27.	Overhead Crane / Mobile, Truck Mounted Crane / Hoist / Chain Block	Load Test	Annually (3 rd Party)	Mechanical
			Operational & Functional Reliability		Quarterly (Internal)
28.	Forklifter	Operational & Functional Reliability	Annually (3 rd Party) Monthly (Internal)	Admin. / TPT
29.	Lights	Luminance	Bi-Annually	Electrical
30.	Ladders, Stair cases, Scaffolding	Physical & Operational Reliability	Ladder (Bi-Annually) Scaffold (Periodically)	Process, Mechanical & HSE
31.	Electric General Inspection	Functional Reliability	Quarterly	Electrical
32.	Motor Control Centre (MCC)	Air Circuit Breaker, Bus Bar, Electrical Cable, etc.	Annually (3 rd Party) Quarterly (Internal)	Electrical & Inst.
33.	Earthing Continuity	Functional Reliability	Quarterly	Electrical
34.	Heat Tracing Cable & Insulation System	Physical & Functional Reliability	Quarterly	Electrical
35.	Level Indicator / Transmitter / Switch Controller	Functional Reliability	Annually	Inst.
36.	Control Panel	Functional Reliability	Annually	Inst.
37.	Control Valve (PCV, LCV, FCV)	Calibration / Inspection	Annually (3 rd Party) Quarterly (Internal)	Inst.
38.	Pressure Safety Valve (PSV)	Calibration (Trevi or Bench Test) / Inspection	Annually (3 rd Party) Quarterly (Internal)	Prod. Facilities / Inst.
39.	Block & Bleed Valves / Isolation Valves, NRVs & Flanges	Leak Test	Annually (3 rd Party) Quarterly (Internal)	Process, Prod. Facilities and Mechanical
40.	X-Mass tree & Well Head Assembly	Well Monitoring & Flow Condition	Monthly	Well Services
		Down Hole Flow Parameters & Pressure Survey	Annually (3 rd Party)	Well Services
41.	Down Hole Tubing, Flowline & Plant Piping	Corrosion Assessment	Monthly	Production / Prod. Facilities
42.	SSVs/ SSSVs	Calibration/ Operational	At the time of work-	Prod. Facilities

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43.	Flowline & Plant Pipeline	Reliability	over	
		Integrity Assessment (Hardness & Thickness)	Bi-Annually	Prod. Facilities
		Pipeline Foundation	Annually (3 rd Party) Quarterly (Internal)	Prod. Facilities
44.	ESD Panel	CP System Monitoring	Monthly	Prod. Facilities
45.	Chemical Injection Pump	Calibration / Inspection	Annually	Inst. / Telemetry
46.	Chemical Injection Package	Operational Reliability	Bi-Monthly	Prod. Facilities
47.	Extraction / Reinjection Well	Operational Reliability	Monthly	Prod. Facilities
48.	Rotary Equipment (Turbine, Compressor, Power Generator, Refrigeration Units, etc.)	Operational Reliability	Bi-Annually	Prod. Facilities
49.	Chiller, Cooling Tower, Stabilizing Columns, Flare Stack, etc.	Vibration Analysis	Quarterly	Mechanical
50.	Heat Exchanger, Hot Oil Heater, Boiler, etc.	Mechanical Integrity	As per OEM recommendation	Mechanical
51.	Vessel, K.O drum, Flash Tank, Separator, etc.	Calibration / Inspection / NDT	Annually(3 rd Party) Quarterly (Internal)	Mechanical
52.	Condensate Storage Tank & Associated Equipment	Mechanical Integrity	As per OEM recommendation	Mechanical
53.	LPG Storage Vessels (Bullets)	Physical Condition (Dyke; Lightening Arrestor; Breather; Blanketing Gas; Flame Arrestors; Ladders)	Annually (3 rd Party) Quarterly (Internal)	Production / Process
54.	Condensate Bouzer	Calibration / Inspection / NDT	As per OEM recommendation	Production / Process
55.	Compressed Gas Cylinders	Physical Inspection	Daily	Process/ Production / Marketing
		Handling and Storage	Quarterly	Mechanical, Lab, HSE, Inst. & Telemetry
56.	Control Room/ SCADA Telemetry System/ DCS	Proof Pressure Test	5 Yearly	Mechanical, Lab, HSE, Inst. & Telemetry
		Functional Reliability of Transducer, PLC (time/ pressure/ temperature/ volume), Securities, etc.)	Quarterly	Telemetry / Inst.
Environment Monitoring				
57.	Ponds/ Pits (CPI/API/TPI)	Fugitive Emission & Soil Erosion	Monthly	Lab.
58.	DG, GG, Stacks & Fire Fighting Engine	Emissions	Monthly	Lab.
59.	Flare/ Vent	Ambient Air Quality	Annually (3 rd Party)	Lab.
60.	Storage/ Loading of Condensate/ Crude	Exposure Levels BTX Volatile Organic Compounds	Quarterly	Lab.
61.	Hazardous Material and Waste Bins	Segregation, Labeling, Storage Condition	Monthly	HSE
62.	Heavy or Rotating/Vibrating Machinery/Vehicles	Noise Pollution	Plant (Monthly) Vehicles (Bi-Annually)	HSE Admin. / TPT
Occupational Health Monitoring				
63.	Drinking Water	Chemical, Physical and Biological parameters	Quarterly	Lab.
64.	Workforce's Health	OH Assessment /Fitness Tests (Trade-wise)	Annually	Medical
		Personal Hygiene Inspection	Monthly	
65.	Mess/ Food-handling	Cleanliness, hygiene, and quality	Monthly	Medical/ HSE

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- 16.1.1.6 Inspection Plans/ Checklists/ Forms shall be developed by the Responsible/Concerned Sectional ICs to observe & document the status observed during the monitoring.
- 16.1.1.7 The equipment used for monitoring and measurements of key parameters (related to significant HSE aspects & risks and HSE regulations) shall be calibrated as per schedule and record of calibration shall be maintained.
- 16.1.1.8 Calibration Record shall be specifically documented providing parameters to be calibrated, required value/set point, read values, final values after calibration, calibrated date and calibration due date.
- 16.1.1.9 When HSE performance falls below desirable level, or when there is a possibility of a noncompliance against laws or regulations, the HSE Representative shall initiate corrective or preventive actions (CPR), and shall establish appropriate objectives and targets to improve HSE performance.

16.1.2 Analysis of Data

- 16.1.2.1 HSE performance shall be analyzed on regular basis and reported to top management and stakeholders through Key Performance Indicators (KPIs): KPIs mentioned below may be monitored on regular basis:
 - a. Related to Man Hours, Lost Man Hours & Safe Man Hours
 - b. Related to Accidents
 - o Non-Fatal Accidents
 - o Fatal Accidents
 - o First Aid Cases
 - o Near Hits
 - c. Related to Recordable Injury Cases
 - o Restricted Workday Injuries
 - o Lost Workday Injuries
 - o Medical Treatment Cases
 - d. Related to Accidents and their Causes (Unsafe Acts and Conditions)
 - o Vehicle
 - o Electrical
 - o Explosion / Burn
 - o Caught Between
 - o Fall
 - o Others
 - a. Related to Near Hits and their Causes (Unsafe Acts and Conditions)
 - o Accidental Explosion / Ignition
 - o Fire Outbreak
 - o Uncontrolled Release of Hazardous Gases / Fumes
 - o Spillage of Oil / Chemical
 - o Road Accident
 - o Breakage of Hoist
 - o Others
 - b. Related to Occupational Health Illnesses
 - c. Related to Work Permits (Hot & Cold)
 - o Corrective Jobs
 - o Breakdown Jobs
 - o Prevent. Maintenance
 - d. Related to Energy Consumption & Conservation (for primary usage, makeup or loss)
 - o Power
 - o Fuel
 - o Lubricating Oil/ Grease
 - o Water
 - o Light
 - o Chemicals
 - pH Stabilizing Additives
 - Scale Inhibitors
 - Oxygen Scavengers
 - Corrosion Inhibitors
 - Scale Dispersants
 - Anti-Bacterial agents
 - Anti-Microbial Agents
 - Sweetening Agents
 - Dehydration/Drying Agents
 - Anti-Gel Additives
 - Desalting Agents
 - Surfactants
 - Chelating Agents
 - Anti-Emulsion Agents
 - Reducing Agents
 - Others

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- e. Related to Waste Management
 - o Non-Hazardous Waste
 - Metallic Scrap
 - Vehicle Scrap
 - Miscellaneous
 - o Hazardous Waste
 - Process
 - Mechanical
 - Clinical
 - Electrical
- f. Related to Pollution
 - o Air Emissions
 - from vehicles
 - from generators
 - from turbines
 - from boilers
 - from incinerators
 - others
 - o Fugitive Emissions
 - Leaks from pressurized equipment
 - through valves
 - through pipe connections
 - through mechanical seals
 - others
 - Emissions from
 - CPI/TPI/API
 - Waste Water Ponds
 - Condensate Storage Tanks
 - Tankers' filling and decanting
 - others
 - o Ambient Air Quality
 - due to Flare
 - due to Vent
 - o Liquid Effluents
 - Produced Water
 - Process (drain) Water
 - Sewerage
 - o Drinking Water
 - o Noise
- g. Related to Trainings and Awareness Sessions
- h. Related to HSEQ Observations, Surveillance Activities and Audits
- i. Related to HSEQ Field Review Meetings

16.1.3 Performance Monitoring of Departments/Sections/Personnel

16.1.3.1 To keep an eye on how involvement of each Section/Department is working in imparting improvement of the HSE System, information on HSE KPIs shall be compiled (for each section or department) at the end of each calendar year in the following manner as minimum:-

<u>Performance of each Section or Department</u>	<u>No. of Risks Actually Managed / Identified</u>	<u>No. of Inspections Actually Performed / Planned (Approved)</u>	<u>No. of CPRs Closed / Initiated</u>	<u>No. of Sessions Attended / Scheduled (Approved)</u>	<u>No. of Safety Talks Actually Conducted / Planned (Approved)</u>	<u>No. of Meetings Actually Attended / Scheduled</u>	<u>No. of Personnel Undergone OH Assessment / Planned (Approved)</u>	<u>No. of Drills Actually Attended / Planned (Approved)</u>
<u>Reference Document/Record</u>	Risk Register	HSE Monitoring Plans	CPRs	Onsite HSE Trainings & Awareness Sessions	Toolbox Talks	HSE Review Meetings	Occupational Health Assessments	Emergency Drills

16.1.3.2 HSE Event Management Committee shall compile the above data (minimum) after proper verification and also set a detailed qualifying criterion accordingly.

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






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16.1.3.3 Well turned-out personnel shall be given certain incentives for the sake of motivation and sustainability toward continuous improvement.

16.2 ASSOCIATED DOCUMENTS

-  Health Monitoring Plan
-  Safety Monitoring Plan
-  Environmental Monitoring Plan
-  OH Assessment Plan
-  HSE Monthly/ Annual Reports

16.3 APPLICABLE DOCUMENTS

-  HSE Regulatory Matrix
-  HSE Checklists
-  Annual Returns – Notices / Forms I, II, III, IV, & V
-  Environment (Lab.) Monitoring Report
-  Third Party (Inspection) Certificates
-  Employee's Workplace Exposure & Health (WEH) Record
-  Calibration Record

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Accident, Incident, Nonconformance, Corrective & Preventive Action

The purpose of this procedure is to provide a system for continual improvement in HSE (Health, Safety, and Environment Management System) and to eliminate the causes of actual or potential problems by initiating and implementing Corrective and Preventive Actions. This procedure applies to correcting and preventing non-conformities related to health, safety, and environment emanating from materials, products/services, and / or processes in the field & plant functions of the company.

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17.1 PROCEDURE OF CPR

17.1.1 Improvement

- 17.1.1.1 Persons at all levels and in all departments of OGDCL shall be responsible to identify opportunities for continual improvements and to take actions to improve the quality of services, processes with respect to HSE. Following activities shall provide mechanism for identifying opportunities for continual improvement and taking actions to bring about the improvement in the system:
- Daily observation visits/ walkthroughs
 - Analyzing HSE Report
 - Reviewing the results and trends of subsequent internal quality audits and identifying areas needing improvement
 - Reviewing the performance trends against the objectives and improving the objectives to bring continual improvement in the system
 - Analyzing the data related to customers, products, processes, and suppliers, and identifying opportunities for improvements
 - Reviewing the recommendations for improvement from the departments in the meetings and taking decisions for improvement in the services, processes and HSE

17.1.2 Initiating Corrective and Preventive Actions

- 17.1.2.1 Corrective and preventive actions shall be taken to eliminate the causes of non-conformities to prevent their recurrence and / or to eliminate any potential causes of non-conformity.
- 17.1.2.2 The objective shall be to provide a mean for detecting any deterioration in processes, work standards and systems and thus to prevent the occurrence of a non-conformity.
- 17.1.2.3 Corrective and preventive actions shall be initiated in the following cases or based on the results of data analysis:
- Identification of a major system or service violation that may result in non-fulfillment of HSE related contractual, legal or regulatory requirements
 - Any non-compliance identified during an HSE audit
 - Critical or repetitive nature of HSE related complaints from customers or adverse customer feedback
 - Accidents or near-hits (even if happened from the contractors or subcontractors side)
 - Repetitive operational failures of similar nature or any critical operation failure causing accident or Near Hit
 - Inspection and test records

17.1.3 Requesting and processing CPRs

- 17.1.3.1 First hand information of any unsafe condition, unsafe behavior, near hit, accident, etc. shall be submitted by the Sectional I/Cs or any person to the HSE Section on any suitable authentic template, either through hard or soft means.
- 17.1.3.2 While corrective and preventive actions shall be initiated by any person or HSE Rep. using the CPR Form and Challan System shall be strictly discouraged.
- 17.1.3.3 The request shall contain a description, with a legitimate reference, of the unsatisfactory condition that needs to be corrected.
- 17.1.3.4 Pictorial evidence shall also be affixed if deem appropriate.
- 17.1.3.5 The CPR shall be submitted to the head of HSE, who reviews, classifies the reported-issue, sort out Primary Surface Cause and discusses the nature of problem and corrective / preventive action with the concerned departmental/sectional head.
- 17.1.3.6 The HSEQ Department / Section shall enter CPR description into CPR Log.
- 17.1.3.7 Upon receiving the request for corrective and preventive action, the concerned departmental /sectional head shall investigate the cause of the problem that initiated the request. The investigation process shall include:
- Interviewing the concerned personal that performed that particular job and gathering his views about the possible causes of non-conformities.
 - Observing and examining the processes to detect any possible causes of non-conformity
 - Examining the vendor and his supplies
 - If appropriate, making use of statistical techniques (cause and effect diagram) to determine their root causes
- 17.1.3.8 At this stage, pictorial evidence shall also be collected if all possible.
- 17.1.3.9 The concerned departmental/sectional head shall inform HSEQ Department / Section of the Contributing Surface Cause(s) and Design (actual) Root Cause(s) and propose a corrective / preventive action to be taken on the CPR Form.
- 17.1.3.10 The concerned departmental/sectional head shall also discuss with the HSEQ Department / Section about the most appropriate problem solving team with a target date by which the corrective / preventive action shall be fully implemented, and handover the CPR Form to the problem solving team leader.
- 17.1.3.11 The HSEQ Department / Section shall enter the design (actual) root cause into the CPR

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- Log and keep copy of the CPR Form.
- 17.1.4 Implementation of Corrective and Preventive Action**
- 17.1.4.1 When a corrective / preventive action is decided upon, it may be implemented on trial basis and the results shall be closely monitored. Further measures or changes shall be made where required during the trial period until satisfactory results are attained.
- 17.1.4.2 The corrective and preventive measures where deem fit shall be made by incorporating changes in the HSE system in the relevant documents such as drawings, specifications, operating procedures, work instructions and HSE procedures.
- 17.1.4.3 Where the corrective and preventive action identifies new or changed hazards or the need for new or changed controls, the proposed actions shall be implemented ensuring that the risk(s) shall be reassessed accordingly.
- 17.1.5 Verification of Corrective and Preventive Action**
- 17.1.5.1 On, or immediately after, the due date of implementation of a corrective and preventive action, Head of HSEQ Department / Section shall follow up through an inquiry or audit to determine if the corrective / preventive action has been implemented and whether it is effective.
- 17.1.5.2 When there is objective evidence that the corrective and preventive action is effective, the CPR shall be closed out. If more work is needed to fully implement the action, a new follow up date shall be agreed upon.
- 17.1.5.3 The HSEQ Department / Section shall enter final status of the CPR into the CPR Log and maintain the original CPR form as record.

17.2 PROCEDURE OF WRITING FORMAL INCIDENT REPORT

17.2.1 General

- 17.2.1.1 Formal Incident Report shall include all the essential information as given above.
- 17.2.1.2 The report-writing process shall begin with fact finding and end with recommendations for preventing future accidents.
- 17.2.1.3 Special (identical) Formal Incident Reporting format shall be used for all locations but writing any Formal Incident Report shall involve four basic steps.

17.2.2 Facts Finding

- 17.2.2.1 To prepare for writing an Incident Report, all the facts shall be gathered and recorded like:
- Date, time, and specific location of incident
 - Names, job titles, and department of employee/contractors involved and immediate supervisor(s)
 - Names and accounts of witnesses
 - Events leading up to incident
 - Exactly what employee/contractor was doing at the moment of the accident
 - Environmental conditions (e.g. slippery floor, inadequate lighting, noise, etc.)
 - Circumstances (including tasks, equipment, tools, materials, PPE, etc.)
 - Specific injuries (including part(s) of body injured and nature and extent of injuries)
 - Type of treatment for injuries
 - Damage to environment, equipment, materials, etc.

17.2.3 Determination of Sequence

- 17.2.3.1 Based on the facts, the sequence of events shall be determined in detail, including:
- Events leading up to the incident.** Initial operational activity/phase and/or was the employee/contractor walking, running, bending over, squatting, climbing, lifting operating machinery, pushing a broom, turning a valve, using a tool, handling hazardous materials, etc.?
 - Events involved in the incident.** Further operational activity/phase and/or was the employee/contractor struck by an object or caught in/on/between objects? Did the worker fall on the same level or from a height? Did the employee/contractor inhale hazardous vapors or get splashed with a hazardous chemical?
 - Events immediately following the incident.** Last operational activity/phase and/or what did the employee/contractor do. (e.g. Grab a knee? Start limping? Hold his/her arm? Complain about back pain? Put a hand over a bleeding wound? Also describe how other co-workers responded. Did they call for help, administer first aid, shut down equipment, move the victim, etc.?)
- 17.2.3.2 The incident shall be described on the report in sufficient detail that any reader can clearly picture what happened.
- 17.2.3.3 A diagram may also be sketched to show, in a simple and visually effective manner, the sequence of events related to the incident and include this in the Formal Incident Report. Photos of the accident scene may also be included, which may help follow the sequence of events.

17.2.4 Analysis

- 17.2.4.1 The report shall include an in-depth analysis of the causes of the accident. Causes include:
- Primary Surface Cause(s) (e.g., a spill on the floor that caused a slip and fall)
 - Contributing Surface Cause(s)
 - Design Root Cause(s)

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
17.2.5 Recommendation / Lessons Learned

- 17.2.5.1 Recommendations for the corrective/preventive action(s) shall include immediate corrective action as well as long-term actions such as:
- Employee/contractor training on safe work practices
 - Preventive maintenance activities that keep equipment in good operating condition
 - Evaluation of job procedures with a recommendation for changes
 - Conducting a job hazard analysis to evaluate the task for any other hazards and then train employee/contractors on these hazards
 - Engineering changes that make the task safer or administrative changes that might include changing the way the task is performed

17.3 PROCEDURE OF REGISTERING OCCUPATIONAL ILLNESSES AND INJURIES

- 17.3.1 The Medical Representative shall use Register of Occupational Illnesses and Injuries to classify work-related injuries and illnesses and to note the extent and severity of each case. When an incident occurs, specific details about what happened and how it happened shall be logged in the Register of Occupational Illnesses and Injuries as follows:
- 17.3.1.1 Identify the employee involved.
 - 17.3.1.2 Identify when and where the case occurred.
 - 17.3.1.3 Describe the case.
 - 17.3.1.4 Classify the seriousness of the case by recording the most serious outcome associated with the case, Death being the most serious and Other recordable cases being the least serious
 - 17.3.1.5 Identify whether the case is an injury or illness. If the case is an injury, check the injury category. If the case is an illness, check the appropriate illness category.
- 17.3.2 Cases listed on the Register of Occupational Illnesses and Injuries shall not necessarily be eligible for workers' compensation or other insurance benefits.
- 17.3.3 An injury or illness shall be considered work-related if an event or exposure in the work environment caused or contributed to the condition or significantly aggravated a preexisting condition. Those work-related injuries and illnesses shall be logged that result in:
- 17.3.3.1 death,
 - 17.3.3.2 loss of consciousness,
 - 17.3.3.3 days away from work (LWI),
 - 17.3.3.4 restricted work activity or job transfer, or
 - 17.3.3.5 medical treatment beyond first aid.
- 17.3.4 Any significant work-related injury or illness that is diagnosed by a physician or other licensed health care professional shall be recorded including any case requiring an employee to be medically removed under the requirements of any health standard.
- 17.3.5 In addition, Employee's Workplace Exposure & Health (WEH) Record shall be maintained by the Medical Representative as well.

17.4 ASSOCIATED DOCUMENTS

-  CPR Form
-  CPR Log / Register
-  Register of Occupational Illnesses and Injuries
-  Employee's Workplace Exposure & Health (WEH) Record

17.5 APPLICABLE DOCUMENTS

-  Formal Incident Report

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Control of Records

The purpose of this procedure is to ensure that all records related to HSE Management System are properly filed, indexed, stored, retained and disposed. This procedure is applicable to all the records generated as result of routine operational activities performed by different departments / sections of production fields and plants.

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18.1 PROCEDURE

18.1.1 Filing and Indexing

- 18.1.1.1 Hardcopies of records shall be filed in cardboard or plastic files. These files shall be numbered and indexed for easy retrieval and safe storage.
- 18.1.1.2 Following labeling format shall be used for files:

File #:
Department:
File Title:
Date Started:
Date Closed:
Maintained by:
Example
File #: HSE-1
Department: HSE
File Title: Operational Control
Date Started: 1st January, 2005
Date Closed: 31st March, 2005
Maintained by: Field HSEQ Department / Section

18.1.2 Reference Numbering System

Following format shall be implemented at organizational and unit level for controlling Audit records, CPRs, CCRs, Management Reviews, Risk Register, and JHAs:

Control of Internal HSE Audit Noncompliance Report
 Format:-HSE / Abbreviation of Location / Year – NCR###
 Example:- HSE/QPR/2007-NCR001

Control of Corrective Action Request
 Format:-HSE / Abbreviation of Location / Year – CPR###
 Example:- HSE/QPR/2007-CPR003

Control of Review Minutes
 Format:-HSE / Abbreviation of Location / Year – MR###
 Example:- HSE/QPR/2007-MR002

Control of Risk Register
 Format:-HSE / Abbreviation of Location / Year – RR(##)
 Example:- HSE/QPR/2007-RR(00)

Control of Job Hazard Analysis
 Format:-HSE / Abbreviation of Location / Section – JHA###(##)
 Example:- HSE/QPR/LAB-JHA001(00)

Control of Change Control Requisition
 Format:-HSE / Abbreviation of Location / Section – CCR###(##)
 Example:- HSE/QPR/LAB-CCR001(00)

Where,
 HSE = HSE Domain
 QPR= Qadirpur Plant
 2007= Year record is taken
 NCR = Audit Noncompliance Report
 CPR = Corrective and Preventive Action Request
 MR = Management Reviews
 RR= Risk Register
 JHA= Job Hazard Analysis
 CCR= Change Control Requisition
 001 = Serial Number of the record
 (##)= Revision number

18.1.3 Record Approval & Issue

- 18.1.3.1 After the preparation and numbering of records, these shall be reviewed and approved by the competent authorities.
- 18.1.3.2 The following personnel shall be the reviewing and approving authorities related to various HSE records:

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Type of Document	Prepared by	Reviewed by	Verified / Approved by
HSE Training Plan	HSEQ Department Head Office	GM HSEQ	ED HR
HSE Regulatory Matrix	HSEQ Department Head Office	Manager HSEQ	GM HSEQ
List of Approved HSE Auditors	HSEQ Department Head Office	HSE Lead Auditor	GM HSEQ
HSE Audit Schedule and Plans (Corporate)	HSEQ Department Head Office	HSE Lead Auditor	GM HSEQ
Internal HSE Audit Summary Report (Corporate)	Internal HSE Auditor	HSE Lead Auditor	HSE Lead Auditor
In-House HSE Surveillance Schedule (Field)	HSE Field IC	HSE Field Committee	Field Manager Plant Manager
In-House HSE Surveillance Summary Report (Field)	HSE Field IC	In-House HSE Surveillance Team	Field Manager Plant Manager
Operational Control Form (Field)	HSE Field IC	HSE Field Committee	HSE Field Committee
Health Monitoring Plan (Field)	HSE Field IC	HSE Field Committee	Field Manager Plant Manager
Safety Monitoring Plan (Field)	HSE Field IC	HSE Field Committee	Field Manager Plant Manager
Environment Monitoring Plan (Field)	HSE Field IC	HSE Field Committee	Field Manager Plant Manager
OH Assessment Plan	Medical Representative	HSE Field IC	Field Manager Plant Manager
Register of Occupational Illnesses and Injuries	Medical Representative	Medical Representative	Medical Representative
Employee's Workplace Exposure & Health (WEH) Record	Medical Representative	Medical Representative	Medical Representative
Monthly HSEQ Report (Field)	HSE Section (Field)	HSE Field IC	Field Manager Plant Manager
Specific HSE Objectives & Action Plan (Field)	HSE Field IC	HSE Field Committee	HSE Field Committee
HSE Risk Assessment Plan (Field)	HSE Field IC	HSE Field Committee	Field Manager Plant Manager
HSE Risk Register (Field)	HSE Field IC	HSE Field Committee	Field Manager Plant Manager
PPE Need Assessment Matrix	Rep. of the Section	Section IC	HSE Field IC
Job Hazard Analysis (JHA) Record (Field)	All Department / Section ICs	HSE Field IC	Field Manager Plant Manager
Change Control Requisition (CCR) [Process]	Section IC	Scrutiny Committee (Process)	Field Manager Plant Manager
Change Control Requisition (CCR) [Production]	Section IC (Production)	Scrutiny Committee (Production)	Field Manager
List of External Documents (Field)	All Department In-Charges	HSE Field IC	Field Manager Plant Manager
Master List of Documents (Corporate & Field)	HSE Section	HSE Field IC	GM HSEQ
Master List of Records (Corporate)	HSEQ Department Head Office	Manager HSEQ	GM HSEQ
Master List of Records (Field)	HSE Section	HSE Field IC	Field Manager Plant Manager
Agenda of Management Reviews (Corporate)	HSEQ Department Head Office	Manager HSEQ	GM HSEQ
Agenda of Management Reviews (Field)	HSE Section	HSE Field IC	Field Manager Plant Manager
Minutes of Management Reviews (Corporate)	HSEQ Department Head Office	Manager HSEQ	GM HSEQ
Minutes of Management Reviews (Field)	HSE Section	HSE Field IC	Field Manager Plant Manager

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18.1.4 Storage of Records

18.1.4.1 The record files shall be stored in cabinets and drawers, and concerned persons in the sections shall be responsible for ensuring the security and safety of records in their custody.

18.1.4.2 Computer-maintained files shall be stored in directories or folders on the hard disk or main server following the parent-child directory setup. Back-ups of the computer records shall be maintained.

18.1.5 Retention of Records

18.1.5.1 The retention period of records shall be established for certain periods during which the record may be required for study or verification.

18.1.5.2 After the retention period, the record shall be disposed off through appropriate means.

18.1.5.3 Retention period shall be defined based on the following factors:

- a. Frequency of record generation
- b. Criticality of the record
- c. Legal obligations

18.1.5.4 Retention period for each record shall be defined in the Master List of Records maintained by HSEQ Department / Section.

18.1.6 Disposition of Expired or Obsolete Records

18.1.6.1 After the expiry of retention period of records, head of section shall review the validity and usefulness of records and segregate the record to be disposed.

18.1.6.2 The record shall be disposed off by:

- a. Shredding,
- b. Selling off, or
- c. Archiving in store room

18.2 ASSOCIATED DOCUMENTS

-  Master List of Records

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Internal HSE Audit

The purpose of this procedure is to provide a system for conducting Internal HSE Audits to determine whether activities and related results comply with planned arrangements and whether these arrangements are implemented effectively. Internal HSE Auditing is a company-wide activity, which is applicable to all function involved in activities related to HSE management system at production fields and plants.

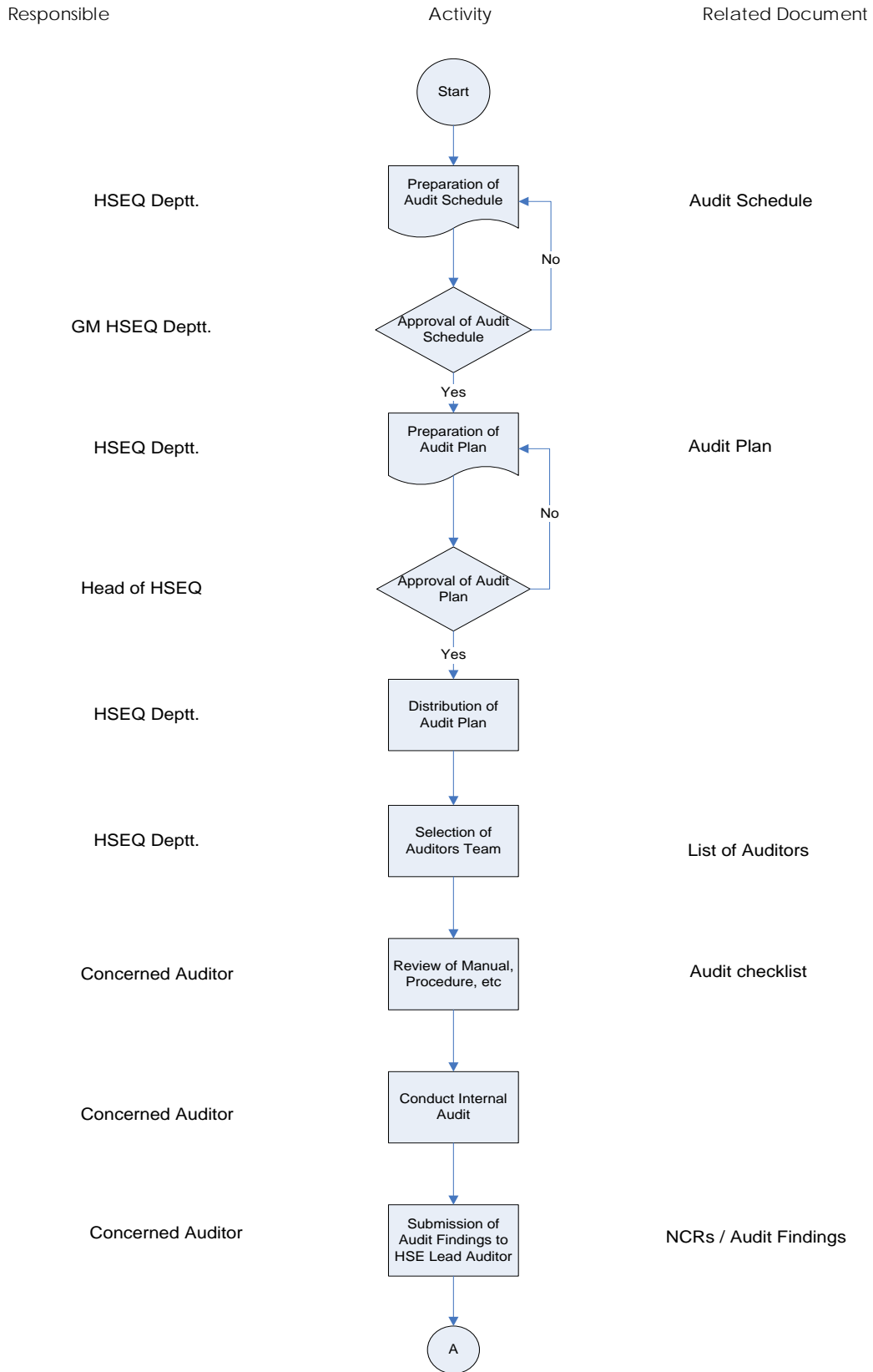
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FLOWCHART FOR INTERNAL HSE AUDIT

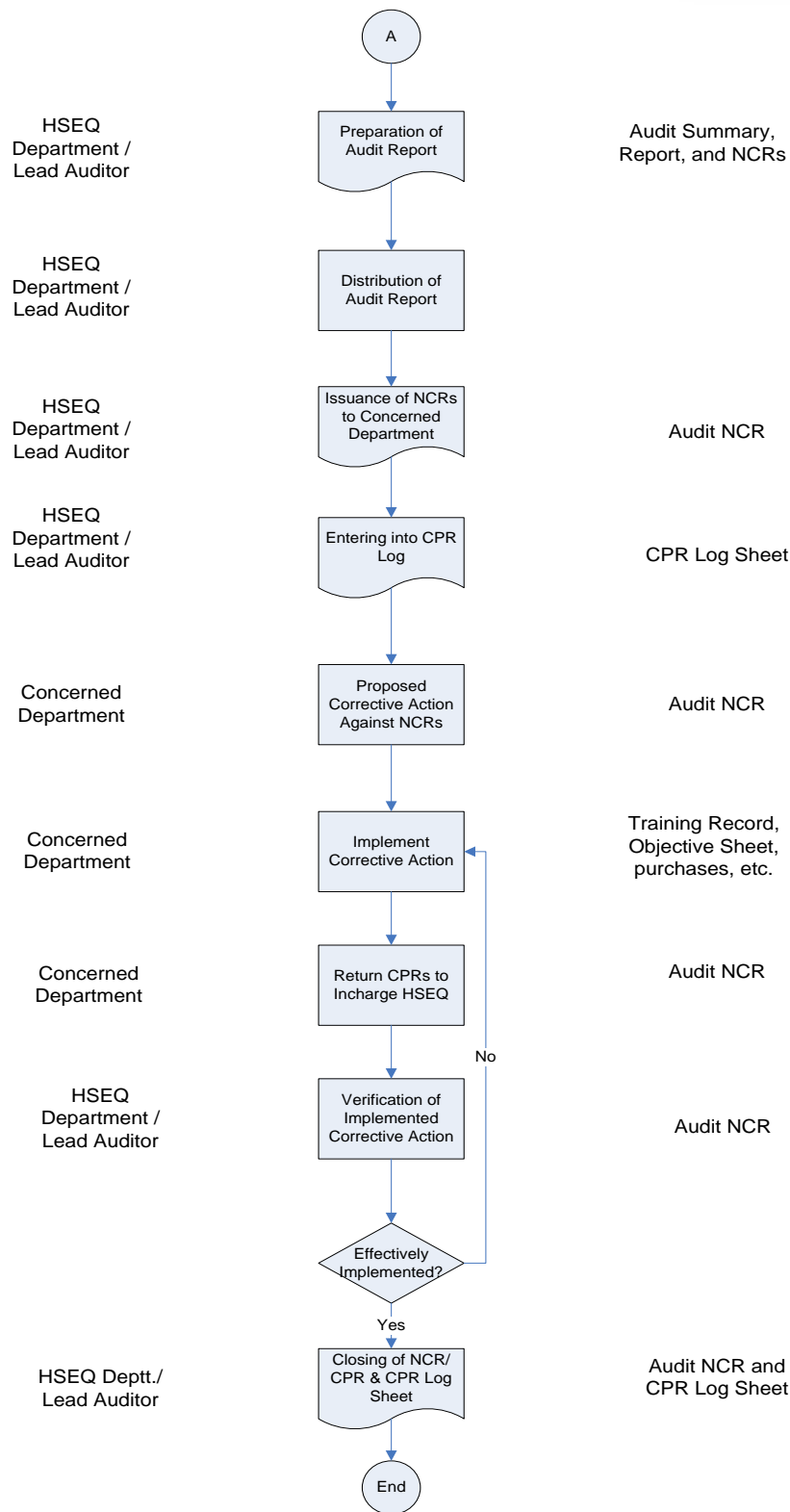


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19.1 PROCEDURE

19.1.1 Audit Team

- 19.1.1.1 For conducting Internal HSE Audit on a regular defined basis, the HSEQ Department shall develop internal HSE Audit team.
- 19.1.1.2 HSEQ Department shall maintain the list of Internal HSE Auditors.
- 19.1.1.3 The Internal HSE Auditors shall be selected from different organizational functions based on their experience and professional skills.
- 19.1.1.4 The Internal HSE Auditors shall be trained on auditing skills by conducting internal training sessions.
- 19.1.1.5 HSEQ Department shall maintain training records of the qualified auditors.

19.1.2 Audit Planning (Planning Phase)

- 19.1.2.1 HSEQ Department shall prepare an Annual Audit Schedule, which is approved by GM HSEQ Department.
- 19.1.2.2 A week before audit, Lead Auditor shall develop and document the Audit Plan.
- 19.1.2.3 The audit plan shall be distributed to all Department In-charges through the Site In-Charge.

19.1.2.4 The Internal HSE Audit shall be conducted at least once in 06 months for each field / plant. However special Internal HSE Audit shall be arranged / scheduled for the risks rated as high in the risk assessment.

19.1.2.5 The Audit Plan shall enlist all the activities corresponding to the HSE system, identify locations where these activities are taking place, and time of audit for each activity and reference standards.

19.1.2.6 The concerned Auditor shall get the documents (e.g., Procedures, Work Instructions etc) of the department to be audited, review the documents and prepare Audit Checklist.

19.1.2.7 The auditor and auditee shall agree on the audit schedule, audit procedures, responsible people and content of the audit.

19.1.3 Audit Execution (Performance Phase)

- 19.1.3.1 Before starting an audit, the auditors shall ensure the possession of:
 - a. Audit Plan & Audit Checklist
 - b. HSE System Manual
 - c. HSE Risk Register

19.1.4 Opening Meeting

- 19.1.4.1 The audit shall begin with a briefing to the management and auditors on the methodology of the audit, its scope and any Administrative arrangements required.
- 19.1.4.2 Audit Plan shall be verified, auditor and auditee personnel shall get introduced, and the logistics and the time for closing meeting shall be determined.

19.1.5 Conducting the Audit

- 19.1.5.1 While conducting the audit, the auditors shall seek to:
 - a. Determine whether documented procedures and instructions meet the requirements of the standards
 - b. Verify whether procedures and instructions are being implemented. For this, the data and records generated as evidence of HSE related activities are examined for compliance with specified procedures. In addition, the auditors make it a point to talk to personnel actually performing various tasks to ascertain whether they understand the procedures and instructions, and are following these. Auditors observe tasks being carried out, to see whether these conform to specified norms and procedures.
- 19.1.5.2 When an auditor observes non-conformity in the system, all relevant information shall be examined carefully and full details of non-compliance or deficiency shall be recorded so that corrective action can be taken.
- 19.1.5.3 The responsible In-charge shall be associated with such observations.
- 19.1.5.4 Evidence of non-conformity and the auditee concurrence (where deem necessary) shall be recorded on the audit checklist to avoid controversy.

19.1.6 Closing Meeting

- 19.1.6.1 On completion of the audit, a closing meeting shall be arranged with the management of the site to review findings and to obtain clarifications if required.
- 19.1.6.2 Lead Auditor shall report the audit team's conclusion.
- 19.1.6.3 Appropriate corrective measures shall also be discussed.

19.1.7 Audit Reporting

- 19.1.7.1 After the completion of audit, the auditors shall submit their findings to Lead Auditor who compiles all these findings and prepares the Audit Report.
- 19.1.7.2 The report shall include the summary of the audit and audit non-conformities and observations observed. The audit report normally shall contain the following information:
 - a. Compositions of the audit team.
 - b. Background information, such as the introduction, audit's objective, scope,
 - c. Summary of findings, observations and exemplary practices.
 - d. Specific findings, particularly non-conformities and response requirements.
- 19.1.7.3 The audit report shall be distributed to the auditee department and to any other

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concerned.

19.1.8 Corrective Action and Follow up

- 19.1.8.1 The concerned departmental In-charge shall investigate the cause of the problem, propose a corrective action to be taken and indicate the date by which the corrective action be fully implemented.
- 19.1.8.2 On, or immediately after, the due date for implementation of the corrective action, the auditors/Lead Auditors shall follow up with an audit to determine if the corrective action has been implemented and if it is effective.
- 19.1.8.3 When there is objective evidence that the corrective action is effective, the audit non-compliance report shall be closed out. If more work is needed to fully implement the corrective action, a new follow-up date shall be agreed upon.








19.1.9 Input to HSE Field and/or Central Committee Reviews

- 19.1.9.1 HSE In Charge shall submit the results of internal HSE audit in HSE Field and/or Central Committee Review as Input.

19.1.10 In-House HSE Surveillance

- 19.1.10.1 In addition to the Internal HSE Audits, In-House HSE Surveillance of the Field / Plant shall be made on quarterly basis (e.g. two weeks before the start of each HSE Field Review) and shall be set off through interdepartmental teams.
- 19.1.10.2 HSE In Charge shall prepare and distribute the In-House HSE Surveillance Schedule on annual basis.
- 19.1.10.3 The Findings of the In-House HSE Surveillance shall be recorded using the Corrective Action Request (CPR) form and the results shall be submitted in HSE Field Committee Review as Input by HSE In Charge.

19.2 ASSOCIATED DOCUMENTS

-  List of Auditors
-  Annual Audit Schedule
-  Audit Plan
-  Audit Checklist
-  Audit Summary Report
-  Audit Non-Conformity Report (NCR)
-  In-House HSE Surveillance Schedule

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Management Review

To coordinate and control the activities of the HSE System being carried out by different functions and to review the performance of the HSE System at regular intervals. This procedure is applicable those management personnel take part in the meetings of HSE Field and/or Central Committee of company.

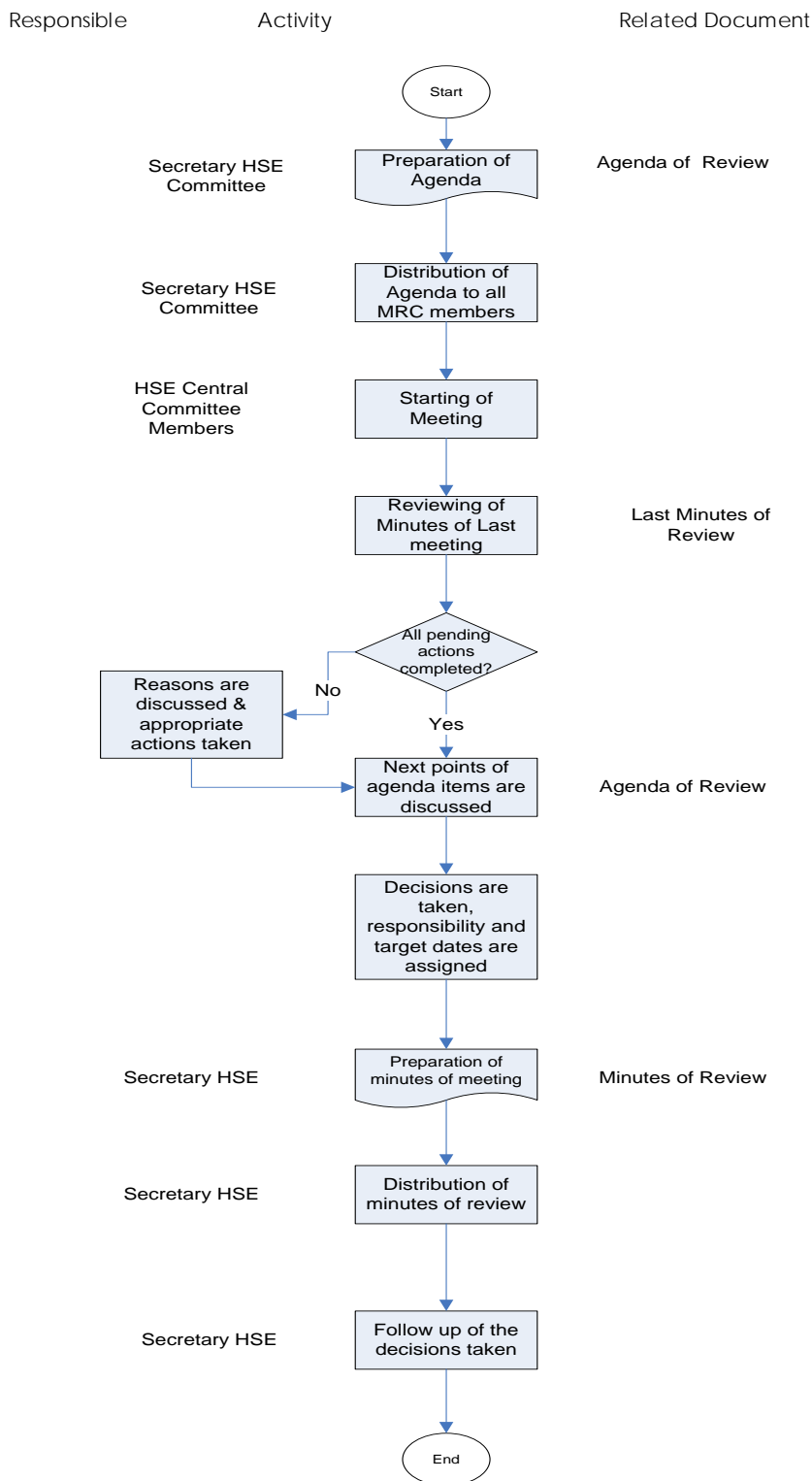
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FLOWCHART FOR HSE FIELD AND/OR CENTRAL COMMITTEE REVIEWS



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17.6 PROCEDURE

17.6.1 General

17.6.1.1 OGDCL management shall establish an HSE Field and/or Central Committee to coordinate and control the activities of the HSE System being carried out by different functions in OGDCL and to periodically review and evaluate the performance of the HSE system.

17.6.2 Frequency

17.6.2.1 The HSE Field Reviews shall be held at on quarterly basis.
 Q1- Around End March
 Q2- Around End June
 Q3- Around End September
 Q4- Around End December

17.6.2.2 The Central Committee Reviews shall be held at least once a year, preferably at the end of calendar year.

17.6.2.3 However, the meeting may be called at any time, when it is considered necessary, on the discretion of Chairman or GM HSEQ. In case where delay in meeting is unavoidable, the management may delay the HSE Field and/or Central Committee Review for a maximum of 30 days.

17.6.3 Composition

17.6.3.1 HSE Central Committee will comprise the following,

Managing Director / CEO	Chairman
General Manager / Manager (HSEQ)	Secretary
All concerned General Managers	Members
All concerned Area Managers	Members
Manager HRD	Observer (optional)

17.6.3.2 While HSE Field Committees shall review the HSE issues on fields with following constitution:

Field /Operational /Plant Manager	Chairman
Field HSE IC	Secretary
All Departmental / Sectional Heads	Members
Chief Engineer HSEQ Department	Observer (optional)

17.6.4 HSE Inputs to Reviews

17.6.4.1 The agenda of the HSE Field and/or Central Committee review shall be prepared by the HSEQ Department / Section a week before the meeting and distributed to all the members mentioned above.

17.6.4.2 The inputs to review meetings shall include:

- HSE Policy (only in case of central committee review)
- Environmental Aspects, Health & Safety Hazards and associated Risks
- Accident statistics.
- Continual Improvement.
- Follow up of last meeting.
- Evaluation of volume and type of work for improved efficiency
- Status of HSE Objectives, Targets and Management Programs
- Results of internal and external Audits.
- Evaluations of compliance with legal requirements and other requirements
- Complaints, Accidents, Incidents, Comments and Views of Interested Parties and feed back
- HSE Performance and Compliance
- Status of preventive and corrective actions.
- Any recommendations/suggestion for improvement in Process or System.
- Evaluation of skill matrix for training need analysis
- Recommendations for improvements

17.6.5 Outputs to Reviews

17.6.5.1 The minutes of the HSE Field and/or Central Committee reviews shall be prepared by the Secretary after the meeting and then distributed to the members.

17.6.5.2 The minutes shall include decisions related to:

- Improvement of HSE management system ;
- Specific corrective actions for individual/sub committees with target dates of completion.
- Revisions to HSE Policy; (only in case of central committee review)
- Revisions to HSE Objectives and Targets;
- Corrective Actions and Action Plans
- Resource / training needs.

17.6.5.3 The minutes shall include the name of persons who attended the meeting, matters reviewed, decisions taken on required actions, the names of persons responsible for implementing such actions and the dates by which they are to be completed.

17.6.6 Follow up of the meeting

17.6.6.1 HSEQ Department / Section shall be responsible for the follow up of the decisions

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



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taken in the meeting to ensure that the decisions are implemented in the time frame specified.

17.7 ASSOCIATED DOCUMENTS

-  Agenda of Review
-  Minutes of Review

17.8 APPLICABLE DOCUMENTS

-  All relevant Documents / Records mentioned in the previous Sections

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CHANGE CONTROL

To define a formal process used to ensure that changes to a system or sub-system are introduced in a controlled and coordinated manner to reduce the possibility that unnecessary changes will be introduced (to a system or sub-system) without forethought, introducing faults or near hits in the shape of human injuries, assets damages, and / or environmental interferences, etc. into the functional areas. The goals of a change control procedure usually include minimal disruption to services, reduction in back-out activities, and cost-effective utilization of resources involved in implementing change regarding the modification of plant and equipment.

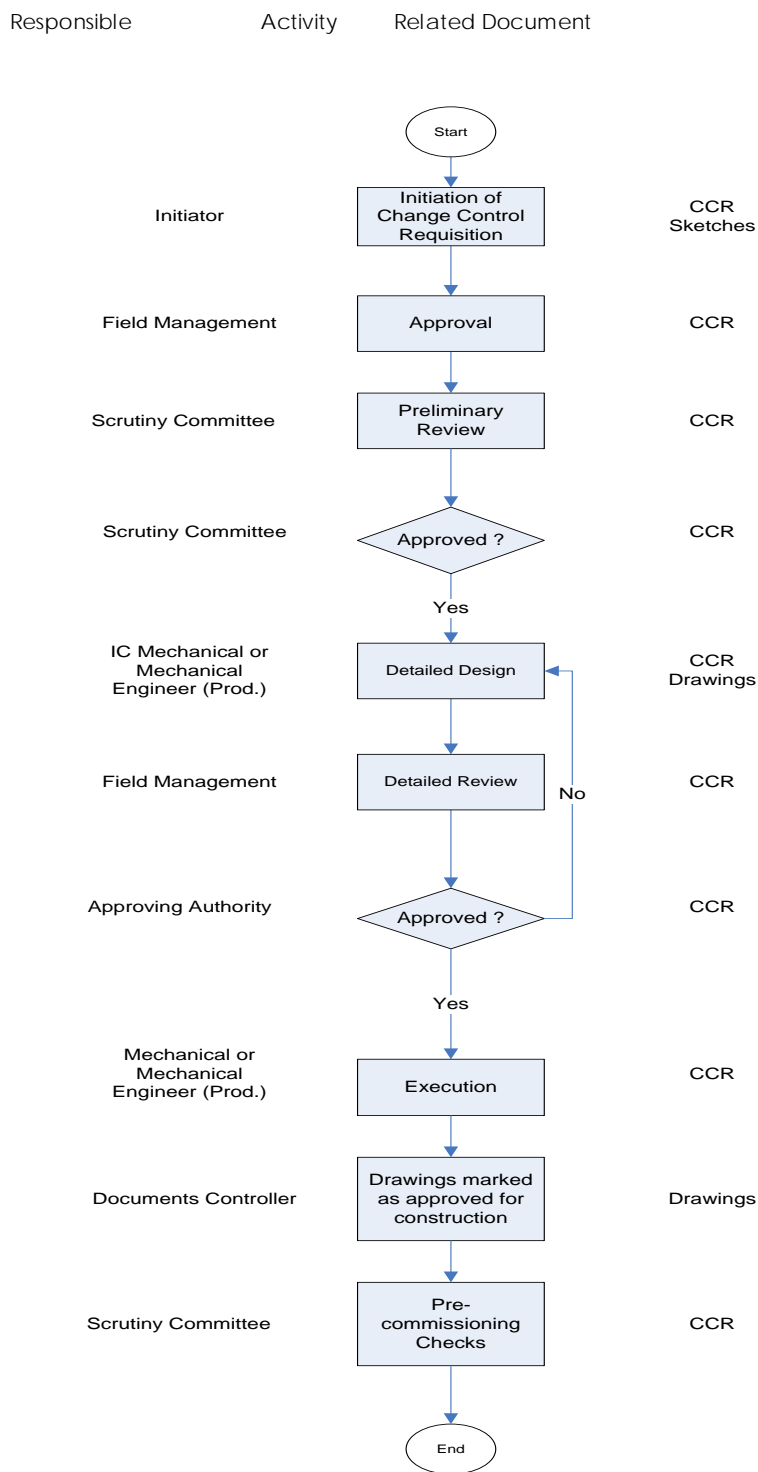
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CHANGE CONTROL PROCESS



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21.1 GENERAL

- 21.1.1 OGDCL management shall control the change regarding any modification whether temporary or permanent, to plant and equipment, process materials, operating procedure, operating conditions which is outside the normal methods of operation and maintenance. Few examples of modifications are as follows:
- Any change in the approved method of operation (as defined in the standard operating procedures).
 - A repair to or replacement of an existing item of equipment or component which represents a departure from the existing engineering specification.
 - A change in the means of support of plant items, pipe-work or fittings or a change to a structure, which could affect its load bearing capabilities.
 - A change, irrespective of its magnitude, that affects the engineering line diagram.
 - A change in the material of construction, size or shape of any component which is in contact with process fluid or utility stream or which could affect the flow rate, temperature, pressure or composition of a process fluid or utility stream.
 - A change to the setting of an alarm or trip.
 - A change to the setting or capacity of a relief stream or device.
 - A change to a control system including the overriding of control action in the field by forcing actuated valves to a particular position.
 - A change to any hardware or software trip or interlock system, including controllers / indicators, etc. This includes any override or defeat of a trip or interlock system unless the override/defeat is an integral part of the system design e.g. a key override or purpose-designed faceplate for software overrides/defeats.
 - Introduction of any new substance into any part of the process or plant equipment including any change in formulation, change in ratio of ingredients or change in source of supply.
 - An alteration to the flow-rate, temperature, pressure or composition of a process fluid or utility stream outside the defined operating parameters.
 - A change to any lifting appliance, including lifting beams.
 - Any change or alteration in layout of an operating field building or building services.
 - Any alteration in the operating field which affects its notification under local legislation.
- Whereas the following type of activities shall not constitute modification
- Replacement of similar kind of piping, mechanical parts, instruments or electrical components that are identical to the existing ones.
 - Change in operating parameters within safe operating limits as specified in the design conditions or the operating manuals.
 - Routine repairs and services carried out by maintenance or other groups.
- 21.1.2 OGDCL field management shall establish two separate Scrutiny Committees – one for Process and the other for Production.
- 21.1.3 The Scrutiny Committee for the Plant shall comprise as follows:
 IC Process Chairman
 The Initiator (Section IC)
 IC Mechanical (Process)
 IC Electrical or I/C Instruments
 (depending upon the nature of modification)
 HSE Representative
- 21.1.4 The Scrutiny Committee for the Production will comprise as follows:
 IC Production Chairman
 (he would be the Initiator as well)
 Mechanical Engineer (Production)
 (to be nominated by OM)
 Representative Electrical or Instrument
 (depending upon the nature of the modification)
 HSE Representative
- 21.1.5 The Scrutiny Committees, in the respective areas, will be responsible to carry out the following activities:
- Preliminary review of the Change or Modification
 - Detailed review of the drawings, P&IDs, PFDs etc.
 - Pre-commissioning review of the installed facilities
 - Post-commissioning monitoring of the Modification in order to compare the actual benefits with the envisaged benefits
 - All members of the Scrutiny Committees shall be provided with necessary training in HazId, Hazop, and HazCom if all possible.

21.2 PROCEDURE

21.2.1 Responsibilities

- 21.2.1.1 Field management shall ensure that all the requirements of the Procedure are in place and the Procedure is effective in the Plant Area as well as in the Production Area.

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- 21.2.1.2 The Initiator of Modification shall be responsible for expediting the progress of the Modification through various stages required by the procedure.
- 21.2.1.3 HSE Representative shall be responsible for communicating the requirements of this Procedure to all concerned.
- 21.2.1.4 This Procedure shall not be bypassed but unless an emerged contingency asks for it.
- 21.2.1.5 The authorized signatory shall not delegate his authority.
- 21.2.2 Initiation of Change Control Requisition**
 - 21.2.2.1 The Initiator shall obtain a reference number for a new Change Control Requisition (CCR).
 - 21.2.2.2 The Initiator shall provide the reasons and description of Modification supported by illustrations (sketches); approximate cost and approximate or expected savings (if any).
 - 21.2.2.3 The Initiator shall secure the approval of field management who shall then refer the proposal to the Scrutiny Committee for Preliminary Review.
- 21.2.3 Preliminary Review**
 - 21.2.3.1 Scrutiny Committee shall fundamentally question whether the Modification is required at all. The Scrutiny Committee shall ensure that the Modification has been thoroughly defined and the justification is sound by also reviewing the economic viability in the perspective of all possible hazards.
 - 21.2.3.2 If the justification of the Modification is unsound, it shall be cancelled at this stage.
 - 21.2.3.3 If the Scrutiny Committee is satisfied that the Modification is justified, the members shall sign in the relevant space on the CCR. They may also mention any concern or reservations on the CCR.
 - 21.2.3.4 After the preliminary review by the Scrutiny Committee, the Initiator shall secure the approval of the field management for the detailed design.
- 21.2.4 Detailed Design**
 - 21.2.4.1 The Initiator shall pass on the CCR which has been approved for the detailed design and costing to IC Mechanical in case of Process and to the nominated Mechanical Engineer (Production) in case of Production.
 - 21.2.4.2 IC Mechanical / Mechanical Engineer (Production) shall ensure that the detailed design for the Modification is completed, required drawings are developed, cost estimation is done, material availability is checked and the time schedule is developed. He shall sign the CCR and pass on the documents to the Initiator.
 - 21.2.4.3 Once the detailed design is complete, the Initiator will refer the documents to the respective Scrutiny Committee for detailed evaluation.
- 21.2.5 Detailed Evaluation**
 - 21.2.5.1 The Scrutiny Committee shall ensure that the detailed design is sound, safe and fully reflects the intent of the Modification and is adequate for the implementation through installation, erection, construction, fabrication, etc. If the Scrutiny Committee is satisfied with the suitability of the detailed design and its safety features, the members shall sign in the relevant space on the CCR.
- 21.2.6 Final Approval**
 - 21.2.6.1 The Initiator shall now submit the documents to the field management for the final approval for Modification and approval of funds.
 - 21.2.6.2 If necessary, field management shall also secure approval for the Modification from the concerned authority at Head Office.
 - 21.2.6.3 Initiator shall pass on the "Approved for Construction" drawings and documents to IC Mechanical / Mechanical Engineer (Production) for the execution of the Modification.
- 21.2.7 Execution**
 - 21.2.7.1 IC Mechanical / Mechanical Engineer (Production) shall ensure the execution of the Modification in coordination with the Initiator and with the support of persons from various other areas of specialization e.g. electrical, instruments etc.
 - 21.2.7.2 After installation and before commissioning, the members of the respective Scrutiny Committee shall carry out a comprehensive pre-commissioning check of the installed facilities.
 - 21.2.7.3 If the Scrutiny Committee is satisfied with the suitability of the facilities, Chairman of the Committee shall sign on behalf of the members in the relevant space on the CCR.
 - 21.2.7.4 For modifications requiring commissioning, the field management shall be responsible for the commissioning and arrangement of relevant trainings if required.
 - 21.2.7.5 Subsequent to the commissioning, the respective Initiator shall be responsible to ensure that various changes are made on all relevant drawings as well as in the operating / maintenance procedures by all concerned.
 - 21.2.7.6 Once the above steps are done, the modification shall be declared complete and shall be accordingly signed off by the Initiator on the CCR. The CCR along with all relevant documents shall be sent to the respective record controller who shall keep these in the record.
 - 21.2.7.7 Scrutiny Committee shall perform post-commissioning monitoring of the Modification in order to compare the actual benefits with the envisaged benefits.

21.3 ASSOCIATED DOCUMENTS

-  Change Control Requisition (CCR)

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Annexure A

Master List of Templates / Forms

Directly associated with This Manual

#	Name of Template / Form	Identification (ID)
Section 8: Health, Safety Environment Hazard Identification & Risk Assessment		
1	HSE Risk Assessment Plan	OGF – HSEQ – 001
2	HSE Risk Register	OGF – HSEQ – 002
3	Job Hazard Analysis (JHA) Sheet	OGF – HSEQ – 003
4	Personal Protective Equipment Need Assessment Matrix	OGF – HSEQ – 003A
Section 9: Legal & Other Requirements		
5	Regulatory Requirement Matrix	OGF – HSEQ – 004
Section 10: HSE Objectives & Management Program		
6	HSE Objective and Management Planning Sheet	OGF – HSEQ – 005
Section 11: Training, Awareness & Competence		
7	HSE Training Plan	OGF – HSEQ – 006
8	Emergency Drill Plan	OGF – HSEQ – 006A
9	Toolbox Talk Program	OGF – HSEQ – 006B
10	Training Attendance Sheet	OGF – HSEQ – 007
11	Training Evaluation Form	OGF – HSEQ – 008
12	Training Certificates	OGF – HSEQ – 009
Section 12: Communication & Consultation		
13	External Environmental Complaint Sheet	OGF – HSEQ – 010
14	Inter office Memos	OGF – HSEQ – 011
Section 13: HSE Management System Documentation & Data Control		
15	Master List of Documents	OGF – HSEQ – 012
16	List of External Documents	OGF – HSEQ – 013
17	Document Change Request (DCR) Form	OGF – HSEQ – 014
18	Distribution Log Sheet	OGF – HSEQ – 015
Section 14: Operational Control		
19	Operational Control Form	OGF – HSEQ – 016
Section 15: Emergency Preparedness and Response		
Section 16: HSE Monitoring, Measurement & Compliance Evaluation		
20	Environmental Monitoring Plan	OGF – HSEQ – 017
21	Safety Monitoring Plan	OGF – HSEQ – 018
22	Health Monitoring Plan	OGF – HSEQ – 019
23	OH Assessment Plan	OGF – HSEQ – 019A
24	HSE Monthly / Annual Report	OGF – HSEQ – 020
Section 17: Accident, Incident, Nonconformance, Corrective & Preventive Action		
25	CPR Form	OGF – HSEQ – 021
26	CPR Log	OGF – HSEQ – 022
27	Register of Occupational Illnesses and Injuries	OGF – HSEQ – 021A
28	Employee's Workplace Exposure & Health (WEH) Record	OGF – HSEQ – 021B
Section 18: Control of Records		
29	Master List of Records	OGF – HSEQ – 023
Section 19: Internal HSE Audit		
30	List of Auditors	OGF – HSEQ – 024
31	Annual Audit Schedule	OGF – HSEQ – 025
32	Audit Plan	OGF – HSEQ – 026
33	Audit Checklist	OGF – HSEQ – 027
34	Audit Report	OGF – HSEQ – 028
35	Audit Non-Conformity Report	OGF – HSEQ – 029
Section 20: Management Review		
36	Agenda of Review	OGF – HSEQ – 030
37	Minutes of Review	OGF – HSEQ – 031
Section 21: Change Control		
37	Change Control Requisition	OGF – HSEQ – 032

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Annexure B

OGF - HSEQ - 014(00)

Document Change Request

(Use DCR in case you recommend change(s) in any of the controlled HSEQ Document.)

Document Number:	Document Name:
Revision:	Attached Document Reference:
Recommended Changes: 	
Originator Signature:	Signature:
Originator Name:	Approved By Concerned Departmental Head:
Date:	Date:
To be completed by the HSEQ Section / Department	
Recommendation Accepted? Yes ____ Yes w/ modification ____ No ____	Reason for change
Comments: 	
Signature of HSEQ Representative :	Date:
Approving Authority [Corporate → GM HSEQ; Field → FM / PM]	
<input type="checkbox"/> Approved	<input type="checkbox"/> Not Approved
To be filled by HSEQ Section / Department	
Document/Record Revision Number:	Document/Record Revision Date:

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Annexure C

INSTRUCTIONS FOR ANNUAL TURN AROUND (ATA) OF PROCESSING PLANTS

In order to execute Annual Turn Around (ATA) safely, following instructions must followed before hand:-

1. Updated P&IDs, PFDs, etc. shall be available on site & ER Post.
2. All Producing Wells shall be closed, locked out and tagged out.
3. Complete system shall be depressurized.
4. All gas lines shall be purged with an inert gas (like Nitrogen) and made free from hydrocarbon.
5. All crude oil lines shall also be purged with an inert gas (like Nitrogen) or flushed with clean water.
6. Stock level of oil shall be minimized up to dead level, where possible
7. All oil storage tanks shall be isolated from the system and their in-out valves closed/ locked out/ tagged out.
8. Stock level of LPG shall also be minimized up to dead level.
9. All LPG storage bullets shall also be isolated from the system and their in-out valves closed/ locked out/ tagged out.
10. Oil, sludge and oily water shall be removed from the TPI/ API/ CPI areas to make these free from inflammable material.
11. Bins/ containers placed at the sample points shall be removed away from the plant's hazardous zones.
12. Every oil spill and oily soil shall be removed/ controlled in the plant premises.
13. Housekeeping of plant area shall be maintained. Inflammable material like cotton rags, grass, bushes, paper etc. shall be removed from the plant premises.
14. Hot oil shall be drained and system shall be cooled down.
15. Propane circuit shall be depressurized and purged with an inert gas (like Nitrogen) if welding cutting is required at this circuit.
16. Propane accumulator shall be isolated from the circuit and its in-out valves closed/ locked out/ tagged out if welding cutting is required there.
17. In-out valves of major equipments (like Vessels, Columns, K.O drums, Separators etc.) shall be closed and isolated from the system.
18. All equipment/ units shall be turned off other than the exceptional ones required for power generation. Emergency power generator shall be readily available/ on standby.
19. All electric motor breakers shall be turned off/ tagged out/ locked out or racked out.
20. All slippery areas and oily area shall be cleaned and dried while tripping hazards shall be pre-checked and cleared.
21. Proper scaffolding arrangements shall be predetermined for work at height.
22. All lifting equipment like crane, fork lifter, sling, web sling, shackle, eye bolt etc. shall be inspected prior to use.
23. Trained, qualified and certified workforce shall be hired for the execution of ATA activities.
24. System shall be in place to achieve compliance of PTW and JHAs.
25. Fire suppression systems shall be in perfectly ready mode and area operators shall be vigilant.
26. Emergency response post, fire tender and ambulance shall be ready to combat any emergencies.
27. Each ATA job/ activity shall be carried out under the supervision of competent person to ensure the quality of work within the prescribed timeframe.

HSE System Manual

For Production Fields & Plant Functions

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Annexure D

Oil & Gas Development Company Ltd. HSE INDUCTION FOR FIELD VISITORS

1. Visitors are expected to comply with all SAFETY/ ENVIRONMENT/ EMERGENCY signs and use of PPE where required.
2. In case of any emergency, inform Duty Officer by dialing 'xxx'.
3. Actions in the event of Fire or Fire Alarm:
 - If fire is detected, inform Duty officer.
 - If fire alarm sounds; Switch off any electrical/ gas appliance in use; Close doors/ windows.
 - Evacuate through the nearest Fire Exit and proceed to Muster Point.
 - Do not attempt to gather your personal belongings.
 - Do not go to the places other than the Muster Point.
 - Return to the office/ plant/ camp when allowed by Security Administrator.
4. Only use the designated areas for smoking.
5. Visitor's responsibilities towards Environment:
 - Do not litter; Use the designated waste bins.
 - Switch off the lights, fan, air conditioner, and heater when not needed.
 - Report any spark in the switch boards and water leakage in the toilets.
 - Do not use tap water for drinking.
6. Please avoid wearing open shoes or sandals while going out of the camp/ field area, since presence of snakes or poisonous insects cannot be ruled out. In case of snake/ insect bite, please call medical emergency at xxx. Necessary medicines are available at field.
7. Illegal drugs, weapons and explosives are prohibited within office/ plant/ camp premises.

Safety Observation Form

(Please use this section for recording any UNSAFE ACT/ BEHAVIOUR or UNSAFE CONDITION that you observe during your visit. Give the filled card to the Duty Officer or leave it in the room.)

Name: _____
Organization: _____
Contact No.: _____

Signature: _____
Date: _____

HSE System Manual

For Production Fields & Plant Functions

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Annexure E

OGDCL HSEQ PROTOCOL FOR PROJECT (CONTRACTOR) MANAGEMENT

Sr. No	Title	Specific Requirement
1.	HSE Policy	Contractor shall be held responsible, as a minimum, for compliance with the OGDCL's HSE Policy, in addition to all governmental regulations applicable to the scope of work being performed.
2.	HSE Field Team	Contractor shall be solely responsible for means and methods and for jobsite HSE by assigning appropriate strength of qualified Field HSE Coordinators, Supervisors and Medical Staff with specific duties at the project site, full time, from the first day.
3.	HSE Roles & Responsibilities	Contractor shall ensure that all personnel assigned on the project can safely perform the essential functions of their job assignment. Contractor shall ensure that personnel maintain the appropriate standards of HSE in connection with the work that is being performed.
4.	HSE Planning	Contractor shall submit, before the start of project, the detailed documents as follows: i. Project HSE Risk Assessment Plan ii. Project Health Monitoring Plan iii. Project Safety Monitoring Plan iv. Project Environmental Monitoring Plan v. Project Emergency Preparedness and Response Plan vi. Project Waste Management & Disposal Plan
5.	Toolbox Talk Program	Contractor shall develop and ensure project-wide Toolbox Talk Program as a series of numbered discussion topics on Safety, Health and Environmental matters as daily HSE briefings by its operational teams.
6.	Work Permit	Contract shall strictly follow the Work-to-Permit System and shall provide plan of activities in advance, submit THAs/JHAs where required and engage only certified staff for the hot jobs.
7.	Safety Critical Equipment	Contractor shall ensure that the equipment (especially to be used on site for lifting and hoisting purposes) is certified from the third party and operators have proper permits / licenses.
8.	PPE	Contractor shall acquire and maintain adequate PPE and other/related safety gadgets of an approved type as required for the performance of the work to be safely performed.
9.	Hazard Communication	Contractor shall ensure proper labeling at all the pertinent safety risk areas with appropriate warning signs and instructions. It shall also be ensured that all original containers of hazardous chemicals or materials entering the project site to be properly labeled with the hazard warnings and related information.
10.	Incident Reporting	Contractor shall immediately report to OGDCL representative all significant and important incidents involving fatality, injury, illness, environmental impacts, near hits, and/or hazardous situations.
11.	Accident Investigation	Contractor shall investigate and report all accidents regardless of their nature so that the cause and means of prevention can be determined to prevent a reoccurrence.
12.	Environmental Procedures	Contractor shall immediately clean up the trash, spills, food waste, etc. and spills of chemicals, oils, whereas potentially hazardous wastes to be immediately reported to OGDCL representative.
13.	Waste Management	Contractor shall place designated drums, containers, bins, etc with specific labels as Collection Method for each waste-type and further ensure safe disposal of the hazardous waste.
14.	ERP	Contractor shall provide orientation on Emergency Preparedness and Response Procedure to its project team and ensure that its personnel are well aware of what procedures are in practice and who is to notify in the event of any emergency.
15.	HSE Performance Reports	Contractor shall submit to OGDCL representative an HSE Performance Review Report on fortnight basis.
16.	Workforce's Record	Contractor shall issue security pass for the staff engaged and provide a) copy of attested identity cards, b) employment cards, c) HSE training cards and c) health assessment cards of its project's approved staff to OGDCL.
17.	Surveillance Audits	OGDCL's representative shall visit the project site on sporadic basis to monitor the actual level of compliance on the HSE matters.

IMPORTANT:- IT IS EVERYBODY'S RESPONSIBILITY TO ENSURE THAT THE OGDCL'S HSE MANAGEMENT SYSTEM IS IN PLACE.

Revision Number 4A – June 2010

★★

To get help on implementation issues, contact mubashir_abbas@ogdcl.com 051-9202882, Ext.: 2827

ATTACHMENT – II-A

**TERMS AND CONDITIONS OF THE INLAND L/C
FOR SUPPLY**

ATTACHMENT – II-A**TERMS AND CONDITIONS OF THE INLAND L/C FOR SUPPLY****1.0 IN CHARGE STORE KUNNAR**

The material must be consigned to Chief Stores Officer. Oil & Gas Development Company Limited, Plot No.21, West Wharf Road, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040.

2.0 PACKING

The Packing of the material must conform to the International Standards.

3.0 MARKING

3.1 All Packages/Boxes must bear the Contract as shipping Marks, Country of Origin and Weight in Kilograms (Gross/Net). The marks must tally with shipping documents.

3.2 In addition to the above mentioned shipping marks, the following procedure of color code marking to be adopted / made on each side of the package/box/container while dispatching the material:-

“There will be an isosceles triangle with or less than six inches side, triangle and letters will be in black. On bid packages/boxes/container, the sides or triangle and letters will be increased appropriately. Underneath the triangle there will be two color code bars in “**GREEN**” color size six inches in light and 1^{1/2}” in width. If the above color codes marking is not appropriate/suitable, the sizes and color may be changed”

4.0 SHIPPING DOCUMENTS

Shipping documents shall normally consist of the following:

4.1 Clean Truck Receipt/Carrier Receipt showing freight paid & indicating Contract / Inland LC details.

4.2 Original detailed commercial invoice showing material description, quantity unit price and total price strictly in line with the Contract and verified by OGDCL.

- 4.3 Copy of applicable GST invoice.
- 4.4 Copy of NTN certificate
- 4.5 Packing list
- 4.6 Mill Inspection/Quality Certificates.
- 4.7 Dully Signed & Stamped Delivery Note
- 4.8 Third Party Inspection Certificate from any of the following (if required):
 - I. Lloyds
 - II. SGS
 - III. TUV Austria Bureau
 - IV. Velosi
- 4.9 Warranty Certificate
- 4.10 Certificate of origin.
- 4.11 Certificate issued by OGDCL that ordered equipment/material has been received at delivery location and inspected and accepted

5.0 **INSTRUCTIONS FOR COMPLETING SHIPPING DOCUMENTS**

- 5.1 The shipping invoice should be marked on top in capital words:
 - a) Complete, first and last consignment (if all the contractual material is shipped in one lot).
 - b) First partial Shipment/Second partial shipment (and so on) Final and last shipment as the case may be if shipments are effected in parts.
- 5.2 All invoices should be signed, and must indicate value of the each item total value & also show 'SHIPPING MARKS' as provided in the contract.

6.0 **SHIPMENT INTIMATION**

6.1 The beneficiary within 24-48 hours of making shipment must send Fax to:

- i. Chief Stores Officer, Plot No. 21 West Wharf, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040
- ii. Manager (Procurement)- OGDCL House Plot NO. 3 (New No. 3013) F-6/G6, Blue Area, Jinnah Avenue, Islamabad, email irshad_muhammad@ogdcl.com intimating them the following;
 - a) L/C number and Contract No.
 - b) Total FOR value of the consignment shipped.
 - c) No. of boxes/package/pieces etc.
 - d) Net and gross weights.
 - e) Expected time of arrival (ETA) of material.

7.0 **INSTRUCTION REGARDING TRANSMISSION/NEGOTIATION OF SHIPPING DOCUMENTS**

7.1 **Original/Negotiable Documents**

- a) The beneficiary immediately upon making shipments(s) should negotiate the original clean shipping documents free from any discrepancy with negotiating bank as indicated in the L/C.
- b) Original/negotiable documents must contain at least four sets of the shipping documents mentioned under Clause No. 5 above including one set of the parts catalogue, brochures, technical literature, etc., invariably.
- c) The original shipping documents should be dispatched through courier service by the negotiating bank at the beneficiary's cost within 24-48 hours after receipt from the beneficial.
- d) The discrepant documents with minor discrepancies will be accepted subject to the consent of Procurement Department. Due to the discrepancies reported by L/C opening bank will be on beneficiary account.

7.2 Non-Negotiable Documents

Six complete sets of non-negotiable shipping documents including one set of parts catalogue brochures/technical literature etc. should be received by the following immediately upon shipment is effected:

Manager (Foreign) Procurement,
Oil & Gas Development Company Limited,
OGDC House, Plot No.3 (New No. 3013), F-6/G-6, Blue Area
Jinnah Avenue, Islamabad, Pakistan.

Ph No. 0092-51-920022144

Email: irshad_muhammad@ogdcl.com

Two complete sets of non-negotiable shipping documents along with one set of parts catalogue brochure/technical literature etc. should be received by the following immediately upon shipment is effected:

Manager (Materials)-South,
Oil & Gas Development Company Limited,
Plot No. 21, West Wharf Road,
Karachi, Pakistan.

Fax # 0092-21-32311040

Email: mujahid_ali@ogdcl.com, abdulwaheed_kunbhar@ogdcl.com

8.0 LIQUIDATED DAMAGES

If the contractor fails to deliver any or all of the goods within the time period(s) specified in the Contract, the Purchaser shall, without prejudice to other remedies under the contract, deduct from the contract price / Bank Guarantee as liquidated damages, a sum not more than 0.5% of the contract price per week or part thereof for first four weeks, 1.00% per week for next four weeks and 1.5% per week exceeding four weeks up to maximum extent of 5% of the contract value.

In case the Purchaser is satisfied that the delayed / defective shipment was due to some mistake or circumstances beyond the control of the contractor and the contractor has not intentionally or negligently contributed in the delay, the Purchaser may impose Liquidated Damages for not more than a sum equivalent to 0.5% of the delayed or defective shipment per week or part thereof for first two weeks, 1.00 % per week for next three weeks and 1.5% per week exceeding five weeks but not exceeding 5% of the contract value of the delayed/ defective shipment provided that the contractor takes immediate remedial measures for the-replacement of defective shipment and takes prompt steps to mitigate the delay. The Purchaser may however, impose Liquidated Damages as per (a) above if the delayed or defective shipment has affected the project completion schedule or has resulted in production losses.

Even after imposition of LDs, if the supplier fails to materialize the delivery (material and or services); the Purchaser reserves the right to cancel Purchase order/contract/LC and to forfeit the Guarantee (if applicable) after intimating the supplier for such cancellation / forfeiture.

9.0 **PERFORMANCE BANK GUARANTEE**

Payment against this credit will not be released by the corresponding bank to the beneficiary till receipt of copy of performance bond required to be submitted to OGDCL against the contract against which this letter of credit has been established.

10.0 **AMENDMENT/EXTENSION OF L/C**

The beneficiary will positively confirm shipment of all ordered materials within L/C validity or made request for extension of shipment and negotiation dates at least 15 to 30 days prior to the expiry of L/C. If shipment is not effected within L/C validity or request for extension is not received 15 to 30 days prior to expiry of L/C validity, no request for grant of extension in shipment and negotiation period will be entertained under any circumstances. In case of extension in shipment/negotiation period, the beneficiary will be required to extend the validity of his performance bond (if provided) accordingly. All charges on this account will be on beneficiary's account.

11.0 **CHARGES FOR L/C ESTABLISHMENT**

- 11.1 All Charges of the bank for credit opening will be borne by the OGDCL.
- 11.2 All charges of corresponding bank such as negotiation of documents, adding confirmation to credit etc. will be to the account of beneficiary.
- 11.3 All charges for amendments/extension in L/C will be to the account of beneficiary.

ATTACHMENT – II-B

**TERMS AND CONDITIONS OF THE INLAND L/C
FOR SERVICES**

ATTACHMENT – II-B**TERMS AND CONDITIONS OF THE INLAND L/C FOR SERVICES****1.0 IN CHARGE STORE KUNNAR**

The material must be consigned to Chief Stores Officer. Oil & Gas Development Company Limited, Plot No.21, West Wharf Road, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040.

2.0 PACKING

The Packing of the material must conform to the International Standards.

3.0 MARKING

3.1 All Packages/Boxes must bear the Contract as shipping Marks, Country of Origin and Weight in Kilograms (Gross/Net). The marks must tally with shipping documents.

3.2 In addition to the above mentioned shipping marks, the following procedure of color code marking to be adopted / made on each side of the package/box/container while dispatching the material:-

“There will be an isosceles triangle with or less than six inches side, triangle and letters will be in black. On bid packages/boxes/container, the sides or triangle and letters will be increased appropriately. Underneath the triangle there will be two color code bars in “**GREEN**” color size six inches in light and 1^{1/2}” in width. If the above color codes marking is not appropriate/suitable, the sizes and color may be changed”

4.0 SHIPPING DOCUMENTS

Shipping documents shall normally consist of the following:

4.1 Clean Truck Receipt/Carrier Receipt showing freight paid & indicating Contract / Inland LC details.

4.2 Original detailed commercial invoice showing material description, quantity unit price and total price strictly in line with the Contract and verified by OGDCL.

- 4.3 Copy of applicable GST invoice.
- 4.4 Copy of NTN certificate
- 4.5 Packing list
- 4.6 Mill Inspection/Quality Certificates.
- 4.7 Dully Signed & Stamped Delivery Note
- 4.8 Third Party Inspection Certificate from any of the following (if required):
 - I. Lloyds
 - II. SGS
 - III. TUV Austria Bureau
 - IV. Velosi
- 4.9 Warranty Certificate
- 4.10 Certificate of origin.
- 4.11 Certificate issued by OGDCL that ordered equipment/material has been received at delivery location and inspected and accepted

5.0 **INSTRUCTIONS FOR COMPLETING SHIPPING DOCUMENTS**

- 5.1 The shipping invoice should be marked on top in capital words:
 - a) Complete, first and last consignment (if all the contractual material is shipped in one lot).
 - b) First partial Shipment/Second partial shipment (and so on) Final and last shipment as the case may be if shipments are effected in parts.
- 5.2 All invoices should be signed, and must indicate value of the each item total value & also show 'SHIPPING MARKS' as provided in the contract.

6.0 **SHIPMENT INTIMATION**

6.1 The beneficiary within 24-48 hours of making shipment must send Fax to:

- i. Chief Stores Officer, Plot No. 21 West Wharf, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040
- ii. Manager (Procurement)- OGDCL House Plot NO. 3 (New No. 3013) F-6/G6, Blue Area, Jinnah Avenue, Islamabad, email irshad_muhammad@ogdcl.com intimating them the following;
 - a) L/C number and Contract No.
 - b) Total FOR value of the consignment shipped.
 - c) No. of boxes/package/pieces etc.
 - d) Net and gross weights.
 - e) Expected time of arrival (ETA) of material.

7.0 **INSTRUCTION REGARDING TRANSMISSION/NEGOTIATION OF SHIPPING DOCUMENTS**

7.1 **Original/Negotiable Documents**

- a) The beneficiary immediately upon making shipments(s) should negotiate the original clean shipping documents free from any discrepancy with negotiating bank as indicated in the L/C.
- b) Original/negotiable documents must contain at least four sets of the shipping documents mentioned under Clause No. 5 above including one set of the parts catalogue, brochures, technical literature, etc., invariably.
- c) The original shipping documents should be dispatched through courier service by the negotiating bank at the beneficiary's cost within 24-48 hours after receipt from the beneficial.
- d) The discrepant documents with minor discrepancies will be accepted subject to the consent of Procurement Department. Due to the discrepancies reported by L/C opening bank will be on beneficiary account.

7.2 Non-Negotiable Documents

Six complete sets of non-negotiable shipping documents including one set of parts catalogue brochures/technical literature etc. should be received by the following immediately upon shipment is effected:

- **OGDCL**

- **Manager (Foreign)-Procurement**

- Oil & Gas Development Company Limited

- Supply Chain Management Department

- OGDCL House, Plot No. 3 (New No. 3013) F-6/G-6,

- Jinnah Avenue, Islamabad (Pakistan)

- Phone No: 92-51-920022144

- Email: irshad_muhammad@ogdcl.com

- **Manager MELA Project**

- 9th Floor, Tower-C,

- OGDCL House, Jinnah Avenue,

- Blue Area, Islamabad.

- Pakistan.

- Tel: (92-51)-920022909, 9209783

- Email: zaheer_mirza@ogdcl.com

8.0 DRAFTS AT.....

- **Works (Covering Construction, Installation & Erection, Pre-Commissioning, Commissioning & Start-up)**

OGDCL shall make progressive payments to Contractor on monthly basis against Contractor's invoices giving details of that specific work and its completion status. The payment shall be made considering the Bid Price Schedule and verified percentage completion of work. The measurement/verification mechanism for progressive payments is detailed in **Annexure-XVIII**. The measurement/verification of work will be made by OGDCL/Consultant based on progress reports submitted by the Consultant and actual at site.

- **Transportation Loading & Un-loading Services**

Transportation, loading and un-loading charges shall be paid by OGDCL to the PCC Contractor on submission of invoice duly verified by OGDCL/Consultant and accompanied with certificate that the equipment/material and packages have been delivered at Project Site and duly inspected/accepted by OGDCL/Consultant.

➤ **Pre-Commissioning, Commissioning & Start-Up (including Performance Testing)**

The commissioning & Start-Up charges for equipment and packages shall be paid on successful commissioning & performance testing of equipment and packages required for Mela Development Project by OGDCL and submission of PC Contractor's invoice duly verified by OGDCL.

9.0 **DOCUMENTS REQUIRED**

Payment against the letter of credit shall be effective upon submission of following clean documents:

➤ **Works (Covering Construction, Installation & Erection, Pre-Commissioning, Commissioning / Commissioning Assistance & Start-up (including Performance Testing))**

OGDCL shall make progressive payments to Contractor on monthly basis against Contractor's invoices giving details of that specific work and its completion status. The payment shall be made considering the Bid Price Schedule and verified percentage completion of work. The measurement/verification mechanism for progressive payments is detailed in Annexure-XVIII. The measurement/verification of work will be made by OGDCL/Consultant based on progress reports submitted by the Consultant and actual at site.

➤ **Transportation Loading & Un-loading Services**

Transportation, loading and un-loading charges shall be paid by OGDCL to the PCC Contractor on submission of invoice duly verified by OGDCL/Consultant and accompanied with certificate that the equipment/material and packages have been delivered at Project Site and duly inspected/accepted by OGDCL/Consultant

➤ **Invoicing Procedure**

For progressive payment of works on a day in each month, to be agreed between the OGDCL's representative and the PC Contractor's representative the Contractor shall in respect of all amounts owing to him submit an invoice with relevant supporting documents, in three copies, to the OGDCL's Representative with a Work progress report for OGDCL's approval and signature. OGDCL's Representative shall authorize in writing payment to the Contractor as ascertained in accordance with the above clause.

➤ **Timing for Payment**

The Payment of undisputed invoices shall be made in full within estimated thirty (30) days after OGDCL has authorized such payment in writing, provided OGDCL/Consultant representative has first certified such invoice and Contractor has fulfilled all requirements for the release of payment, OGDCL shall pay the amount due less applicable taxes and any amounts which may be due to OGDCL.

➤ **Disputed Invoices**

If any invoice or an amount of invoice is disputed, OGDCL shall within ten (10) days of receipt of invoice inform the Contractor the grounds on which payment of the invoice or an amount is disputed. Efforts shall be made by both parties to resolve the dispute within a period of thirty (30) days.

10.0 **LIQUIDATED DAMAGES**

If the contractor fails to deliver any or all of the goods within the time period(s) specified in the Contract, the Purchaser shall, without prejudice to other remedies under the contract, deduct from the contract price / Bank Guarantee as liquidated damages, a sum not more than 0.5% of the contract price per week or part thereof for first four weeks, 1.00% per week for next four weeks and 1.5% per week exceeding four weeks up to maximum extent of 5% of the contract value.

In case the Purchaser is satisfied that the delayed / defective shipment was due to some mistake or circumstances beyond the control of the contractor and the contractor has not intentionally or negligently contributed in the delay, the Purchaser may impose Liquidated Damages for not more than a sum equivalent to 0.5% of the delayed or defective shipment per week or part thereof for first two weeks, 1.00 % per week for next three weeks and 1.5% per week exceeding five weeks but not exceeding 5% of the contract value of the delayed/ defective shipment provided that the contractor takes immediate remedial measures for the-replacement of defective shipment and takes prompt steps to mitigate the delay. The Purchaser may however, impose Liquidated Damages as per (a) above if the delayed or defective shipment has affected the project completion schedule or has resulted in production losses.

Even after imposition of LDs, if the supplier fails to materialize the delivery (material and or services); the Purchaser reserves the right to cancel Purchase order/contract/LC and to forfeit the Guarantee (if applicable) after intimating the supplier for such cancellation / forfeiture.

11.0 PERFORMANCE BANK GUARANTEE

Payment against this credit will not be released by the corresponding bank to the beneficiary till receipt of copy of performance bond required to be submitted to OGDCL against the contract against which this letter of credit has been established.

12.0 AMENDMENT/EXTENSION OF L/C

The beneficiary will positively confirm shipment of all ordered materials within L/C validity or made request for extension of shipment and negotiation dates at least 15 to 30 days prior to the expiry of L/C. If shipment is not effected within L/C validity or request for extension is not received 15 to 30 days prior to expiry of L/C validity, no request for grant of extension in shipment and negotiation period will be entertained under any circumstances. In case of extension in shipment/negotiation period, the beneficiary will be required to extend the validity of his performance bond (if provided) accordingly. All charges on this account will be on beneficiary's account.

13.0 CHARGES FOR L/C ESTABLISHMENT

- 13.1 All Charges of the bank for credit opening will be borne by the OGDCL.
- 13.2 All charges of corresponding bank such as negotiation of documents, adding confirmation to credit etc. will be to the account of beneficiary.
- 13.3 All charges for amendments/extension in L/C will be to the account of beneficiary.

ATTACHMENT – III

MOBILIZATION ADVANCE PAYMENT
BANK GUARANTEE

ATTACHMENT-III

MOBILIZATION ADVANCE PAYMENT BANK GUARANTEE

Oil & Gas Development Company Limited
Islamabad.
PAKISTAN

Guarantee No.....
Date of Issue.....
Date of Expiry.....
Amount.....

Dear Sirs,

RE: _____

Since you have issued a Contract No. _____ dated _____ to _____
_____ (hereinafter referred to as CONTRACTOR) and in consideration of value
received from CONTRACTOR and since said Contract provides for mobilization advance
payment to be made by you to CONTRACTOR to the extent of
_____ we hereby guarantee, agree and undertake as follows:

1. To make unconditional, immediate and forthwith payment of you as called upon of an amount (equivalent to 10% of total contract value in Pak Rs.) on your written FIRST and SIMPLE demand without further recourse, question, query, deferment, contestation or reference to CONTRACTOR or any other person in the event of default, non-performance or non-fulfillment by CONTRACTOR of his obligations, liabilities responsibilities under the said Contract of which you shall be the sole and absolute judge.
2. To accept written intimation from you as conclusive, sufficient and final evidence of the existence of a default or breach as aforesaid on the part of the CONTRACTOR and to make payment immediately and forthwith upon receipt of your FIRST and SIMPLE written intimation.
3. To keep this guarantee in full force and effect from the date hereof until the period specified in the Contract.
4. That no grant of time or other indulgence to, amendment in the terms of the Contract between the parties, or imposition of Contract with CONTRACTOR in respect of the performance of his obligation under and in pursuance of said Contract with or without notice to us, shall in any manner discharge or otherwise however affect this Guarantee and our liabilities and commitments there under.

5. This is an Independent and direct obligations Guarantee and shall be binding on us and our successor in-interest and shall be irrevocable.
6. This Guarantee shall not be affected by any change in the constitution of the Guarantor or the constitution of the Contractor.
7. This Guarantor warrants and represents that it is fully authorized, empowered and competent to issue this Guarantee.

SIGNATURE AND SEAL OF
THE GUARANTOR

ATTACHMENT – IV

CUSTOMS GENERAL ORDER NO. 02/2017

C.No.1/2/TARIFF-II/2006
GOVERNMENT OF PAKISTAN
REVENUE DIVISION
(FEDERAL BOARD OF REVENUE)

Islamabad, the 19th April, 2017.

CUSTOMS GENERAL ORDER NO. 02/2017

Subject: **LIST OF LOCALLY MANUFACTURED GOODS/ITEMS FOR THE PURPOSES OF CONCESSIONARY NOTIFICATIONS ETC.**

The goods detailed in the appended list of this CGO are manufactured locally. This list is compiled and updated by the Engineering Development Board in consultation with stakeholders. Henceforth the appended list of locally manufactured goods is applicable for reference purposes to all the exemptions/concessionary notifications.

2. The Collectors of Customs and the staff responsible for allowing concessions under different notifications/orders are advised to follow this list for the purposes of allowing concessions from customs duties and sales tax etc. The information if any, alongwith evidence regarding the local manufacture of goods, not indicated in the list, may be forwarded to the FBR forthwith so that the list of locally manufactured goods/items is up-dated in consultation with the Engineering Development Board.

3. The Collectors are, however, authorized to allow release of goods/items indicated in the list of locally manufactured goods/items against bank guarantee for a period of three months if the importer produces a certificate issued by the renowned local manufacturers of the disputed items from Engineering Development Board stating that the imported item is not being manufactured locally and the importer shall produce a clarification from FBR to this effect within the above stated period of three months.

4. This Customs General Order supersedes CGO 11/2007, dated 28th August, 2007 and all other instructions on the subject.



(SANAULLAH ABRO)
SECRETARY (TARIFF-II)

All Collectors of Customs

LIST OF LOCALLY MANUFACTURED GOODS

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1	2	3	4	5	6	7
1	1520.0000	Glycerol (glycerin), crude	Glycerol % 99 Min. Boiling point 250 Min, Iron content (ppm) 0.5 max. Chloride (PPM) 2.0 max.	Appearance Clear white liquid, Sugar +ve (0.25) Specific Gravity 1.256 ~ 1.260	Acidity as Na ₂ O 0.00052%, Fatty Acids & Easter as Na ₂ O Eqv. 0.0077%	Nimir Industrial Chemicals Ltd. 51-N, Industrial Area, Gulberg II, Lahore.
2	2501.0010	Sodium Chloride	Pyrogen free grade	Salt including table salt and Pure Sodium Chloride	NaCl	Hub-Pak Salt Refinery C-206 Hub Industrial Trading Estate Hub, Balochistan
3	2501.0090	Sodium Chloride	Pyrogen free grade	Salt including table salt and Pure Sodium Chloride	NaCl	Hub-Pak Salt Refinery C-206 Hub Industrial Trading Estate Hub, Balochistan
4	2508.1000	Bentonite	Viscosity (Fann viscometer 600 RPM): 15 cps. min. Filtrate Loss (at 100 psi, 30 min.): 15 cc max. pH: 9-10 F36 (Excluding untreated Bentonite meeting API specifications)	Dry Particle Size: 80% < 200 mesh Wet Particle Size: 80-90% < 0.5 micron Residue 75 microns: 4% max. Moisture: 10% max.	SiO ₂ : 50 – 60 % Al ₂ O ₃ : 15 – 20 % Fe ₂ O ₃ : 2 – 4 % MgO: 4 – 6 % CaO: 3 – 6 % K ₂ O: 0.2 – 0.5 % TiO ₂ : 0.2 – 0.5 % Others: 0.5 – 1 % Moisture: 5 – 10 % Loss on Ignition: 10 – 15 %	Ahmad Saeed and Company 2nd Floor, Sindhu Trade Centre, 473, G-III, Johar Town, Lahore
5	2520.2000	Gypsum Powder/Plaster of Paris	100 mesh Gypsum Board Grade	Fine Powder	CaSO ₄ 1/2 H ₂ O	DFB Gypsum Industries, Suit No. 105, 1st Floor, Business & Finance Center, II Chundrigar Road, Karachi
6	2523.9000	Oil Well Cement	Class "G" HSR API Specification 10A	Color: Grey	MgO: 1.0 ~ 2.0% SO ₃ : 1.50 ~ 2.50% Loss on Ignition: 1.20 ~ 1.70% Insoluble Residue: 0.20 ~ 0.30% C ₃ S: 62.0 ~ 64.0% C ₃ A: 0.0 ~ 0.5% C ₄ AF + twice the C ₃ A: 17.0 ~ 20.0% Total alkali content, expressed as Na ₂ O equivalent: 0.30 ~ 0.50% Free-fluid content: 3.0 ~ 5.0% Thickening Time Test Consistency: 15.0 ~ 25.0 minutes Thickening Time: 105.0 ~ 115.0 minutes Compressive Strength after 08 hrs at 38° C: 400 ~ 500 psi Compressive Strength after 08 hrs at 60° C: 1500 ~ 1600 psi	Thatta Cement Co Ltd. No. 606-608, Continental Trade Centre Block-8 Clifton, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
7	2618.0000	Granulated Slag	Calcium Oxide 36%Min., Silica 35%Min., Alumina15%Max., Magnesium Oxide9% Max., Maganese Oxide1.3%Max., Titanium Oxide 1%Max., Iron Oxide 0.7%Max., Sulphur 1%Max., Alkalis 0.70%Max	Moisture 10% Max., Sizes 0-5mm,5-10mm, & 10-15mm	Same as Specification	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
8	2619.0000	Slag, dross	Other than granulated slag and other waste of iron or steel	Converter Slag (Moisture 10% Max., Sizes 0-5mm,5-10mm, & 10-15mm)	Calcium Oxide 55%, Silica 14%, Alumina1.7%, Magnesium Oxide1.7%,	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
9	2704.0010	Coke	Fixed Carbo=By Difference, Moisture Contents=3% typical, Ash=13%Max., Volatile matter=1.5%Max, Sulphur=0.8%, cv=7K-8K KCL/kG	0-25mm 25-80mm. and above	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
10	2704.0090	Coke Dust	Moisture Contents=10%Max, Ash=14%Max., Volatile matter=4%Max, Sulphur=0.7%Max, cv=6K-8K KCL/kG	0-1mm	Moisture Content 10% (Max); Ash Content 14% (Max); Volatile matter 4% (Max); Sulphur 0.70% (Max); Calorific Value 6000 to 8000 Kcal/kg	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
11	2706.0010	Coal Tar	Ash-0.3%Max, Moisture 5%Max, Density (g/cm3)1.21 Max, Flahs Point 282F	Black and mixed with water	Ash-0.3%Max, Moisture 5%Max, Density (g/cm3)1.21 Max, Flahs Point 282F	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
12	2801.1000	Chlorine	99.90%	Yellow liquid with very irritating odor	Cl ₂	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad Engro Polymer & Chemicals Limited 16th Floor, The Harbor Front Building, HC # 3, Marine Drive, Block-4, Clifton, Karachi
13	2803.0010	Carbon Black (Rubber Grade)	N-220, N-330, N-339, N-375, N-326, N-550, N-660 and N-77	N-220, N-330, N-339, N-375, N-550, N-660, N-7	C % 97-98	National Petrocarbon (Pvt) Ltd. 301-304 3rd Floor Beamount Plaza behind PIDC House Karachi
14	2806.1000	Acid, Hydrochloric	35% (+/-1)	Colorless to yellow liquid	HCl	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad Engro Polymer & Chemicals Limited 16th Floor, The Harbor Front Building, HC # 3, Marine Drive, Block-4, Clifton, Karachi Nimir Industrial Chemicals Ltd. 12-B, New Muslim Town, Lahore.

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
15	2807.0000	Acid, Sulphuric	96% and above	Specific gravity 1.84 Sour Taste Colorless Odorless Iron contents < 100 ppm Hardness < 60 ppm	Formula H ₂ SO ₄ , strong exothermic reaction when diluted, excellent dehydrating agent, reacts with metals to form metallic sulphates, (Copper sulphate, Zinc sulphate, Nickel Sulphate), strong oxidizing agent. Reacts with non metal substances to make nonmetallic sulphides. Reacts with carbon to make CO ₂ and SO ₂ . Reacts with NaCl to make NaHSO ₄ and HCl.	Tufail Chemical Industries Ltd. Progressive Centre, Mezz Floor, 30-A/6, PECHS, Shahrah-e-Faisal, Karachi Faras Combine Marketing Co (Pvt) Ltd., 77 D New Muslim Town Main Wahdat Road Lahore Prime Chemical (Pvt) Ltd. 18-A, Civic Centre, Faisla Town (Women Welfare Complex), Lahore Exide Pakistan Ltd. A/45, Hill Street, P.O. Box No. 3680 SITE Karachi-75400 Engro Polymer & Chemicals Limited 16th Floor, The Harbor Front Building, HC # 3, Marine Drive, Block-4, Clifton, Karachi
16	2811.2100	Carbon Di Oxide	99.99%	Liquified Colorless, Odorless gas	CO ₂	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
17	2815.1100	Caustic Soda, solid	97%	Flakes and Solid	NaOH	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
18	2815.1200	Caustic Soda, liquid	50%	Colorless solution, liquid	NaOH	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad Engro Polymer & Chemicals Limited 16th Floor, The Harbor Front Building, HC # 3, Marine Drive, Block-4, Clifton, Karachi Nimir Industrial Chemicals Ltd. 12-B, New Muslim Town, Lahore
19	2825.9000	Calcium Hydroxide, excluding natural	96% (by weight)	White fine powder	Ca (OH) ₂	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
20	2827.1000	Ammonium Chloride	99.70%	White crystals	NH ₄ Cl	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
21	2827.2000	Calcium Chloride	77% min.	Granule to powder form	CaCl ₂	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
22	2827.3100	Magnesium Chloride	Min 46% & Max. 98%	Off White Granular Solid	MgCl ₂ .6H ₂ O	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
23	2827.3500	Nickel Chloride	24% as Nickel	Yellowish green crystalline powder	NiCl ₂	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
24	2827.3900	Iron / Ferric Chloride	40% (+/-2) solution	Dark red / brown liquid	Fe Cl ₃	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
25	2828.1010	Calcium Hypochlorite	30% and 35% (+/-1)	White, Crystalline solid	Ca (OCl) ₂	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
26	2828.9000	Sodium Hypochlorite	19 - 20%	Pale Greenish / yellow, Commercial grade	NaOCl	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad Engro Polymer & Chemicals Limited 16th Floor, The Harbor Front Building, HC # 3, Marine Drive, Block-4, Clifton, Karachi Nimir Industrial Chemicals Ltd. 12-B, New Muslim Town, Lahore.
27	2833.1900	Sodium Sulphates, other	98% and above	Industrial grade for Glass, Detergent Tile	Na ₂ SO ₄ (98%)	Tufail Chemical Industries Ltd. Progressive Centre, Mezz Floor, 30-A/6, PECHS, Shahrah-e-Faisal, Karachi
28	2833.2100	Magnesium Sulphate	48% Min	Colorless prismatic crystals	MgSO ₄ .7H ₂ O	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
29	2833.2200	Sulphates; aluminum	Of Aluminium 14-15%	In Lumps Form.	14-15%	Tufail Chemical Industries Ltd. Progressive Centre, Mezz Floor, 30-A/6, PECHS, Shahrah-e-Faisal, Karachi Faras Combine Marketing Co (Pvt) Ltd. 77 D New Muslim Town Main Wahdat Road Lahore Prime Chemical (Pvt) Ltd. 18-A, Civic Centre, Faisla Town (Women Welfare Complex), Lahore Exide Pakistan Ltd. A/45, Hill Street, P.O. Box No. 3680 SITE Karachi-75400 Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad
30	2833.2400	Nickel Sulphate	Nickel 22 ± 1%	Greenish Crystals	NiSO ₄ .6H ₂ O	Sitara Chemical Industries Ltd. 32-KM Sheikupura Road, Faisalabad

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
31	2833.3000	Alum (Double Salt)	Contain 98% as AL 2 (SO4) (3) (NH4)2 SO4. 24H2	Purifies Water	Alum is Soluble in water. In alum crystals, 6 water molecules are held by monovalent ion. 6 water molecules are held by trivalent ion. 12 water molecules are held in the crystal structure. Aqueous solution of alum are acidic due to carionic hydrolysis of trivalent cation. On heating an alum at high temperature the alum swells up in to a porous mass which is called burn alum. Alum acts as coagulants as they are effective in precipitating colloids. Alum have germicide properties. Alum is stable in air.	Exide Pakistan Ltd. A/45, Hill Street, P.O. Box No. 3680 SITE Karachi-75400
32	2836.2000	Sodium Carbonate (di-sodium)	Total Alkalinity as (Na ₂ CO ₃)= >=98% Chloride as NaCl= <=0.85% Iron as Fe ₂ O ₃ = <=0.007% Matter Insoluble In Water = <=0.15% Sulphates a Na ₂ SO ₄ = <=0.08%	White Crystalline powder packed in 40Kg or 80Kg or 100Kg polypropylene bags Pouring Density = 450 to 600 gms / Liter for Light Ash grade Pouring Density = 950 to 1200 gms / liter for Dense Ash grade	Purity or Total Alkalinity as Na ₂ CO ₃ >=98%	ICI Pakistan Limited, Soda Ash Business ICI Pakistan Limited 63, Mozang Road Lahore 54000
33	2836.3000	Sodium bicarbonate	Purity as NaHCO ₃ = >=99% Arsenic as As = <=3 ppm Heavy Metals = <=5 ppm Insoluble Substance = 1gm In 20ml water gives clear solution pH of 1% solution at 25°C = 8.5	White granular powder packed in 25Kg Laminated Polypropylene Bags	Purity as NaHCO ₃ = >=99%	ICI Pakistan Limited, Soda Ash Business ICI Pakistan Limited 63, Mozang Road Lahore 54000
34	2847.0000	Hydrogen Per Oxide	35%, 50%, 60% w/w Concentration and all other Concentrations	Clear Color Less, odour less liquid. Density 1.13-1.24kg/m ³ Mol weight34.01 Km ³ /Kg	Viscosity @25oC1-1.11cp, Boiling Point @101.3KPA is 108-120 oC, Melting Point -33 to-62 oC, Heat of Decomposition is 233.1 to 334.7 Kcal/Kg	Descon Oxychem Limited., 18-Km, Ferozpure Road, Lahore Sitara Peroxide Limited., 26-Km, Sheikhpura Road, Faisalabad.
35	2849.1000	Calcium Carbide	--	--	--	Sino Pak Electrochemical Industries Ltd., Plot No. DSU-20, Zulfiqarabad, Bin Qasim Karachi (Pipri)
36	2904.9090	Reserver Salt	Drying Agent	White Powder Yellow Powder	Drying Agent	S & F Enterprises, Karachi Plot No. F-22, Qabail Colony, Block 11 Gulberg Town, F.B. Area Karachi
37	2915.1100	Acid, formic	85% and above	Transparent Liquid Form	HCOOH 85%	Tufail Chemical Industries Ltd. Progressive Centre, Mezz Floor, 30-A/6, PECHS, Shahrah-e-Faisal, Karachi Faras Combine Marketing Co (Pvt) Ltd. 77 D New Muslim Town Main Wahdat Road Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
38	2915.7010	Acid, stearic, chemically pure	IV 1.0 ~ 3.0, Acid Value 198 ~ 206, Saponification Value 199 ~ 206, Specific Gravity 0.86, Molecular wt 284.47	Color White, Appearance Small Flakes, Melting point 61 ~ 65	$C_{17}H_{35}COOH$	Nimir Industrial Chemicals Ltd. 51-N, Industrial Area, Gulberg II, Lahore. Gamalux Oleochemicals (Pvt.) Ltd. A-8, NWIZ, Port Qasim Industrial Area, Bin Qasim, Karachi
39	2917.1400	Maleic anhydride	Solidification point: 52.4°C Maleic Acid (%): <0.1 Purity By G.C (%Wt): Min. 99.0 Colour (APHA): Max. 15 - 20 Citraconic Acid %: <0.1 Benzoic Acid %: <0.1 Ortho Toulaldehyde %: <0.1	Maleic anhydride is a colorless crystalline needles, flakes, pellets, rods, briquettes, lumps or a fused mass with pungent odour. Chemical Name: 2 – 5 Furandione Molecular formula: $C_4H_2O_3$ Molecular Weight: 98.06 Melting Point: 52.4 °C Boiling Point: 202 °C Thermal Decomposition Temp: > = 200 °C Solubility in water: Soluble in water.	It is moderately toxic white solid chemical. Maleic Anhydride reacts vigorously on contact with oxidizing materials. It reacts exothermically with water or steam. It undergoes violent exothermic decomposition reactions, producing carbon dioxide, in the presence of strong bases (sodium hydroxide, potassium hydroxide, calcium hydroxide), alkali metals (lithium, sodium, potassium), aliphatic amines (dimethylamine, trimethylamine), aromatic amines (pyridine, quinoline) at temperatures above 150° C. The presence of a residue of weak sodium hydroxide solution in a pressure vessel caused maleic anhydride to decompose in a runaway explosive reaction.	Nimir Chemicals Pakistan Limited 51-N Industrial Area, Gulberg-II, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
40	2917.3200	Diocetyl Orthophthalates (DOP)	Acid value 0.02%, MC 0.05% Colour 15 APHA	<p>Di-octylphthalate is a colorless, odorless, oily liquid mild odour. Slightly less dense than water and insoluble in water. Hence floats on water.</p> <p>Molecular Formula : $C_{24}H_{38}O_4$ Molecular Weight : 390 Melting Point : - 50.0 °C Boiling Point : 384.0 °C Specific Gravity : 0.978 ~ 0.985 at 20 °C Vapour Pressure : 1.0X10⁻⁷ mm Hg at 25 °C.</p>	<p>On heating it emits acid smoke and irritating fumes. It reacts with acids to liberate heat along with alcohols and acids. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Heat is also generated by the interaction with caustic solutions. Flammable hydrogen may be generated by mixing with alkali metals and hydrides. It can generate electrostatic charges by swirling or pouring. It is incompatible with Strong oxidizing agents. DOP is an indirect food additive for use only as a component of adhesives.</p>	<p>Nimir Chemicals Pakistan Limited 51-N Industrial Area, Gulgerg-II, Lahore</p> <p>AHN Colloids Chemicals (Pvt) Ltd. 10-Abbott Road, Lahore</p> <p>A.T.S Synthetic (Pvt) Ltd. 1-2 Asad Chamber Umer Market, McLeod Road, Lahore</p>
41	2917.3500	Phthalic anhydride (PA)	<p>Solidification point: 130.9 Colour (APHA): 20 Heat Hazen at 250 C (APHA): 40 Purity By G.C (%Wt): Min. 99.85 Benzoic Acid %: 0.05</p>	<p>It is a colorless to white lustrous solid in the form of needles with a mild distinctive odor. Forms a corrosive solution when mixed with water. Chemical Name : 1, 2 Benzene Di Carboxylic Acid Anhydride ($C_8H_4O_3$) Molecular Weight : 148 Melting Point: 131.9 °C Boiling point: 284.5 °C Vapor pressure : 5.17X10⁻⁴ mm Hg at 25 °C Vapor density: 6.6 (Air = 1) Water solubility : 6,000 mg/L at 25 °C Slightly soluble: in ethyl ether Soluble in Ethanol, acetone, benzene</p>	<p>Phthalic anhydride hydrolyzes rapidly in the presence of water forming Phthalic Acid. It is incompatible with acids, strong oxidizing agents, alcohols, amines, and bases. Reacts with strong oxidants, strong acids, strong bases and reducing agents. Reacts violently with copper oxide and sodium nitrite on heating. This generates explosion hazard. Attacks many metals in the presence of water. Naphthoquinones (byproduct of Naphthalene) reacts with iron salts of phthalic acid & iron sulfides to form fire & explosion. The material is stable at normal conditions even under fire exposure conditions and do not react with water.</p>	<p>Nimir Chemicals Pakistan Limited 51-N Industrial Area, Gulgerg-II, Lahore</p>
42	2934.9910	Furazolidine	Active Pharmaceutical Ingredient (API) & Feed grade	Yellow Powder	--	Alpha Chemicals (Pvt) Limited 113 A Canal View Housing Society Near Thokar Niaz Baig, Lahore
43	2939.4100	Ephedrine Hydrochloride / Ephedrine Sulphate	Active Pharmaceutical Ingredient (API)	White Crystalline Powder	--	Alpha Chemicals (Pvt) Limited 113 A Canal View Housing Society Near Thokar Niaz Baig, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
44	2939.4200	Pseudoephedrine Hydrochloride / Pseudoephedrine Sulphate	Active Pharmaceutical Ingredient (API)	White Crystalline Powder	--	Alpha Chemicals (Pvt) Limited 113 A Canal View Housing Society Near Thokar Niaz Baig, Lahore
45	3004.5090	Medicaments containing vitamins	Soya based vitamin and minerals Instant beverage	Food grade	--	Matrix Pharma Pvt. Ltd. Plot 12, Secotr 15 Korangi Industrial Area, Karachi
46	3102.2100	Amonium Sulphate	Acidity 0.04% Maz, Nitrogen 21%Max, Sulphur 24.24%	Crystal Size = 0.25mm Min.)	Acidity 0.04% (max) Nitrogen 21.00% Crystal size 0.025mm & 70% (min)	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
47	3202.1000	Synthetic organic tanning substances	Tanning is the process of treating skins and hides of animals to produce leather. The substance used to achieve the desired affect are known as tanning substances.	May be solid or liquid at room temperature	Crosslinking of the protein structure of skin, making it more durable and less susceptible to decomposition.	Chemical Process Ind. (Pvt) Ltd. 103-Habitat, Shadman-II, Jail Road Lahore Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900
48	3202.9010	Tanning preparations	Tanning is the process of treating skins and hides of animals to produce leather. The substance used to achieve the desired affect are known as tanning substances.	May be solid or liquid at room temperature	Crosslinking of the protein structure of skin, making it more durable and less susceptible to decomposition.	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Chemical Process Ind. (Pvt) Ltd. 103-Habitat, Shadman-II, Jail Road Lahore Industrial Chemicals (Pvt.) Ltd. D-29 SITE, South Avenue Manghopir Road , Karachi
49	3202.9090	Bates, artificial	In the bating process, proteases are used to remove scud and unwanted proteins. The process also deswells swollen pelts. The result of bating with the use of enzymes is a clean,smooth and soft hide surface.	May be solid or liquid at room temperature	Enzymes	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900
50	3204.1100	Disperse dyes and preparations	Water-insoluble dyes that are used for the dyeing of polyester and acetate fibers. Normally comes with a dispersing agent to disperse them in water.	May be solid, semi-solid or liquid at room temperature	Water-insoluble dyes	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900
51	3204.1200	Dyes, acid	Water soluble dyes used for the dyeing of silk, wool, nylon and modified acrylics	May be solid, semi-solid or liquid at room temperature	Water soluble dyes	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S, Karachi – 75400 Sandal Dyestuff Industries Ltd. 4 KM Chak Jhumra Sangla Hill Road, Faisalabad

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
52	3204.1200	Acid Dyes for Leather	Water soluble dyes used for the dyeing of silk, wool, nylon and modified acrylics	May be solid, semi-solid or liquid at room temperature	Water soluble dyes	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Sardar Chemical Industries Suit # 9, 2nd Floor, Hafeez Centre, Main Boulevard, Gulberg-III, Lahore Sardar Dyes & Chemical Industries Chemi-Dystuff Industries (Pvt) Ltd. Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore Sandal Dystuffs Industries 305-308, 2nd Floor, The Business Center, 8/8 New Civil Lines Faisalabad Chemical Process Ind. (Pvt) Ltd. 103-Habitat, Shadman-II, Jail Road Lahore
53	3204.1400	Direct dyes and preparations	Water soluble substantive dyes that have affinity for cellulosic fibres	--	--	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Sandal Dyestuff Industries Ltd. 4 KM Chak Jhumra Sangla Hill Road, Faisalabad
54	3204.1600	Reactive dyes and preparations	Water soluble organic substances, primarily used for tinting textiles, that attach themselves to their substrates by a chemical reaction by forming a covalent bond between the molecule of dye and that of the fibre.	May be solid or liquid at room temperature	Water soluble organic substances that are attached to the fibers through a dyeing process with the help of certain chemicals	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Sandal Dyestuff Industries Ltd. 4 KM Chak Jhumra Sangla Hill Road, Faisalabad
55	3204.1700	Pigments and preparations	Pigments are water insoluble and are applied as finely ground solid particles through a liquid matrix. Pigments may be organic.	May be solid, semi-solid or liquid at room temperature	Main organic pigment includes azo pigments and Copper phthalocyanines.	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Mobil Master Batch Industries (Pvt) Ltd., 92- Main Ravi Road, Lahore BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S, Karachi – 75400 Sandal Dyestuff Industries Ltd. 4 KM Chak Jhumra Sangla Hill Road, Faisalabad Bin Rasheed Color & Chemical Mfg Co. 10 Abbot Road, Lahore - 54000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
56	3204.2000	Synthetic organic products of a kind used as fluorescent brightening agents	Optical brighteners, optical brightening agents (OBAs), fluorescent brightening agents (FBAs) or fluorescent whitening agents (FWAs) are chemical compounds that absorb light in the ultraviolet and violet region (usually 340-370 nm) of the electromagnetic spectrum, and re-emit light in the blue region (typically 420-470). These additives are often used to enhance the appearance of fabric and paper, causing a "whitening" effect"; they make intrinsically yellow materials look less so, by compensating the deficit in blue and purple light reflected by the material, with the blue and purple optical emission.	May be solid or liquid at room temperature	--	<p>Sardar Dyes & Chemical Industries</p> <p>Sandal Dystuffs Industries 305-308, 2nd Floor, The Business Center, 8/8 New Civil Lines Faisalabad</p> <p>Chemi-Dystuff Industries (Pvt) Ltd.</p> <p>Chemical Process Ind. (Pvt) Ltd. 103-Habitat, Shadman-II, Jail Road Lahore</p> <p>Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900</p> <p>Sardar Chemical Industries Suit # 9, 2nd Floor, Hafeez Centre, Main Boulevard, Gulberg-III, Lahore</p> <p>Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore</p> <p>- S & F Enterprises, Karachi</p>
57	3204.9000	Whitening agent	Textile grade	May be solid, semi-solid or liquid at room temperature	--	<p>Sardar Dyes & Chemical Industries</p> <p>Sandal Dystuffs Industries 305-308, 2nd Floor, The Business Center, 8/8 New Civil Lines Faisalabad</p> <p>Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900</p> <p>Chemi-Dystuff Ind. (Pvt) Ltd. D/4, South Avenue, S.I.T.E Karachi-75700</p> <p>Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore</p> <p>Sardar Chemical Industries Suit # 9, 2nd Floor, Hafeez Centre, Main Boulevard, Gulberg-III, Lahore</p> <p>Chemical Process Ind. (Pvt) Ltd. 103-Habitat, Shadman-II, Jail Road Lahore</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
58	3206.1900	Pigments and preparations	Textile/Leather grade Preparations containing less than 80% titanium dioxide, include dispersions in plastics, natural rubber, synthetic rubber or plasticizers, used for colouring plastics and rubber etc in the mass.	May be solid, semi-solid or liquid at room temperature	Mainly inorganic pigment based on TiO ₂ .	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Mobil Master Batch Industries (Pvt) Ltd., 92- Main Ravi Road, Lahore Bin Rasheed Color & Chemical Mfg Co. 10 Abbot Road, Lahore - 54000
59	3206.2010	Chrome Yellow for oil Paint, Industrial Paints, Master Batches, Artificial Leather, NC Paints and printing Inks	Chrome Yellow Pigments (Inorganic) 95%	Appearance Yellow Colour	PH. Value 5.7 to 7.8 PbCrO ₄ <68 to < 90% S.P. Gravity 5.6 to 6.1 Fastness to Heat 180 °C to 240 °C Moisture 0.5% Timing strength 100 + 5% Fineness: 325 to 450 Mesh	Poplon & Company (Pvt) Ltd. 34-N, Gulberg II, Lahore
60	3206.4290	Masterbatches	Based on Lithopane/ Zinc Sulphide:	Solid form	Dispersion of Lithopane and Zinc Sulphide in polymers	Clariant Chemicals Pakistan (Pvt) Ltd. Sector 20, Korangi Industrial Area, Karachi. Bin Rasheed Color & Chemical Mfg Co. 10 Abbot Road, Lahore - 54000 Mobil Master Batch Industries (Pvt) Ltd., 92- Main Ravi Road, Lahore
61	3206.4910	Masterbatches	Master Batches - Solid	Solid form	Organic and inorganic in nature, resistance to solvents, nature is acidic /alkali	Clariant Chemicals Pakistan (Pvt) Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi. Bin Rasheed Color & Chemical Mfg Co. 29-G/5, Model Town, Lahore Mobil Master Batch Industries (Pvt) Ltd., 92- Main Ravi Road, Lahore
62	3206.4990	Masterbatches	Master Batches- Liquid	Paste form	Organic and inorganic in nature, resistance to solvents, nature is acidic /alkali	Clariant Chemicals Pakistan (Pvt) Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi. Bin Rasheed Color & Chemical Mfg Co. 29-G/5, Model Town, Lahore Mobil Master Batch Industries (Pvt) Ltd., 92- Main Ravi Road, Lahore
63	3208.2090	Plastic Parts Clear Coat	Special synthetic Acrylic Polyol based resin.	Clear Coat for Glossy Finish.	UV resistant, water Resistant.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
64	3208.2090	Clear coat (Baking paint)	Acrylic Melamine based Resin.	Clear Coat for Glossy Finish.	UV resistant & Protective Clear coat.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
65	3208.9090	Primer Surfacer / Intermediate Coat (Baking Paint)	Polyester/Melamine resin based paint for automotive	Liquid coloured paint with anti-chipping property	Mild Acid/Alkali resistant middle coat	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
66	3208.1090 3208.2090 3208.9090	Stoving clear Coats	i) Polyester based ii) Acrylic based iii) Alkyd Melamine Based Resin.	Clear Coat for Glossy Finish. Clear coat (Baking)	UV resistant, water Resistant & Protective Clear coat.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
67	3208.1090 3208.2090 3208.9090	Aluminium Paints	i) Polyester based ii) Acrylic based iii) Alkyd Melamine Based Resin.	Metal finishing	Metallic effect finishes.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
68	3208.1090 3208.2090 3208.9090	Metallic / Pearl basecoat (Baking Paint)	i) Polyester based ii) Acrylic based iii) Alkyd Melamine Based (Resins with Aluminium & Mica).	Colored properties with Mica & Aluminium.	To give assorted colors.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
69	3208.1090 3208.2090 3208.9090	Stoving enamels	i) Polyester based ii) Acrylic based iii) Alkyd Melamine Based Resin.	Give color & Protection.	Corrosion resistant.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
70	3208.1090 3208.2090 3208.9090	Stoving Primer/ Intermediate Coat	i) Polyester based ii) Acrylic based iii) Alkyd Melamine Based Resin.	- For Smooth finish & good adhesion. - Liquid coloured paint with anti-chipping property	- Anti corrosive property. - Mild Acid/Alkali resistant middle coat	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
71	3208.1090 3208.9090	Solid Colour Topcoat (Baking Paint)	i) Polyester based ii) Alkyd Melamine Based Resin	Coloured liquid paint for automotive vehicles	Protection & good appearance.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
72	3208.2090 3208.9090	PU Clears Paints	Polyurethane (PU) Polyol /Acrylic Urethane (AU) Resin based.	Clear Coat for Glossy Finish.	UV resistant, water resistant & good weatherability.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
73	3208.2090 3208.9090	Primer for Plastic Parts	Special synthetic Acrylic Polyol based resin.	Pigmented Colored Paint.	For Smooth surface adhesion & Finish.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
74	3208.2090 3208.9090	Plastic Parts Base Coat	Special synthetic Acrylic Polyol based resin.	Pigmented color for Automotive vehicles.	To give assorted colors.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
75	3208.2090 3208.9090	PU Enamels	Polyurethane (PU) Polyol /Acrylic Urethane (AU) Resin based.	Give color & Protection.	Protect against weather.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
76	3208.2090 3208.9090	PU Primers	Polyurethane (PU) Polyol /Acrylic Urethane (AU) Resin based.	For Smooth finish & good adhesion.	UV resistant, water Resistant & good adhesion to the substrate.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
77	3209.1090 3209.9090	Cathodic Electro-Deposition Primer (CED) (Two Component- Baking paint) - F-1 Pigment Paste & F-2 Resin Emulsion	i) Acrylic based CED paint ii) Modified Epoxy resin based CED paint	i) Coloured liquid paint ii) Milky liquid emulsion paint	Anti-corrosive paint	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
78	3210.0020	Prepared water pigments	For Textile	May be solid, semi-solid or liquid at room temperature	--	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400
79	3211.0090	Dryers, prepared	For paints	Liquid	Dryer for Paints	Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore Nimir Resins Limited Akhavan House, 38 Davis Road, Lahore
80	3213.1000	Colours in sets	Water Colour sets for children, Poster Colours	Viscous Gel like liquid. Packed in plastic container	CMC Organic Pigments Clay	Indus Pencil Industries B-54, Manghopir Road SITE Karachi
81	3214.9010	Silicon Sealant	Acetoxy & Neutral Cure Sealants	For use in Construction, Automotive, Solar Panels, Home Appliances, Electronics, Textiles, Glass Processing, Sanitary, and others	Sealant made using, but not solely comprising of, silicone polymer [-Si-O-Si-] backbone	Harris Silicones & Glass (Pvt.) Ltd. Farooque Industrial Estate, Anam Road 20km Ferozepur Road Lahore
82	3215.9090	Ink	Fountain Pens inks in Bottles, Sachets and Catridges	Colour: Black, Blue, Red, Green Form: Liquid	Boiling Point (at 760 mmHg): 99°C PH:5.46~7.85 Specific Gravity: 1.004~1.017gm/cm ³ Viscosity at 25°C: 3.3~4.72cps Surface Tension: 51.813~65.944dyne/cm	Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700
83	3402.1110	Linear Alkyl Benzene Sulphonic Acid	96% & 90%	Liquid	--	Tufail Chemical Industries Ltd. Progressive Centre, Mezz Floor, 30-A/6, PECHS, Shahrah-e-Faisal, Karachi
84	3402.1190	Sodium Lauryl Ether Sulphate	70%	Paste	--	Tufail Chemical Industries Ltd. Progressive Centre, Mezz Floor, 30-A/6, PECHS, Shahrah-e-Faisal, Karachi
85	3402.1190	Sodium Lauryl Sulphate	--	Powder & Paste	--	Tufail Chemical Industries Ltd. Progressive Centre, Mezz Floor, 30-A/6, PECHS, Shahrah-e-Faisal, Karachi
86	3402.1300	Non Ionic Surface- active agents	Surfactants are compounds that lower the surface tension (or interfacial tension) between two liquids or between a liquid and a solid. Surfactants may act as detergents, wetting agents, emulsifiers, foaming agents, and dispersants.	May be solid or liquid at room temperature	Surfactants that do have an ionic character	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
87	3402.9000	Surface Active Preparations and cleaning agents	Surface Active Preparations and Cleaning agents are composed mainly of surfactant alongwith auxiliaries to boost the performance of formulation. They mainly act as detergents, wetting agents, emulsifiers, foaming agents or dispersants. Surfactants of various nature may be blended for the synergistic effect.	May be solid or liquid at room temperature	May be blend of ingredients containing one or more surfactant. May include auxiliaries to boost the performance of the formulation.	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900
88	3403.1110	Preparation	Preparations are intended to prepare leather and give it desirable properties.	--	--	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Chemical Process Ind. (Pvt) Ltd. 103-Habitat, Shadman-II, Jail Road Lahore
89	3403.9110	Preparation	Fat Liquor	Mainly liquid at room temperature	Reduce friction and enhance smoothness/ slippage property.	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Chemical Process Ind. (Pvt) Ltd. 103-Habitat, Shadman-II, Jail Road Lahore
90	3602.0000	Prepared Explosive - Super Balster	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
91	3602.0000	Prepared Explosive - Balster	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
92	3602.0000	Prepared Explosive - Super Breaker	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
93	3602.0000	Prepared Explosive - Seismic Explosive	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
94	3602.0000	Prepared Explosive - Pre-Splitter	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
95	3603.0000	Detonator-Plain	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
96	3603.0000	Electric Detonator	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
97	3603.0000	Seismic Electric Detonator	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
98	3603.0000	Milli Second Delay Electric Detonator	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
99	3603.0000	Half Second Delay Electric Detonator	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
100	3603.0000	Milli Second Delay Non Electric Detonator	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
101	3603.0000	Half Second Delay Non Electric Detonator	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
102	3603.0000	Two Way Delays Relays	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
103	3603.0000	Safety Fuse	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad
104	3603.0000	Detonating Cord	-	-	-	Biafo Industries Ltd. 1st Floor Biafo House, Plot No. 23, St No. 38-40, I&T Centre, G-10/4, Islamabad

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
105	3701.3030	Presensitized printing plates	Aluminum Plates Lithographic Thickness ranging from 0.15mm to 0.30mm. Packing in Corrugated cartons	<u>Thickness 0.15mm:</u> 450mm x 370mm (100 Plates); 500mm x 370mm (100 Plates); 510mm x 400mm (100 Plates); 900mm x 715mm (50 Plates) <u>Thickness 0.20mm:</u> 645mm x 510mm; 745mm x 585mm; 760mm x 603mm; 840mm x 603mm; 840mm x 625mm (all in 50 Plates). <u>Thickness 0.24mm:</u> 650mm x 550mm (50 Plates); 724mm x 615mm (50 Plates); 745mm x 585mm (50 Plates); 745mm x 605mm (50 Plates); 914mm x 625mm (30 Plates); 915mm x 715mm (30 Plates) <u>Thickness 0.30mm:</u> 840mm x 586mm (30 Plates); 890mm x 586mm (30 Plates); 914mm x 585mm (30 Plates); 914mm x 625mm (30 Plates); 915mm x 715mm (30 Plates); 925mm x 625mm (30 Plates); 925mm x 715mm (30 Plates); 975mm x 755mm (30 Plates); 1030mm x 770mm (20 Plates); 1030mm x 820mm (20 Plates); 1270mm x 1030mm (20 Plates)	Si 0.037, Mn 0.007, Cu 0.003 Fe 0.30, Mg 0.001, Zn 0.007, Al 99.56.	DuTech (Pvt) Limited Plot No.18, Sector No. 28, Korangi Industrial Area, Karachi
106	3806.2000	Sodium Resinates	pH 9 -12	Dark Brown Paste	Sodium Resinate	Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore
107	3809.9110	Printing gum	Main use is in printing applications where gums are used to increase the medium viscosity enabling localized coloration.	May be solid or liquid at room temperature	Impart thickness to the matrix under the influence of pH.	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore ICI Pakistan 63, Mozang Road Lahore 54000 Universal Chemicals B-45, Estate Avenue S.I.T.E, Karachi - Alka Chemicals

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
108	3809.9190	Dyeing Auxiliaries and Finishing Agents	Dyeing and Finishing agents are used to impart desired effect on textiles. Use of agents facilitate the dyeing and finishing of the fabrics.	May be solid or liquid at room temperature	Improve the performance of the dyeing process and imparts desirable aesthetic to the treated fabric.	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900
109	3809.9300	Finishing agents	Finishing agents are used to impart desired effect on textiles. Use of agents facilitate finishing of the fabrics.	May be solid or liquid at room temperature	Imparts desirable aesthetic to the treated fabric.	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900
110	3814.0000	Organic Composite Solvents and Thinners	Organic Hydrocarbon Compound.	Dilution & smooth application.	Rehology control & adjustment of the Paint according to various environment.	Kansai Paint (Pvt) Ltd. 139-CCA, Sector DD, Phase IV Defence Housing Authority, Lahore
111	3816.0000	Refractory cements, mortars, concretes and similar compositions, other than products of heading 38.01.	Tap Hole Repair Mass & Mastic Tubes	<u>Tap Hole Repair Mass:</u> Specific Gravity:3.0 min Cold Crushing Strength (kg/cm2):250 min Grain Size:0 - 3 mm Bulk density (Kg/dm3): 2.70 min <u>Mastic Tubes:</u> LOI(%):45 max Maximum Grain Size:(-) 60 BS Mesh	<u>Tap Hole Repair Mass:</u> MgO(%) :91 min Al ₂ O ₃ (%):0.8 max Fe ₂ O ₃ (%):1.8 max CaO(%) :2.5 max SiO ₂ (%):4.5 max <u>Mastic Tubes:</u> C(%): 25 min Al ₂ O ₃ (%):30 min SiC (%): 03 min SiO ₂ (%): 15 max K ₂ O + Na ₂ O(%):0.2 max	Bhanbhore Ceramics Industries Plot DSU-18, Pakistan Steel Down Stream Industrial Estate Bin Qasim Karachi
112	3823.1100	Acid, stearic	IV 1.0 ~ 3.0, Melting point 61 ~ 65, Specific Gravity 0.86	Small Flakes, colour: White	C ₁₇ H ₃₅ COOH	Nimir Industrial Chemicals Ltd. 51-N, Industrial Area, Gulberg II, Lahore.
113	3823.1910	Acid oils for refining	Palm fatty acid distillate (PFAD)	Colour 5 ~ 6, -1, Melting point 48 ~ 52	Acid Value 190 Min.	Nimir Industrial Chemicals Ltd. 51-N, Industrial Area, Gulberg II, Lahore. Gamalux Oleochemicals (Pvt.) Ltd. A-8, NWIZ, Port Qasim Industrial Area, Bin Qasim, Karachi
114	3823.1920	Acid oils for refining	Palm Acid Oil	--	--	Nimir Industrial Chemicals Ltd. 51-N, Industrial Area, Gulberg II, Lahore.
115	3823.1930	Acid oils for refining	Fatty Acid Distilled (FAD) 92% to 99%, IV 30 ~ 55	Colour 5 ~ 6, -1, Melting point 45 ~ 58	Acid Value 190 Min.	Nimir Industrial Chemicals Ltd. 51-N, Industrial Area, Gulberg II, Lahore. Gamalux Oleochemicals (Pvt.) Ltd. A-8, NWIZ, Port Qasim Industrial Area, Bin Qasim, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
116	3903.1100	Polystyrene expandable, in primary forms	(i) Plastic foaming grade (ii) Plastic moulding grade (iii) Plastic extrusion grade	Resins and Granules	Polymer	Pak Petrochemical Industries (Pvt) Ltd. Polymer House, Survey No. 136, 25th km, on Main National Highway, Karachi-75030
117	3903.1910	General purpose polystyrene (GPPS)	(i) Plastic moulding grade (ii) Plastic extrusion grade	Resins and Granules	Polymer	Pak Petrochemical Industries (Pvt) Ltd. Polymer House, Survey No. 136, 25th km, on Main National Highway, Karachi-75030
118	3903.1920	High Impact Polystyrene (HIPS)	(i) Plastic moulding grade (ii) Plastic extrusion grade	Resins and Granules	Polymer with more than 95% styrene	Pak Petrochemical Industries (Pvt) Ltd. Polymer House, Survey No. 136, 25th km, on Main National Highway, Karachi-75030
119	3903.9010	High Impact Polystyrene (HIPS)	(i) Plastic moulding grade (ii) Plastic extrusion grade	Resins and Granules	Co polymer with less than 95% styrene	Pak Petrochemical Industries (Pvt) Ltd. Polymer House, Survey No. 136, 25th km, on Main National Highway, Karachi-75030
120	3904.1090	Poly Vinyl Chloride (PVC) Resin	Suspension	Appearance Color White Volatile Matter 0.4% wt max Particle size 40 mesh pass 100% wt min Particle Size 270 mesh pass 3% wt max	Polyvinyle Chloride , C ₂ H ₃ Cl, is an inert material, it does not react with most chemicals and solvents. Resistant to Acids, bases, slats and most solvents. Partially soluble in acetone.	Engro Polymer & Chemicals Limited 16th Floor, The Harbor Front Building, HC # 3, Marine Drive, Block-4, Clifton, Karachi
121	3904.2200	PVC not mixed with other substances, plasticised	(PVC Compound) International /National Standard (Cable Grade only)	Granules	C ₂ H ₃ C ₁	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Atlas Rubber & Plastic Industries 9th Floor, Textile Plaza, Mumtaz Hassan Road Karachi – 74000 Bismillah Plastic Works Sohail Manzil, Street No. 30 Sector "F" Allama Iqbal Road, Manzoor Colony Karachi
122	3904.2200	PVC Compound (Plasticized)	BSS 7655	Granules	C ₂ H ₃ C ₁	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore
123	3905.1200	Vinyl Acetate Copolymers	Vinyl acetate-acrylic copolymers, emulsion products that are used for a wide range of applications including paints, bond coats, binders, pigmented paper coatings, textiles, and nonwovens	Liquid at room temperature	Crosslink to form film that imparts desirable properties to the treated surface.	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Nimir Resins Limited Akhavan House, 38 Davis Road, Lahore Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
124	3905.2100	Polyvinyl acetate	Polyvinyl acetate polymers, emulsion products that are used for a wide range of applications including paints, bond coats, binders, pigmented paper coatings, textiles, and nonwovens	Liquid at room temperature	Crosslink to form film that imparts desirable properties to the treated surface.	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900
125	3906.9030	Pigment thickener	Pigment thickener	--	--	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 ICI Pakistan Limited 63, Mozang Road Lahore 54000 T & N Chemical 12.5 KM Sitara Road, Faisalabad
126	3906.9090	Acrylic polymers	Acrylate polymers belong to a group of polymers based on acrylic acid, methacrylic and their esters. They are noted for their transparency, resistance to breakage, and elasticity. They are also commonly known as acrylics or polyacrylates.	Mainly liquid at room temperature. However, can be produced in solid form	Acrylate polymers upon drying form films that yield desired properties on the substrate	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 Nimir Resins Limited Akhavan House, 38 Davis Road, Lahore BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400 Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road), Lahore Sandal Dyestuff Industries Ltd. 4 KM Chak Jhumra Sangla Hill Road, Faisalabad
127	3907.3000	Epoxide in primary forms	Electrostatic Coating Powder	--	--	Oxyplast Pakistan (Pvt.) Ltd. Silver House, 11/E, Block-6 P.E.C.H.S., Karachi.
128	3907.3000	Fusion Bonded Epoxy (FBE)	Jotapipe & Corro-Coat (Anti-Corrosion Coating for Piping)	1350-1500G/L >0.5% Moisture Contents Hardness Avg. 85 (ASTM. STD)	Polarized Cracking Pass Impact resistance >1.5J	Jotun Powder Coatings Pakistan (Pvt) Ltd. 2 KM Defence Road, Off 9 KM Raiwind Road, Adj. Valancia Homes Gate, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
129	3907.5000	Resins, alkyd, in primary forms	Viscosity 3-1000 poises Acid Value less than 12	Colour Max 10GH	Esters	Nimir Resins Limited Akhavan House, 38 Davis Road Lahore Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore
130	3907.6010	Polyethylene terephthalate in primary	Polyester Chips - Yarn and Film grade	Yarn and Film Grade	--	Gartron (Industries) Limited 11th Floor, G&T Tower No. 18, Beaumont, Civil Lines – 10, Karachi. Novatex Ltd. Ground Floor, G&T Tower # 18, Beaumont Road, Civil Lines - 10, Karachi - 75530
131	3907.6020	Polyethylene terephthalate in primary	Polyester Chips - Bottle grade (Pet Resin)	Bottle grade (Pet Resin)	--	Gartron (Industries) Limited 11th Floor, G&T Tower No. 18, Beaumont, Civil Lines – 10, Karachi. Novatex Ltd. Ground Floor, G&T Tower # 18, Beaumont Road, Civil Lines - 10, Karachi - 75530
132	3907.6090	Polyethylene terephthalate in primary	Polyester Chips Amorphous	Plastic Resin in Granules	Polyester Resin made from PTA & MEG with I.V. 0.6 to 0.68 in Amorphous form capable of being upgraded to PET Bottle Grade.	Novatex Ltd. Ground Floor, G&T Tower # 18, Beaumont Road, Civil Lines - 10, Karachi - 75530 Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore
133	3907.9100	Polyesters, unsaturated, in primary forms	Unsaturated polyester Resins	--	--	BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400
134	3907.9900	Powder Coating Pure Polyester	Corro-Coat PE (Exterior Polyester Powder Coating)	Film Hardness >70 (EN ISO 2815) 100% Adhesion	Exceed 5mm without Film Cracking Salt Spray Resistance Excellent	Jotun Powder Coatings Pakistan (Pvt) Ltd. 2 KM Defence Road, Off 9 KM Raiwind Road, Adj. Valancia Homes Gate, Lahore
135	3907.9900	Epoxy Polyester Hybrid	Corro-Coat MX (Interior Hybrid Powder Coating)	Film Hardness >80 (EN ISO 2815) 100% Adhesion	Exceed 60 Inch Pounds without film cracking Salt Spray Resistance Excellent	Jotun Powder Coatings Pakistan (Pvt) Ltd. 2 KM Defence Road, Off 9 KM Raiwind Road, Adj. Valancia Homes Gate, Lahore
136	3907.9900	PE – F Polyester Facade	Corro-Coat PE-F (Exterior Durable Polyester Powder Coating)	Film Hardness >80 (EN ISO 2815) 100% Adhesion	2.5 Nm without film cracking	Jotun Powder Coatings Pakistan (Pvt) Ltd. 2 KM Defence Road, Off 9 KM Raiwind Road, Adj. Valancia Homes Gate, Lahore
137	3909.2000	Resins , melamine, in primary forms	Viscosity 75 Poises Acid Value less than 2	Colour Water White	Amino	Descon Chemicals (Pvt) Ltd. Akhavan House, 38-Shahrah-e-Sir, S.M.S Agha Khan-III, (Davis Road) Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
138	3912.2090	Nitrocellulose in primary forms	Used in leather industry to impart special finish	Mainly liquid at room temperature.	Based on Nitrocellulose	Archroma Pakistan Ltd. 1-A/1, Sector 20, Korangi Industrial Area, Karachi – 74900 BASF Pakistan (Pvt.) Ltd. 46-A, Block – 6, P.E.C.H.S Karachi – 75400
139	3917.2100	Tubes, Pipes & Hoses, Rigid of Polymers of Ethylene	ISO4437 ISO 4427 DIN 8074 ASTM 2513	Diameter 20mm to 630mm and ¾" to 12" Length of coils as per customer requirement or straight lengths upto 40 feet	Ethylene	Dadex Eternit Ltd. Dadex House, 34-A/1, Block-6, P.E.C.H.S. Shahrah-e-Faisal Karachi Sun International Co. (Pvt) Ltd. 62 CMA Colony Street #4 Lahore Cantt. Lahore
140	3917.2100	PE Gas Pipe Fittings	SNGPL Spec, ASTM-2513, ASTM-D-2683 SSGC Spec. ISO-4437 ISO-8085 EN-1555	Dia: 3/4 inch to 6 inch Length: 12 inch to 36 inch PE Spec: PE-80/100 Steel Spec: ASTM & API 5L Dia: 20mm to 180mm Length: 12 inch to 36 inch PE Spec: PE-80/100 Steel Spec: ASTM & API 5L	Melt Flow 0.8 gm/10mn, Density >0.940 to 0.947 to gm/cm ³ Melt Flow 1.55 gm/10mn, Density >0.940 to 0.955 to gm/cm ³	Mechfit Industries 124-IV, E-Block Model Town, Lahore Swabis Polyplast A-496, St No. 9, Block "N", North Nazimabad Karachi
141	3917.2100	PE Water Pipe Fittings	ASTM-2513	Dia: 3/4 inch to 6 inch Length: 12 inch to 36 inch PE Spec: PE-80/100 Steel Spec: ASTM & API 5L Dia: 20mm to 180mm Length: 12 inch to 36 inch PE Spec: PE-80/100 Steel Spec: ASTM & API 5L	Melt Flow 0.8 gm/10mn, Density >0.940 to 0.947 to gm/cm ³ Melt Flow 1.55 gm/10mn, Density >0.947 to 0.955 to gm/cm ³	Mechfit Industries 124-IV, E-Block Model Town, Lahore Swabis Polyplast A-496, St No. 9, Block "N", North Nazimabad Karachi
142	3917.2100	Blow Moulded Cans/ Jars	HDPE Material	0.25, 0.5 and 1 litre sizes	Density 942	Mechfit Industries 124-IV, E-Block Model Town, Lahore
143	3917.2200	Hoses, polypropylene, rigid	Din 8077	Diameter 20mm to 110mm	--	Sun International Co. (Pvt) Ltd. 62 CMA Colony Street #4 Lahore Cantt. Lahore
144	3917.2900	Glass Reinforced Epoxy (GRE) Pipes	20 ft. upto: 18" dia For Tube Well Pipes etc.	Food Grade	--	Creative Engineering (Pvt) Ltd. 160/ S, Q.I.E. Kot Lakhpat Lahore
145	3917.2900	Fiber Reinforced Polyester (Fiberglass) Ladder	16 Ft, 32 Ft and 48 Ft.	--	--	Creative Engineering (Pvt) Ltd. 160/ S, Q.I.E. Kot Lakhpat Lahore
146	3917.4000	Fittings, plastic	Joints, elbows, flanges etc. ASTM 2513	As per API 5LB for steel As per ASTM 2513 for Polyethylene	As per API 5LB for steel As per ASTM 2513 for Polyethylene	Swabis Polyplast A-496, St No. 9, Block "N", North Nazimabad Karachi
147	3918.1000	Polyvinyl Chloride floor covering	PVC Flooring	--	--	A.T.S Synthetic (Pvt) Ltd. 1-2 Asad Chamber Umer Market, McLeod Road, Lahore Green Earth Recycling Pakistan 208/A Street # 5, Cavalry Grounds, Cantt. Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
148	3919.1090	Detectable Underground Tape	LDPE Sheet with Aluminium foil	Thickness 4-7 mils, Elongation 80%, Tensile 20 lb/ inch	Al thickness 0.3 mils	Mechfit Industries 124-IV, E-Block Model Town, Lahore
149	3920.2090	Polypropylene	PP/PE sheet 1.5mm to 12mm (6*4' Sheet) Flat sheeting combination of Polypropylene and Polyethylene. Thickness ranging from 1.5mm to 12mm and width upto 4 feet	Can be customized according to customer requirements	--	Green Earth Recycling Pakistan 208/A Street # 5, Cavalry Grounds, Cantt. Lahore
150	3920.3000	Polystyrene plates, sheets, film,	HIPS 1mm to 4mm (6*4" sheet) GPPS, Polystyrene Sheet Thickness 0.25 mm to 7.00 mm Width 48" Flat sheeting made from Polystyrene (PS), High Impact Polystyrene (HIPS), General Purpose Polystyrene (GPPS), Acrylic (PMMA), Acrylonitrile Butadiene Styrene (ABS), a combination of HIPS and GPPS and a combination of ABS and PMMA. Thickness ranging from 1 mm to 10 mm and width upto 4.5 feet	--	Polystyrene sheet is a high impact grade of polystyrene with improved stress crack resistance, developed for extrusion and thermoforming applications, especially for the refrigerator industry in various thickness and sizes.	Lucky Plastic Industries (Pvt) Ltd. Polymer House E-110 Main Boulevard Defence, Lahore Cantt, Lahore. Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore Green Earth Recycling Pakistan 208/A Street # 5, Cavalry Grounds, Cantt. Lahore
151	3920.4300	Polyvinyl Chloride plates, sheets,	PVC Flexible Sheet Width = Upto 132 Inches Minimum Thickness = 30Micron, Maximum Thickness = 2000Micron, Length = As per customer requirement	--	--	A.T.S Synthetic (Pvt) Ltd. 1-2 Asad Chamber Umer Market, McLeod Road, Lahore
152	3920.4910	Polyvinyl Chloride plates, sheets, rigid	Width 24" Thickness 50 to 500 Micron (PVC)	--	--	Lucky Plastic Industries (Pvt) Ltd. Polymer House E-110 Main Boulevard Defence, Lahore Cantt, Lahore.
153	3920.4990	Polyvinyl Chloride plates, sheets,	Width 24" Thickness 50 to 500 Micron (PVC)	--	--	Lucky Plastic Industries (Pvt) Ltd. Polymer House E-110 Main Boulevard Defence, Lahore Cantt, Lahore.
154	3920.5900	Polyacrylic, other, plates, sheets,	Width Acrylic 1.5mm to 12mm 6*4	--	--	Lucky Plastic Industries (Pvt) Ltd. Polymer House E-110 Main Boulevard Defence, Lahore Cantt, Lahore.
155	3920.6200 3920.6900	BOPET Film (All types i.e. transparent, chemical coated, metalized, etc.)	Having thickness of various micron	--	--	Novatex Ltd. Ground Floor, G&T Tower # 18, Beaumont Road, Civil Lines - 10, Karachi - 75530 Astro Plastics (Pvt) Ltd. 17-Banglore Town, Shahrah-e-Faisal, Karachi
156	3921.1200	Polyvinyl Chloride plates, sheets,	PVC Film	--	--	A.T.S Synthetic (Pvt) Ltd. 1-2 Asad Chamber Umer Market, McLeod Road, Lahore
157	3921.1300	Polyurethane plates, sheets, film,	Polyurethane Sandwich Panels	Thickness from 60mm to 150mm	--	Pakistan Insulations Pvt. Ltd. 107 Business Avenue PECHS Block-6, Karachi
158	3921.9090	Tooth paste tube Laminate	100-125 mic PE+Co-polymer laminated to foil 20-40 mic + PE + Co-polymer both sides. (Total thickness 290 to 300 mic)	--	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi
159	3923.1000	Boxes	Boxes, plastic, for conveyance or packing	--	--	Polycon Pakistan Pvt. Ltd. 62-CMA Officers Colony, 4th Street, Lahore Cantt. Lahore
160	3923.5000	Plastic caps	Plastic caps	--	--	International Caps Company 121/A, Ishaqabad, Sir Shah Mohd Suleman Road, Karachi-75900

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
161	3923.9010	Preforms	Made from PET Resin	All ranges including and above 11.5 grams.	--	Gatron (Industries) Limited 11th Floor, G&T Tower No. 18, Beaumont, Civil Lines – 10, Karachi. □
162	3924.9000	Cans, plastic (Household)	10 ml to 40 litres.	--	Hydensity polyethylene,ABS, PP	Plasticans (Pvt) Ltd. 120/3 Industrial Estate, Kot Lakhpat Lahore
163	4003.0000	Rubber, reclaimed	PS: 1915 - 1987 ISO: 4633/ 1 - 1983	Natural or Synthatic rubber	--	Dadex Eternit Ltd. Dadex House, 34-A/1, Block-6, P.E.C.H.S. Shahrah-e-Faisal Karachi
164	4009.1190	Pipes and tubing	All types, un-hardened vulcanized rubber excluding bearing API certification., Rubber hoses	--	--	Longman Mills, Lahore 14-N Industrial Area Gulberg-II Lahore-45660 Samad Rubber Works Ltd. 409-Ferozepur Road P.O. FC College Lahore-54600 Darson Rubber Works Ltd., Darson Road, G.T. Road P.O. Box 5, Wazirabad – 52000
165	4009.1200	Hoses, vulcanised rubber,	ASTM & SAE, with Fittings, excl hard rubber, with their fittings	--	--	Darson Industries Private Limited Darson Road, P O Box 5 Wazirabad-52000
166	4009.1200	Hoses, vulcanised rubber, not reinforced or Combined	Size ½", 3/8", length 3', 3.5', 4', 6' available for Nat Gas LPG, confirming to BS 669-1:1989 [Excluding High Pressure Hoses of over 30 PSI & having API Certification]	--	--	Tesla Industries Pvt. Ltd. Plot No. 81-F, St. 6, I-10/3 Islamabad
167	4009.1200	Hoses, vulcanised rubber,	ASTM & SAE, not reinforced or Combined	--	--	Darson Industries Private Limited Darson Road, P O Box 5 Wazirabad-52000
168	4010.1900	Conveyors Belts and Transmission Belts (of Vulcanized Rubber)	Belts from 25mm in width to 2300mm width with any length and thickness and number of plies. (as per customers requirements)	--	Heat Resistant and abrasion resistant	Chawla Rubber & Plastic Ind. (Pvt) Ltd. 43-Industrial Area, Township, Kot Lakhpat, Lahore
169	4011.1000	Tyres,rubber,pneumatic	4.50-12wt,6.00-16f wot,6.00-16 Jeep ND WOT , motor cars	--	--	Mian Tyre & Rubber Co. Limited. 29.5 Km, Sheikhpura Road Lahore
170	4011.1000	Tyres	450-12,600-12, 615-13, 165-13, motor cars/ station wagons	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar
171	4011.1000	Tyres	145/70R12, 145/80R12,155/70R12, 165/70R12, 145/80 R13, 155/80R13, 185/70R13,165/80R13, 165/65R13, 175/70R13,185/65R14, 185/60 R15, 175/70R14,195/65 R14, 195/65 R15, 175/65R15, 205/55R16, 215/55R16 for Motor Cars	--	--	The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
172	4011.2010	Tyres	4.50-12, 6.50-14, , 6.00-16, 6.50-16, 7.00-16, 7.50-16, 145R12, 185R14, 195R14, 7.50 R16, 195R15, 205/70R15 for Light Trucks Commercial Vehicles	--	--	The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
173	4011.2010	Tyres	450-12 8PR, 600-14, 650-14, 750-16, for light trucks - 4.50-12, 6.50-14, 6.00-16, 1.75/80-16, 6.50-16, 7.50-16, 185 R 14C, 195 R 14C, 750 R 16C	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar
174	4011.2090	Tyres	350-8, 400-8 for Rickshaw, Scooter	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar
175	4011.2090	Tyres	8.25-20, 9.00-20, 10.00-20, 11.00-20 12.00-20, for heavy Trucks/Buses & Lorries	--	--	The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
176	4011.4000	Tyres	2.25/17 Front/Rear 2.25/17 Front/nylo grip 2.50/17 Front/Rear 2.50/17 R Panther Power and Mt1 2.50/17 Trail Plus 2.50/18 Front/Rear, Nylo Grip, Power, Power Mt1, Trial Plus, Trail Enduro 2.75/17 Rear, Rear Laser 2.75/18 Front, Rear, Trail 3.00/17 Rar, Panther Power, Trail Plus, trail Enduro 3.00/18 Rear, Trail, Trail Enduro 3.5/8 Scooter 3.5/10 Scooter, and Scooter Laser 4.00-8 Front and Rear, for motorcycles - 225-17, 250-17, 300-17, 250-18, 275-18	--	--	Mian Tyre & Rubber Co. Limited. 29.5 Km, Sheikhpura Road Lahore
177	4011.4000	Pneumatic Tyres	For 2/3 Wheelers (Motorcyels, Scooters, Auto Rickshaws, Motorcycles Rickshaws, wheel barrow) 2.25-17, 2.50-17, 2.50-18, 3.00-17, 4.00-8 135-10 for Motorcycles & Rickshaws/Scooters	--	--	Service Industries Ltd. Service House-2, Main Gulberg Lahore The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
178	4011.5000	Tyres, rubber, pneumatic	Panther Special 4 PR delux and super Panther Power Road Life and Grip Panther nylon Delux Panther Sports Panther BMX Bodyline and Black Panther BMX Red and Black, for bicycles	--	--	Mian Tyre & Rubber Co. Limited. 29.5 Km, Sheikhpura Road Lahore
179	4011.5000	Pneumatic Tyres	bicycles (28**1.50"); (26**2.125"); (26**2.125"); (16**1.75"); (26**2.125"); (26**1.95"); (24**1.95"); (20**2.125"); (16**2.125"); (26**1.3/8"); (24**1.3/8"); (20**1.3/8")	--	--	Service Industries Ltd. Service House-2, Main Gulberg Lahore
180	4011.6100	Tyres	5.50-16, 6.00-16, 7.50-16, 7.50-20, 12.4/11-28, 14.9/13-28, 16.9/14-30, 18.4/15-30 for Agricultural Vehicles	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
181	4011.6900	Tyres	700-15 ND, 700-16 JS, 600-16 ND, for jeeps	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar
182	4011.9200	Tyres	5.50-16, 6.00-16, 7.50-16, 7.50-20, 12.4/11-28, 14.9/13-28, 16.9/14-30, 18.4/15-30 for Agricultural Vehicles	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
183	4011.9900	Tyres	5.50-16, 6.00-16, 7.50-16 , 7.50-20, 12.4/11-28, 14.9/13-28, 16.9/14-30, 18.4/15-30 for Agricultural Vehicles	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
184	4011.9900	Inner Tubes of Rubber	4.50-12, 6.50-14, 7.00/7.50-16, 8.25-20,9.00-20, 10.00-20,11.00-20, 12.00-20 for (light & heavy) buses, lorries or Trucks	--	--	The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
185	4013.1020	Inner Tubes of Rubber	12,13,14,16 , 450-12, 600-12, 615-13, 165-13 for vehicles	--	--	Mian Tyre & Rubber Co. Limited. 29.5 Km, Sheikhpura Road Lahore United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar
186	4013.2000	Inner Tubes of Rubber	28*1-1/2,28*1-3/8 24*1-3/8,26*2-1.25 for bicycles	--	--	Mian Tyre & Rubber Co. Limited. 29.5 Km, Sheikhpura Road Lahore Service Industries Ltd. Service House-2, Main Gulberg Lahore
187	4013.9010	Inner Tubes of Rubber	5.50-16, 6.00-16, 7.50-16 for Agricultural vehicles	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
188	4013.9020	Inner Tubes of Rubber	2.25-17, 2.5-75/17, 2.5-75/18, 3.00-17, 3.00-18, 3.5-8, 3.5-10, 4.00-8, 2.50-17, 3.00-17, 2.50-18, 2.75-18 for motorcycles and scooters	--	--	Mian Tyre & Rubber Co. Limited. 29.5 Km, Sheikhpura Road Lahore United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar The General Tyre & Rubber Co. of Pakistan Ltd. H-23/2, Landhi Industrial Trading Estate, Landhi, Karachi
189	4013.9030	Inner Tubes of Rubber	600-14, 650-14 for Jeep	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar
190	4013.9090	Inner Tubes of Rubber	350-8, 400-8 for Rickshaws and Scooters	--	--	United Rubber (Pvt) Ltd. 70-Industrial Estate Jamrud Road Peshawar Service Industries Ltd. Service House-2, Main Gulberg, Lahore
191	4201.0000	Belts or Belting of rubber and/or leather excluding those conforming to API specifications.	Conforming to BSS-351 & 490 (excluding grades, N 17, M 24 & above) Also conforming to DIN 22102 (excluding grades; M, N and above)	--	--	Premier Rubber Belting Mfg. Co. C-13, SITE Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
192	4410.9000	Chipboard	Board made of chips of wood	Sheets size 8*4 density 600	Glue Urea Formaldehyde	Chenab Particle Board (Pvt) Ltd. 30.k.m.Gujranwala Road, Alipur Chatta,
193	4411.1200 4411.1300 4411.1400	Medium Density Fiber (MDF) / Lamination Board	Size 8 x 4 (standard) Other sizes as per customer requirement	--	--	Chenab Particle Board (pvt) Ltd. 30.k.m.Gujranwala Road, Alipur Chatta, Al Noor Sugar Mills Ltd. Shahpur Jahania, Taluka Moro, District Naushero Feroze Peshawar Particle Board Ind. (Pvt) Ltd. 16-17, Industrial Estate, Jumrud Road, Peshawar Ciel Wood Works (Pvt) Ltd. 17, Ind. Estate, Jumrud Road, Peshawar Frontier Green Wood Industries (Pvt) Ltd. W 28, 29 and plot No. 14, 27 Industrial Estate, Jamrud Road, Peshawar Garibsons (Pvt) Ltd. C69-71, 12th Commercial Street Phase 2 Ext, DHA Karachi Taj Board Near Taj Ghee Sakha Kot Road, Sher Ghar, KPK Hamza Board
194	4819.3000	Sacks, paper	Papersacks made from Extensible / Clupak and Non Extensible Sack Kraft Paper base width 40 cm or more	--	--	Pakistan Papersack Corporation Limited Plot No. 749-749A, Zila Moza Pathra, Tehsil Hub, District Lasbella, Hub Baluchistan
195	4908.1000	Transfers, vitrifiable, excluding window transparencies	Stickers, Transfer Labels (Decalcomania) and Chassis Aluminium ID Plates.	--	--	Allco Transfer Printers (Pvt) Ltd. 3 Haider Chamber, 11-B, Rizvia Society, Karachi-74600
196	4908.9000	Decalcomanias, excluding vitrifiable decalcomanias	Transfer Labels (Decalcomania)	--	--	Allco Transfer Printers (Pvt) Ltd. 3 Haider Chamber, 11-B, Rizvia Society, Karachi-74600
197	5402.3300	Yarn, textured, of polyesters	Polyester Filament Yarn	--	--	Gatron (Industries) Limited 11th Floor, G&T Tower No. 18, Beaumont, Civil Lines – 10, Karachi. □
198	5402.4700	Yarn, oriented polyester, Single, untwisted	Polyester Filament Yarn	--	--	Gatron (Industries) Limited 11th Floor, G&T Tower No. 18, Beaumont, Civil Lines – 10, Karachi. □
199	5503.2010	Fibres, staple, polyester	1.2 Danier, not carded or combed	Tensile Strength = 7-7.25 Breaking Load = 8-8.5	PET = 99.57 Textile Finish = 0.13 Moisture = 0.13	ICI Polyester Fibres Business 63 -Mozang Road Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
200	5603.1400	Non Woven Fabric of manmade filaments (Geotextile)	Weight 200-1500 gm/ m ² ; Width (max): 3 meter	Material: Polyester/ Polypropylene; Type: Needle punch non woven fabric; Weight/ Density: 150gsm and above; Thickness: 1-20mm; Color: As per requirement; Width: 3 meter max; Length: As per requirement.	--	Unik Fabrics (Pvt) Ltd. 401, Deh Drigh, Raza-Aam Society Malik Halt, Karachi
201	5606.0000	Yarn,chenille, including flock chenille	Chenille Yarn Ecru and Dyed	Standard	Acrylic, Blended	Khawaja Woollen Mills (Pvt) Ltd. 4-H, Gulberg-III, Lahore-54660
202	5806.3200	Ribbons, nylon, narrow woven	Hook and Loop Fastener tapes, made from 100% nylon material and available in widths 10mm up to 100mm	--	--	NFU Industries (PVT) Ltd. 20 Km, Raiwind Road, Lahore.
203	5901.9010	Buckram	Interlining	--	--	Aruj Garment Accessories Ltd Aruj House, 1 KM Raiwind Road Lahore
204	5903.1000	Textile fabrics impregnated, coated, covered or laminated with plastics, (Artificial Leather).	PVC Synthetic Leather	--	--	A.T.S Synthetic (Pvt) Ltd. 1-2 Asad Chamber Umer Market, McLeod Road, Lahore
205	5903.2000	Textile fabrics impregnated, coated, covered or laminated with plastics, (Artificial Leather).	i) PU Synthetic Leather	--	--	A.T.S Synthetic (Pvt) Ltd. 1-2 Asad Chamber Umer Market, McLeod Road, Lahore
206	5903.9000	Textile fabrics impregnated, coated, covered or laminated with plastics, (Artificial Leather).	PU/ PVC Synthetic Leather	--	--	A.T.S Synthetic (Pvt) Ltd. 1-2 Asad Chamber Umer Market, McLeod Road, Lahore
207	5909.0000	Hose piping, textile material	Fire Hose, Made from High quality Polyester Yarn, woven on Circular Looms, and Rubberlined	Working Pressure 16 bar, Bursting Pressure 32 bar	Polyester 25%, Rubber 75%	National Resources Corporation 3/E-III, Commercial Area, Nazimabad, Karachi
208	6804.1000	Millstones for Milling, grinding or pulping	Various grit sizes from Coarse (mesh 14) to fine (mesh 320 & above) with Hardness from soft (G) to Hard (R) In Vitrified & Resinoid BondIness.	--	--	Grind Wheel (Pak) Ltd. 2nd Floor, Karachi Chambers, Hasrat Mohani Road, Karachi
209	6804.1000	Millstones for Milling, grinding or pulping	Grinding Disc. Dia x Thickness 4" x 1/4 4 1/2" x 1/4 5" x 1/4 7" x 1/4 9" x 1/4 Steel/Stone cutting Disc. Dia x Thickness 4" x 1/8 4 1/2" x 1/8 5" x 1/8 7" x 1/8 9" x 1/8 12" x 1/8 14" x 1/8 16" x 1/8	Working RPMs from 3000 to 14000 M/S	Abrasive + Resin + Glass Fiber	Mughal Corporation (Pvt) Ltd. Sharif pura, G.T.Road,Gujranwala.
210	6805.1000	Cloth, abrasive	Cloth and paper backed abrasives products.	Grade, Strength etc	Silicon Carbide and Aluminum Oxide Coated on Latex paper cloth	Falcon Abrasives (Pvt) Ltd. Plot No. 36, Sector No. 28, Korangi Industrial Area, Karachi.
211	6805.3000	Leather, abrasive	i) PVC Synthetic Leather, ii) Polyurethane Synthetic Leather iii) Transparent Plastic Sheet iv) Flocked Fabric v) Jersey Fabric, etc.	--	--	Crescent Art Fabrics (Pvt) Ltd. 23rd Kilometer, Lahore/Sheikhupura Road, Sheikhupura

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
212	6806.1000	Wool,rock, in bulk, sheets or roll	Density : 60,80,100 Thickness : 50,75,100 ASTM C 592	Diameter of fibres:4-10 micron, Length of fibres: avg. 200 MM Shot contents :max. 15% (0.2 MM, mesh): Loss on ignition:0% Water content:0% Sulphur content:0% Asbestos content :0% Air permeability 70 Kg / CM vf 2 100 Kg / CM 1.1 140 Kg / CM 0.6	SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃ , TiO ₂ , CaO, MgO, Na ₂ O, K ₂ O	Incom Rockwool (Pvt) Ltd. Shernaz House, 8 West Wharf Road, karachi
213	6806.1000	Wool,rock, in sheets or roll	ASTM C592	Rockwool/mineral Wool Blankets, Pipe Sections and Panels Density Upto 150Kg/m ³	--	Pakistan Insulations Pvt. Ltd. 107 Business Avenue PECHS BLock-6, Karachi
214	6809.1100	Gypsum Board	4'x8' 9mm & 12mm	Sheet	Paper, Gypsum, Starch & Foam	DFB Gypsum Industries, Suit No. 105, 1st Floor, Business & Finance Center, II Chundrigar Road, Karachi
215	6809.1900	PVC Laminated Gypsum Ceiling Tiles	2'x2' 7.5mm & 9mm 2'x4' 7.5mm & 9mm	Tile	Paper, Gypsum, Starch, PVC Sheets and Glue	DFB Gypsum Industries, Suit No. 105, 1st Floor, Business & Finance Center, II Chundrigar Road, Karachi
216	6810.9100	Door-frames, prefabricated, concrete, cement	Door frames roll formed	HR 1/2	Commercial grades	Irshad Ahmad & Bros. 145 Loha Market Lahore
217	6811.4000	Cable Conduits of asbestos cement	PS: 558 - 1991 (R) ISO: 881 - 1980	Resistance to corrosion, Resistance against abrasion hydraulic characteristics	Hydrous Magnesium Silicates 3MgO 2SiO ₂ 2H ₂ O	Dadex Eternit Ltd. Dadex House, 34-A/1, Block-6, P.E.C.H.S. Shahrah-e-Faisal Karachi
218	6811.4000	Pipe Fittings of asbestos cement	PS 2942 - 1990 ISO 393/4 - 1986, ISO 393/2 - 1986 (E)	Corrosion free, Good Heat insulation, Fire retardant Termite Proof, Quick & Easy installation	Hydrous Magnesium Silicate 3MgO 2SiO ₂ 2H ₂ O	Dadex Eternit Ltd. Dadex House, 34-A/1, Block-6, P.E.C.H.S. Shahrah-e-Faisal Karachi
219	6811.4000	Joints of asbestos cement	PS: 430 - 1988 (R) ISO 393 part 1&2 1983,1986, ISO 8101-1980, ISO 737-1984	Corrosion Free, Good Heat insulation, Fire retardant, Termictc proof, Quick & Easy installation	Hydrous Magnesium Silicate 3Mgo - 2SiO ₂ 2H ₂ o	Dadex Eternit Ltd. Dadex House, 34-A/1, Block-6, P.E.C.H.S. Shahrah-e-Faisal Karachi
220	6811.4000	Pipes of asbestos-cement	PS: 579 - 1982 (R) ISO 396/ 1 & 2 - 1980 (E)	Corrosion Free, Good Heat insulation, Fire retardant, Termictc proof, Quick & Easy installation	Hydrous Magnesium Silicate 3MgO - 2SiO ₂ 2H ₂ O	Dadex Eternit Ltd. Dadex House, 34-A/1, Block-6, P.E.C.H.S. Shahrah-e-Faisal Karachi
221	6811.8900	Cable Conduits of Cellulose fibre-cement	PS: 428 - 1984 (R) ISO 160 - 1980,ISO 2785-1986,ISO 4483-1979	ISO 4480-1979,ISO 4482-1979,ISO-7336-1984 Resistance to corrosion, Resistance against Abrasion Hydraulic Characteristics	Hydrous Magnesium Silicate 3MgO 2SiO ₂ 2H ₂ O	Dadex Eternit Ltd. Dadex House, 34-A/1, Block-6, P.E.C.H.S. Shahrah-e-Faisal Karachi
222	6812.9900	Gaskets of asbestos	Asbestos	--	Asbestos + Calcium + Silicon	Sheikh Corporation 52/3 Lytton Road, Lahore.

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
223	6902.1010	Chrome Magnesite Bricks	Chrome Magnesite Bricks	Open porosity (%):16 max Apparent Density(gm / cm ³):2.95 min. Cold Crushing Strength (kg/cm ²):700 min Temp. of Deformation :1500 °C Under Load of 2Kgf/cm ² (°C) Thermal Shock Resistance at:2 thermal 1300 °C (Water Cooling) cycles min. Curvature (Bending Arrow):1 mm max Breakage of Angles :5 mm max Breakage of Ribs (sides):3 mm max	MgO (%) :50 min Cr ₂ O ₃ (%) :20 max SiO ₂ (%) :03 max	Banbhore Ceramics Industries Plot DSU-18, Pakistan Steel Down Stream Industrial Estate Bin Qasim Karachi
224	6902.1010	Refractory bricks, blocks, tile & similar refractory ceramic construction goods	High Alumina castable/refractory for temperature upto 1600 °C - High wear & Alkali resistant silicate refractory. - Magnesite Refractory - High Temperature Zircon Refractory.	--	--	Marshal Ceramics PO Box.77, K.M.8.9, Lahore Side G. T Road Gujranwala General Refractories Landhi Industrial Area, Karachi Commander Ceramics P.O. Box 514, G.T. Road Km 11/12 Atawa, Gujranwala
225	6902.1010	Tar Bonded Dolomite Bricks	Al ₂ O ₃ 40-60% Min or 28% Min. Refractoriness °C 1730Min, 1670 Min., Deformation Temperature (at load of 2 Kgf/cm ²) °C 1400 Min.	--	CaO	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
226	6903.1000	Crucibles	--	--	--	Carborundum Crucibles Industries 14-A Davis Road Lahore Kundun Crucibles Industries 14 KM, Sheikupura Road, Lahore Asian Crucibles Industries 14 KM Sheikupura Road Lahore
227	6903.2010	Cold tundish lining sets, slide gate refractory sets & nozzles	Cold Tundish Lining	Loss on Ignition (%) :07 max Bending Strength (kg / cm ²):30 min Humidity (%) :0.5 max Bulk Density (gm / cm ³): 1.15 min Apparent Porosity(%):45 – 55 Refractoriness(°C):1620 min	SiO ₂ (%):90 min. Al ₂ O ₃ (%):02 max. CaO (%):02 max. MgO(%):01 max. Fe ₂ O ₃ (%):01 max	Banbhore Ceramics Industries Plot DSU-18, Pakistan Steel Down Stream Industrial Estate Bin Qasim Karachi
228	6903.2010	Cold tundish lining sets, slide gate refractory sets & nozzles	Nozzles	Bulk Density(gm / cm ³):3.15 min Apparent Porosity (%):16 max Cold Crushing Strength (kg/cm ²):900 min	Al ₂ O ₃ (%):95 min Fe ₂ O ₃ (%):0.2 max	Banbhore Ceramics Industries Plot DSU-18, Pakistan Steel Down Stream Industrial Estate Bin Qasim Karachi
229	6903.2010	Cold tundish lining sets, slide gate refractory sets & nozzles	Well-Block	Bulk Density(gm / cm ³):2.60 min Apparent Porosity (%) :16 max Cold Crushing Strength (kg/cm ²):900 min	Al ₂ O ₃ (%): 93 min K ₂ O(%):0.5 max Na ₂ O(%): :0.1 max Fe ₂ O ₃ (%):0.2 max	Banbhore Ceramics Industries Plot DSU-18, Pakistan Steel Down Stream Industrial Estate Bin Qasim Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
230	6903.2010	Cold tundish lining sets, slide gate refractory sets & nozzles	Slide Gate Plates	Apparent Porosity (%):2.0 – 6.0 Bulk Density (gm / cm ³):3.18 - 3.22 Cold Crushing Strength):1000 - 1100 (Kg / cm ²)	Al ₂ O ₃ (%):73 – 76 Carbon(%):05 – 07 ZrO ₂ (%):08 – 11	Banbhore Ceramics Industries Plot DSU-18, Pakistan Steel Down Stream Industrial Estate Bin Qasim Karachi
231	6907.1000	Tiles, cubes and similar articles, whether or not rectangular, the largest surface area of which is capable of being enclosed in a square the side of which is less than 7cm	All types of unglazed tiles, cubes and similar articles the side of which is less than 7cm or 2.755 inches	Unglazed tiles are just biscuit of tiles without any finishing process of glazing or polishing.	--	Master Tiles & Ceramics Ind. Ltd. G.T. Road, Gujranwala Shabbir Tiles & Ceramics Ltd. 15th Mile Stone, National Highway, Landhi, Karachi – 75120 Karam Ceramics Limited B-C 6, Block – 5, Scheme – 5, Kehkashan, Clifton, Karachi Sonex Tiles & Ceramics Ind. Ltd. 19-K.M.,Lahore Side, (Near Kamoke), G.T.Road, Gujranwala Frontier Ceramics Ltd 29-Industrial Estate, Jamrud Road, Peshawar. Swat Ceramcis (Pvt) Ltd. Nowshehra
232	6907.9000	All Types of Unglazed tiles, cubes and similar articles the side of which is more than 7cm or 2.755 inches	Unglazed tiles are just biscuit of tiles without any finishing process of glazing or polishing	--	--	Master Tiles & Ceramics Ind. Ltd. G.T. Road, Gujranwala Shabbir Tiles & Ceramics Ltd. 15th Mile Stone, National Highway, Landhi, Karachi – 75120 Karam Ceramics Limited B-C 6, Block – 5, Scheme – 5, Kehkashan, Clifton, Karachi Sonex Tiles & Ceramics Ind. Ltd. 19-K.M.,Lahore Side, (Near Kamoke), G.T.Road, Gujranwala Frontier Ceramics Ltd 29-Industrial Estate, Jamrud Road, Peshawar. Swat Ceramcis (Pvt) Ltd. Nowshehra
233	6908.1000	Mosaic cubes, Porcelain Tiles, ceramic	Glazed/ plain, Wall and Floor Tiles	--	--	Emco Industries Limited 2nd Floor, Saudi Pak House, 14-Egerton Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
234	6908.1000	Tiles, cubes and similar articles, whether or not rectangular, the largest surface area of which is capable of being enclosed in a square the side of which is less than 7cm	All types of glazed tiles, cubes and similar articles the side of which is less than 7cm or 2.755 inches	Glazed tiles mean biscuit with finishing process of either glazing or polishing.	--	<p>Master Tiles & Ceramics Ind. Ltd. G.T. Road, Gujranwala</p> <p>Shabbir Tiles & Ceramics Ltd. 15th Mile Stone, National Highway, Landhi, Karachi – 75120</p> <p>Karam Ceramics Limited B-C 6, Block – 5, Scheme – 5, Kehkashan, Clifton, Karachi</p> <p>Sonex Tiles & Ceramics Ind. Ltd. 19-K.M.,Lahore Side, (Near Kamoke), G.T.Road, Gujranwala</p> <p>Frontier Ceramics Ltd 29-Industrial Estate, Jamrud Road, Peshawar.</p> <p>Swat Ceramcis (Pvt) Ltd. Nowshehra</p>
235	6908.9010	Tiles	Porcelain Tiles	--	--	<p>Emco Industries Limited 2nd Floor, Saudi Pak House, 14-Egerton Road, Lahore</p> <p>Master Group of Industries GT Road, Gujranwala</p>
236	6908.9010	Tiles	All types of glazed tiles and similar articles the side of which is less than 7cm or 2.755 inches	Glazed tiles mean biscuit with finishing process of either glazing or polishing.	--	<p>Master Tiles & Ceramics Ind. Ltd. G.T. Road, Gujranwala</p> <p>Shabbir Tiles & Ceramics Ltd. 15th Mile Stone, National Highway, Landhi, Karachi – 75120</p> <p>Karam Ceramics Limited B-C 6, Block – 5, Scheme – 5, Kehkashan, Clifton, Karachi</p> <p>Sonex Tiles & Ceramics Ind. Ltd. 19-K.M.,Lahore Side, (Near Kamoke), G.T.Road, Gujranwala</p> <p>Frontier Ceramics Ltd 29-Industrial Estate, Jamrud Road, Peshawar.</p> <p>Swat Ceramcis (Pvt) Ltd. Nowshehra</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
237	6908.9090	Cubes	All types of cubes and similar articles the side of which is less than 7cm or 2.755 inches	Glazed tiles mean biscuit with finishing process of either glazing or polishing.	--	Master Tiles & Ceramics Ind. Ltd. G.T. Road, Gujranwala Shabbir Tiles & Ceramics Ltd. 15th Mile Stone, National Highway, Landhi, Karachi – 75120 Karam Ceramics Limited B-C 6, Block – 5, Scheme – 5, Kehkashan, Clifton, Karachi Sonex Tiles & Ceramics Ind. Ltd. 19-K.M.,Lahore Side, (Near Kamoke), G.T.Road, Gujranwala Frontier Ceramics Ltd 29-Industrial Estate, Jamrud Road, Peshawar. Swat Ceramcis (Pvt) Ltd. Nowshehra
238	7002.3910	Unworked Glass Rods	(Neutral Glass Tubing) U.S.P. Type I	--	SiO ₂ , BaO, CaO, Al ₂ O ₃ , Na ₂ O, K ₂ O, B ₂ O ₃ , Fe ₂ O ₃ , TiO ₂	Cornpak Ltd. Plot Nos. 11 & 26, Sector 20, Korangi Industrial Area Karachi - 74900
239	7010.1000	Glass Ampoules for packing or conveyance	United States Pharmacopoeia Neutral Type I Glass	--	SiO ₂ , BaO, CaO, Al ₂ O ₃ , Na ₂ O, K ₂ O, B ₂ O ₃ , Fe ₂ O ₃ , TiO ₂	Cornpak Ltd. Plot Nos. 11 & 26, Sector 20, Korangi Industrial Area Karachi - 74900
240	7019.4000	Woven Fabrics of glass fibre rovings	Fiberglass Products	--	--	Fibre Tech 28-E, Safe way House, South Park Avenue, Phase 2, Ext DHA, Karachi
241	7019.9090	Glass Reinforced Epoxy (GRE) Pipes	D-2996	As per Standard	As per Standard	Business & Engineering Trends 100-A Wazir Ali Road, Upper Mall Opposite Lahore Gymkhana Lahore
242	7019.9090	Fiber Glass Tank	D-4097-01 D-3299-00	As per Standard	As per Standard	Business & Engineering Trends 100-A Wazir Ali Road, Upper Mall Opposite Lahore Gymkhana Lahore
243	7020.0090	Glass Reinforced Polyester (GRP) Pipes	upto 40 ft.; dia upto 2600mm (102") PN6-24 bars for Sewerage and water drinking lines.	Food Grade	--	Creative Engineering (Pvt) Ltd. 160/ S, Q.I.E. Kot Lakhpat Lahore
244	7020.0090	Glass Reinforced Polyester (GRP) Pipes	ASTM D-351704 D3262-04 D-3754-04	As per Standard	As per Standard	Business & Engineering Trends 100-A Wazir Ali Road, Upper Mall Opposite Lahore Gymkhana Lahore
245	7201.1000	Pig Iron, non-alloy, excluding that of Foundry Grade	C=4.3% (Max), Si=0.5% (Min) P=0.16% (Max), S & Mn=1% each Notches=2 (Min), Wt upto 45 Kg. All types of Conversion Pig Iron (CPI)	Pig Weight 45 Kg (Max), Width of Pig 115-200 mm, Thickness of Pig 60-100mm, Number of Notches 3, Packing in loose.	Sulphur more than 0.06% in FPI make it special & in CPI more then 0.07% will make it special	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
246	7202.1100	Ferro Manganese High Carbon	Mn: 60% & above C: 6-7% Si: 3% max	--	--	Fine Steel (Mughal Steel Group) 17 KM, Sheikhpura Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
247	7202.2100	Ferro Silicon	FeSi 75 Al 2	Crystallized lumps of size 10-80mm + 10%	Silicon 72-80% Aluminium 1-3% Carbon 0.2% max Phosphorus 0.05% max Sulphur 0.04%	Al-Abbas Sugar Mills Ltd. 55 Km, Main National Highway, Dhabeji, Distt, Thatta
248	7202.2100 7202.2900	Ferro Silicon	Si: 55% & above	--	--	Fine Steel (Mughal Steel Group) 17 KM, Sheikhpura Road, Lahore
249	7202.3000	Ferro Silicon Manganese Low Carbon	Mn: 60% & Above C: 0.5 - 2%	--	--	Fine Steel (Mughal Steel Group) 17 KM, Sheikhpura Road, Lahore
250	7202.3000	Ferro Silicon Manganese High Carbon	Mn: 60% & above C: More than 2%	--	--	Fine Steel (Mughal Steel Group) 17 KM, Sheikhpura Road, Lahore
251	7202.4100 7202.4900	Ferro Chrome	Cr: 55% min. C: 2% min.	--	--	Fine Steel (Mughal Steel Group) 17 KM, Sheikhpura Road, Lahore
252	7204.5000	Ingots, from remelting scrap of iron or steel	Ms Billets Graded and Non Graded Type: Continuous closed casted on high frequency induction furnaces. Size: 4" width x 4" height x 12" length Specs: Being used in all sorts of steel structural products.	--	--	Khawaja Steels 4 KM, Dewan Road, Eminabad, Gujranwala
253	7206.1000	Ingots for re-rolling	Size 50X50 to 15X150mm Forgeable ingots in carbon steel upto 50 tons weight	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila
254	7206.1000 7206.9000	Steel Ingots of Iron and non alloy steel in primary forms (excluding iron of heading 72.03)	Highly refined bottom poured ingots in flat rectangular, round and square sections. Weight : 500kg to 14,000kg. Manufactured as per international quality standards like JIS, Bohler, AISI, DIN, Chinese etc	Air cooled, stress relieved or annealed	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
255	7206.9000	Cast iron	Casting upto 28 tons (single piece) Steel (low alloyed) casting upto 32 tons (single piece)	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
256	7206.9000	i) Ingots and Billets of plain carbon steel, spring steels alloys for re-rolling. ii) Forgable Ingots of plain carbon steel iii) Semi-finished products of iron & non-alloy steel iv) Ingots & others primary forms of iron and non alloy steel (excluding iron of heading No.72.03)	50mm x 50mm to 150mm x 150mm Upto 50 tons weight (single piece) Ingots upto 9000 Kg weight cast in mould/ESR processed.	Structural Steel Billets, Reinforcement Bar Steel Billets, Wire Rod Steel Billets, Cold Heading Steel Billets, Baling Hoops Steel Billets, Spring Steel Billets, Electrode Steel Billets, Seam-Less Steel Tubes & Pipes	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
257	7207.1110	Concast billets	Concast billets of square upto 150mm	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi
258	7207.1110 7207.1190	Con. Cast billet, square	Con Cast (CC Billet) Square : 110, 125 & 150 mm. Length : 4000 - 1200 mm	Cont cast billet as per international standard.	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
259	7207.1210	Con cast billet, Round	Con Cast (CC Billet) Round : Ø110 mm. Length : 4000 - 1200 mm	Cont cast billet as per international standard.	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
260	7207.1210	Structural steel billet for reinforcement steel bars	Sizez: 100mmx100mm, 120mm x 120mm and 150mmx150mm ASTM A-615 & BS 4449	--	Carbon (C) 0.200 to 0.250; Manganese (Mn) 1.250 Phosphorus (P) 0.00; Silicon (Si) 0.300; Sulphur (S) 0.002	S.H.Steel Re Rolling Mills Plot 50, St 12 I-9 Industrial Area Islamabad
261	7207.1910 7207.2010	Con. Cast Bloom	Con Cast (CC Bloom) Square : 230 mm. Length : 4000 - 1200 mm	Cont cast bloom as per international standard.	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
262	7207.1920 7207.1990 7207.2020 7207.2090	Steel Billets	Con Cast (CC Billet) Square : 110, 125 & 150 mm. Round : Ø110 mm Length : 4000 - 1200 mm. Hot rolled billet Square : 75, 80, 90, 100, 130 mm Length : 4000 - 6000 mm	Cont cast & rolled billet as per international standard.	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
263	7207.1990	Semi finished products of iron or non alloy steel.	Concast and hot rolled/square upto 150 x 150 mm and round upto 150 mm dia forged upto 200 mm rolling section.	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000 Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
264	7209.1510	Cold Rolled Coils Of a thickness 3 mm or more	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
265	7209.1590	Cold Rolled Coils Of a thickness 3 mm or more	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
266	7209.1610	Cold Rolled Coils Of a thickness exceeding 1 mm but less than 3 mm:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
267	7209.1690	Cold Rolled Coils Of a thickness exceeding 1 mm but less than 3 mm:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
268	7209.1710	Cold Rolled Coils Of a thickness of 0.5 mm or more but not exceeding 1 mm:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
269	7209.1790	Cold Rolled Coils Of a thickness of 0.5 mm or more but not exceeding 1 mm:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
270	7209.1810	Cold Rolled Coils Of thickness of less than 0.5 mm:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
271	7209.1890	Cold Rolled Coils Of thickness of less than 0.5 mm:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
272	7209.2510	Cold Rolled of a thickness of 3mm or more (Not in Coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
273	7209.2590	Cold Rolled of a thickness of 3mm or more (Not in Coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
274	7209.2610	Cold Rolled Of a thickness of exceeding 1 mm but less than 3 mm: (Not in Coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
275	7209.2690	Cold Rolled Of a thickness of exceeding 1 mm but less than 3 mm: (Not in Coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
276	7209.2710	Cold Rolled Of thickness of 0.5 mm or more but not exceeding 1 mm: (Not in Coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
277	7209.2790	Cold Rolled Of thickness of 0.5 mm or more but not exceeding 1 mm: (Not in Coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
278	7209.2810	Cold Rolled Of thickness of less than 0.5 mm: (Not in coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
279	7209.2890	Cold Rolled Of thickness of less than 0.5 mm: (Not in coils)	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
280	7209.9010	Cold Rolled Coils Of 3 mm and above:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
281	7209.9090	Cold Rolled Coils Of 3 mm and above:	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
282	7210.1210	Electrolytic Tin Plate	Tin plates, of types: - SRT1 to SR T5, having thickness 0.14 mm to 0.48 mm and width up to 965 mm - DR 8 to DR 10, having a thickness of 0.13 mm to 0.4 mm and width upto 965 mm Conforming to European Standards EN 10002-1-1990 & EN 10203 – 1-1991	--	--	Siddiqsons Tin Plate Limited D-53, Textile Avenue, S.I.T.E. Karachi – 75700
283	7210.1290	Electrolytic Tin Plate	Tin plates, of types: - SRT1 to SR T5, having thickness 0.14 mm to 0.48 mm and width up to 965 mm - DR 8 to DR 10, having a thickness of 0.13 mm to 0.4 mm and width upto 965 mm Conforming to European Standards EN 10002-1-1990 & EN 10203 – 1-1991	--	--	Siddiqsons Tin Plate Limited D-53, Textile Avenue, S.I.T.E. Karachi – 75700
284	7210.4110	Corrugated:	Hot Dip Zinc Coated Corrugated Sheets As per all International Standards	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
285	7210.4190	Corrugated:	Hot Dip Zinc Coated Corrugated Sheets As per all International Standards	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
286	7210.4910	Galvanized Steel	Hot Dip Zinc Coated Steel Sheets, Strips and Coils As per JIS G-3302, ASTM A-653	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
287	7210.4990	Galvanized Steel	Hot Dip Zinc Coated Steel Sheets, Strips and Coils As per JIS G-3302, ASTM A-653	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
288	7210.7020	Color Coated	Continuously organic coated (color coated) steel flat products including Color Coated Corrugated As per EN10169, JIS G-3312, ASTM A-755	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
289	7210.7090	Color Coated	Continuously organic coated (color coated) steel flat products including Color Coated Corrugated As per EN10169, JIS G-3312, ASTM A-755	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
290	7210.9010	Other	Continuously organic coated (color coated) steel flat products including Color Coated Corrugated As per EN10169, JIS G-3312, ASTM A-755	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
291	7210.9090	Other	Continuously organic coated (color coated) steel flat products including Color Coated Corrugated As per EN10169, JIS G-3312, ASTM A-755	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
292	7211.1310 7211.1390	Steel sheets & plates (Hot rolled)	Width : 950 mm - 1500 mm Length : Up to 3000 mm	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
293	7211.1410 7211.1490	Steel plates & sheets (Hot rolled)	Width : 1500 mm (max.) Length : Up to 12000 mm, depending upon thickness & width	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
294	7211.1900	Iron or Steel Strips	CR steel strips thickness range: 04 to 2.8mm sizes: available in all types and sizes	--	--	International Industries Ltd. 101 Beaumont Plaza, 10 Beaumont Road, Karachi
295	7211.1910	Cold Rolled Steel strips of thickness below 0.5mm and upto 100 mm wide	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
296	7211.1920	Cold Rolled Steel strips of thickness exceeding 0.5mm	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
297	7211.1920	Flat-rolled product of Iron/non-alloy steel	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per Standard	As per Standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi
298	7211.1990	Cold Rolled Steel strips of thickness exceeding 0.5mm	Cold Rolled Carbon Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
299	7211.1990	Flat-rolled product of Iron/non-alloy steel	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per Standard	As per Standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi
300	7212.3010	Galvanized Steel Strips of a width less than 600 mm	Hot Dip Zinc Coated Steel Sheets, Strips and Coils As per JIS G-3302, ASTM A-653	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
301	7212.3090	Galvanized Steel Strips of a width less than 600 mm	Hot Dip Zinc Coated Steel Sheets, Strips and Coils As per JIS G-3302, ASTM A-653	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
302	7212.5010	Color Steel Strips of a width less than 600 mm	Continuously organic coated (color coated) steel flat products including Color Coated Corrugated As per EN10169, JIS G-3312, ASTM A-755	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
303	7212.5090	Color Steel Strips of a width less than 600 mm	Continuously organic coated (color coated) steel flat products including Color Coated Corrugated As per EN10169, JIS G-3312, ASTM A-755	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
304	7212.6090	M.S. Flat Bar (Hot Rolled)	Range 32 to 300mm Length = 6 to 12 Mtr.	ASTM A-36, SR-24, AISI-1010 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi.
305	7213.1010	M.S. Bars, Deformed Bar & Tor Bar (Hot Rolled)	Range 25 to 60mm Length = 6 to 12 Mtr.	ASTM A-36, SR-24, G-60 & 40 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi. Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi
306	7213.1010	M.S. Bars, Deformed Bar & Tor Bar (Hot Rolled)	Range 25 to 60mm Length = 6 to 12 Mtr.	ASTM A-36, SR-24, G-60 & 40 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi. Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi
307	7213.1090	Hot Rolled Deformed Bars of Iron or non-alloy steel	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per standard	As per standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi
308	7213.1090	Hot Rolled Deformed Bars of Iron or non-alloy steel	Hot Rolled; Diameter : 18 - 60 mm Length : 4000 - 8000mm	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpur Karachi
309	7213.1090	Hot Rolled Deformed Bars of Iron or non-alloy steel	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per standard	As per standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
310	7213.1090	Hot Rolled Deformed Bars of Iron or non-alloy steel	ASTM grade 60, BS4449, DIN 488	ASTM grade 60, Tensile Strength 450N/mm sq, Yield Strength 680N/mm sq	C> 0.32%, Mn >1.3%,	Dost Steels (Pvt) Ltd. 101 Chapal Plaza, Hasrat Mohani Road, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi
311	7213.1090	Hot Rolled Bars and rods in irregularly wound coils of iron or non-alloy steel	Coils of deformed steel. Diameter of greater than 5.5 mm and less 12 mm. Coil weight of greater than 75 kg. Standard: JIG G 3506-80, ASTM A 615-82 (Containing indentations, ribs, grooves or other deformations produced during the rolling process)	longation greater then 20 %. Yield strength greater 30,000 psi.	C: 0.05 % to 0.50 % Mn: 0.30 % to 0.90 % Si: 0.04 % to 0.40 % P: greater than 0.03 % S: greater than 0.03 %	Frontier Foundry (Pvt) Ltd., Plot No. 166, Road B-7, Hayatabad Industrial Estate, Peshawar Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi
312	7213.2010	Hot Rolled Bars & Rods of Non-Alloyed (Low/Plain Carbon) Steel (Irregular Wound Coils)	6.4 mm to 60 mm dia	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
313	7213.2010	M.S. Flat Bar (Hot Rolled)	Range 32 to 300mm Length = 6 to 12 Mtr.	ASTM A-36, SR-24, AISI-1010 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi.
314	7213.2090	Hot Rolled Bars & Rods of Non-Alloyed (Low/Plain Carbon) Steel (Irregular Wound Coils)	6.4 mm to 60 mm dia	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
315	7213.2090	Hot Rolled Bars and rods in irregularly wound coils of iron or non-alloy steel (Other, of free cutting steel)	Steel wire-rod (with no indentation or ribs). Diameter of greater than 5.5 mm and less 12 mm. Coil weight of greater than 75 kg. Standard: JIG G 3506-80, ASTM A 615-82	Elongation greater then 20 %. Yield strength greater 30,000 psi.	C: 0.05 % to 0.50 % Mn: 0.30 % to 0.90 % Si: 0.04 % to 0.40 % P: greater than 0.03 % S: greater than 0.03 %	Frontier Foundry (Pvt) Ltd., Plot No. 166, Road B-7, Hayatabad Industrial Estate, Peshawar Abbas Engineering Industries Ltd. DSU-2, Bin Qasim - Karachi – 75000 Abbas Steel Industries (Pvt) Ltd. Plot No. 8, Sector 19, Korangi Industrial Area Karachi
316	7213.9190	Steel Wire Rod	5.5mm to 12 mm SWRH 42A to 42 B, Medium Carbon ASTM. JIS, All International Spec's	Plain Round	SWRH 42 A to 42 B C% = 0.39/0.46, Mn% = 0.40/0.80, P% Max = 0.030, S % Max = 0.030, Si% = 0.15/0.30	Sandal Bar Rolling Mills (Pvt) Ltd. 1st Floor 48 Nishtar Road, Lahore Abbas Engineering Industries Ltd. DSU-2, Bin Qasim - Karachi – 75000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
317	7213.9990	Steel Wire Rod	5.5mm to 12 mm SWRH 42A to 42 B, Medium Carbon ASTM. JIS, All International Spec's	Plain Round	SWRH 42 A to 42 B C% = 0.39/0.46, Mn% = 0.40/0.80, P% Max = 0.030, S % Max = 0.030, Si% = 015/0.30	Sandal Bar Rolling Mills (Pvt) Ltd. 1st Floor 48 Nishtar Road, Lahore
318	7214.1010 7214.1090	Bars, iron or non alloy steel, forged, hot-rolled	Press forging: Shafts : Dia 700 mm (max.) Disc dia : 1500 mm (Max) Length : 8000 mm (max.) Weight : 12 mt. Radial Forging: Square, Round, & Varying section profile, axles of cross section 60 mm to 200 mm and flat 30 - 150 mm & width 60 - 180 mm, Length 4000 - 6000 mm	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
319	7214.1010 7214.1090 7214.2010	Steel Bars	Grade 60 5.5mm to 32mm ASTM. JIS, All International Spec's	Plain Round, Deform Bars & Twisted	Grade 60 C% = 0.28/0.33, Mn% = 1.15/1.35, P% Max = 0.045, S % Max = 0.045, Si% = 0.35 max, (C+Mn)/6% = 0.47/0.55	Sandal Bar Rolling Mills (Pvt) Ltd. 1st Floor 48 Nishtar Road, Lahore Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi
320	7214.2010 7214.2090	Hot rolled, deformed bars	Hot Rolled; Diameter : 12 - 80 mm Length : 4000 - 6000mm	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Sandal Bar Rolling Mills (Pvt) Ltd. 1st Floor 48 Nishtar Road, Lahore Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi
321	7214.2010	Rolled Profiles	Containing indentation ribs, grooves or Others deformations produced during the rolling process or twisted after rolling, 6.4 mm to 60 mm dia	--	--	Shalimar Steel, Karachi Razzaque Steel (Pvt) Ltd.Karachi Amreli Steels (Pvt) Ltd. D - 89, Shershah Road SITE Karachi
322	7214.2090	Rolled Profiles	Containing indentation ribs, grooves or Others deformations produced during the rolling process or twisted after rolling, 6.4 mm to 60 mm dia	--	--	Shalimar Steel, Karachi Razzaque Steel (Pvt) Ltd.Karachi Amreli Steels (Pvt) Ltd. D - 89, Shershah Road SITE Karachi
323	7214.3010	Steel Bars and Rods	Free cutting steel, 6.4 mm to 60 mm dia	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000 Amreli Steels Ltd. D/89, Shershah Road

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
324	7214.3090	Steel Bars and Rods	Free cutting steel, 6.4 mm to 60 mm dia	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000 Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi
325	7214.3010 7214.3090	Bars of free-cutting steel, hot-rolled, forged	Diameter : 18 - 130 mm, Length 4000 - 6000mm	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi
326	7214.9110	Steel Bars and Rods	Rectangular (other than square) Cross Section 6.4 mm to 60 mm dia	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000 Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi
327	7214.9110 7214.9190	Steel Flat Bars	Flat Bars Size : 6 x 40 mm - 20 x 110 mm Length 4000 - 6000mm	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi
328	7214.9190	Steel Bars and Rods	Rectangular (other than square) Cross Section 6.4 mm to 60 mm dia	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000 Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
329	7215.1010	Bars and Rods	5.5 mm to 12 mm in coils	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000 ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
330	7215.1090	Bars and Rods	5.5 mm to 12 mm in coils	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000 ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
331	7215.1010 7215.1090 7215.5010 7215.5090	Bars of free-cutting & other alloy steel, cold-formed/ finished	Cold drawn bars; Diameter : 12 - 80 mm Length : 4000 - 6000mm	Black surface	All type of carbon steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
332	7216.1000	Steel Sections (U, I or H) not further worked than hot- rolled, hot- drawn or extruded, of a height of less than 80 mm	- Thickness upto 12 mm (for HR materials), length upto 12 m Blank width 100-600 mm UTS = 275 N/mm ² Excl. those conforming to ASTM A-572 or equivalent. (Blank width 100 to 600 mm and UTS upto 65 Kg/mm ²) Thickness upto 10 mm & size 250 x 250 mm Thickness upto 10 mm and size upto 40 x 250 mm Upto IPN 450 Upto 450 x 450	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
333	7216.1000	Angles Shapes and sections of iron or non-alloy steel	U, I or H sections, not further worked than hot-rolled, hot drawn or extruded, of a height of less than 80mm	(ASTM A-36, SR-24, A572, SRJ 275)		Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
334	7216.2100	L sections, not further worked than hot-rolled, hot drawn or extruded, of a height of less than 80mm	L sections	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
335	7216.2100	Steel Sections, L, hot-rolled, hot-drawn	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per Standard	As per Standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
336	7216.2200	T sections, not further worked than hot-rolled, hot drawn or extruded, of a height of less than 80mm	T sections	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
337	7216.2200	M.S T-Section (Hot Rolled)	Range 50 x 50 to 150 x 150mm Length = 6 to 12 Mtr.	ASTM A-36, SR-24 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
338	7216.3110	U sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	U sections of a height exceeding 150mm Size: 304mm x 100mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
339	7216.3190	U sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	U sections of a height above 80mm upto 150mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
340	7216.3210	I sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	I sections of a height exceeding 200mm Size: 457mm x 175mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
341	7216.3290	M.S. I-Beam (Hot Rolled)	Range 100 x 50 to 300 x 150mm Length = 6 to 12 Mtr.	ASTM A-36 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
342	7216.3290	I sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	I sections of a height above 80mm upto 200mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
343	7216.3310	H sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	H sections of a height exceeding 250mm Size: 254mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
344	7216.3390	Steel Sections, H, hot-rolled, hot-drawn	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per Standard	As per Standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
345	7216.3390	M.S. H-Beam (Hot Rolled)	Range 100 x 100 to 200 x 200mm Length = 6 to 12 Mtr.	ASTM A-36 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
346	7216.3390	H sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	H sections of a height above 80mm upto 250mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
347	7216.4010	L or T sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	of a height exceeding 150mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
348	7216.4090	L or T sections, not further worked than hot-rolled, hot drawn or extruded, of a height of 80mm or more	of a height above 80mm upto 150mm	(ASTM A-36, SR-24, A572, SRJ 275)	--	Ishtiaq Steel Industry 43-B PECO Road Badami Bagh Lahore. ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
349	7216.5000	Steel Sections	- Thickness upto 12 mm (for HR materials), length upto 12 m Blank width 100-600 mm UTS = 275 N/mm ² Excl. those conforming to ASTM A-572 or equivalent. (Blank width 100 to 600 mm and UTS upto 65 Kg/mm ²) Thickness upto 10 mm & size 250 x 250 mm Thickness upto 10 mm and size upto 40 x 250 mm Upto IPN 450 Upto 450 x 450	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
350	7216.9100	Steel Sections	- Thickness upto 12 mm (for HR materials), length upto 12 m Blank width 100-600 mm UTS = 275 N/mm ² Excl. those conforming to ASTM A-572 or equivalent. (Blank width 100 to 600 mm and UTS upto 65 Kg/mm ²) Thickness upto 10 mm & size 250 x 250 mm Thickness upto 10 mm and size upto 40 x 250 mm Upto IPN 450 Upto 450 x 450	--	--	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
351	7217.1000	Wire, Iron or non-alloy steel, not plated or coated,	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per Standard	As per Standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
352	7217.2000	Zinc or Zinc Alloy Coated Wire for armouring of power cables/ Zinc Coated Steel Wire for ACSR/ Galvanized Wire	BS EN10257-1, ASTM A-164, ASTM B633, ASTM A121, ASTM B498, BS 4565, BS 3533	As per Standard	As per Standard	Pakistan Wire Industries E-51, Textile Avenue, SITE, Karachi
353	7218.1000	Ingots & Billets in primary forms, stainless steel	Highly refined bottom poured ingots in flat rectangular, round and square sections. Weight : 500kg to 14,000kg. Manufactured as per international quality standards like JIS, Bohler, AISI, DIN, Chinese etc.	Air cooled, stress relieved or annealed, bottom poured ingots	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
354	7218.9100	Stainless Steel Ingots	- Ingots and other primary forms - Of rectangular (Other than square cross section)	--	--	Mughal Steel 77 K.M. Sheikhpura Road, Lahore
355	7218.9100 7218.9900	ESR Steel Ingots	ESR Ingots M-300/400/600/750 Diameter 315, 395, 595, 720 mm Length : 3000 mm (max.), Weight : 9000 Kg. (max.)	Air cooled, stress relieved or annealed	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
356	7219.2200	Flat Rolled plates of stainless steel	Thickness upto 10 mm, width upto 700 mm and length upto 3 M (Although thicker plates, flats upto 60 mm are also made in non standard sizes) Conforming to all grades of AISI 300 & 400 series and equivalent	--	--	Mughal Steel 77 K.M. Sheikhpura Road, Lahore
357	7219.2390	Sheets of stainless steel	0.35-6 mm thick, width upto .75 M and length upto 3 M.	--	--	Mughal Steel 77 K.M. Sheikhpura Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
358	7219.2100 7219.2200 7219.2310 7219.2390 7219.3210 7219.3290 7220.1100 7220.1210 7220.1290	Flat-rolled product, stainless steel	Plates (Hot rolled) Thickness : 10 mm (min.), Width: 1500 mm (max.) Length ; 4000 - 6000 mm Sheets (Hot rolled) Thickness : 3 mm (max.), Width : 950 mm (max.) Length : 3000 mm (max.)	Black surface	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
359	7219.3100 7219.3210 7219.3290 7219.3310 7219.3390 7219.3410 7219.3490 7219.3510 7219.3590 7219.9010 7219.9090	Flat Cold Rolled Products of Stainless Steel Sheet & Coil	Width 500mm to 750mm of thickness 0.5mm to 4.75mm	Cold Rolled	Pure stainless steel	AHN Steel (Pvt) Ltd. 10-Abbot Road Lahore
360	7220.1290	Strips of stainless steel.	1-6 mm thick, width 200 mm	--	--	Mughal Steel 77 K.M. Sheikhpura Road, Lahore
361	7220.2010 7220.2090 7220.9010 7220.9090	Flat Cold Rolled Products of Stainless Steel Sheet & Coil	Width 500mm to 750mm of thickness 0.5mm to 4.75mm	Cold Rolled	Pure stainless steel	AHN Steel (Pvt) Ltd. 10-Abbot Road Lahore
362	7222.1100	Steel Round Bars	Diameter : 18 - 130 mm, Length 4000 - 6000mm	Black surface	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
363	7222.1900	Bars and rods of stainless steel	- Of circular cross section - Bars & rods, not further worked than cold formed or cold finished - Other bars & rods Dia 20 mm and above	--	--	Mughal Steel 77 K.M. Sheikhpura Road, Lahore G.M. Steel, Lahore
364	7222.1900	Bars of stainless steel, hot-rolled	Flat Bars Size : 6 x 40 mm - 20 x 110 mm Length 4000 - 6000mm	Black surface	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
365	7222.2000	Cold draw stainless steel bars	Cold drawn bars; Diameter : 12 - 80 mm Length : 4000 - 6000mm	Bright surface	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
366	7224.1000	Ingots	Highly refined cast ingots and billets in flat rectangular, round and square sections. Weight ranging from 500kg to 14,000kg. Manufactured as per international quality standards like JIS, Bohler, AISI, DIN, Chinese etc	Air cooled, stress relieved or annealed, bottom poured ingots	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
367	7224.9000	ESR steel ingots	ESR Ingots M-300/400/600/750 Diameter 315, 395, 595, 720 mm Length : 3000 mm (max.), Weight : 9000 Kg. (max.)	Air cooled, stress relieved or annealed	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
368	7225.5000	Cold Rolled of a width of 600 mm or more	Cold Rolled Alloy Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
369	7225.9200	Galvanized Steel	Hot Dip Zinc Coated Alloy Steel Sheets, Strips and Coils As per JIS G-3302, ASTM A-653	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
370	7225.9900	Other / Color Coated Alloy Steel	Hot Dip Zinc Color Coated Alloy Steel Sheets, Strips and Coils, As per JIS G-3302, ASTM A-653	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
371	7225.3000 7225.4000 7226.2000 7226.9100 7226.9900	Plates & Sheets (Hot rolled)	Plates (Hot rolled) Thickness : 10 mm (min.), Width: 1500 mm (max.) Length ; 4000 - 6000 mm Sheets (Hot rolled) Thickness : 3 mm (max.), Width : 950 mm (max.) Length : 3000 mm (max.)	Black surface	All type of stainless steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
372	7226.9200	Cold Rolled of less than 600mm	Cold Rolled Alloy Steel Sheets, Strips and Coils As per JIS G-3141, ASTM A-1008 [Excluding SPCE (SDH) grade and other auto grades]	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
373	7226.9900	Galvanized Steel of less than 600mm	Hot Dip Zinc Coated Alloy Steel Sheets, Strips and Coils, As per JIS G-3302, ASTM A-653	--	--	International Steel Ltd. 399-404, Rehri Road, Landhi Karachi
374	7227.9000	Hot Rolled Bars of alloy steel	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per Standard	As per Standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi
375	7228.1000	High-speed steel, Forged	Radial Forging: Square, Round, & Varying section profile, axles of cross section 60 mm to 200 mm and flat 30 - 150 mm & width 60 - 180 mm, Length 4000 - 6000 mm	Black surface	All type of alloy steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
376	7228.3010	Case hardening steel, Hot rolled bars	Hot Rolled Bars; Diameter : 18 - 130 mm Length : 4000 - 6000mm	Black surface, See Annex-II	All type of alloy steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
377	7228.4000	Alloy steel, Forged bars	Press forging: Shafts : Dia 700 mm (max.) Disc dia : 1500 mm (Max) Length : 8000 mm (max.) Weight : 12 mt. Radial Forging: Square, Round, & Varying section profile, axles of cross section 60 mm to 200 mm and flat 30 - 150 mm & width 60 - 180 mm, Length 4000 - 6000 mm	Black surface/ Machined	All type of alloy steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
378	7228.5000	Alloy steel, Cold drawn bars	Cold drawn bars; Diameter : 12 - 80 mm Length : 4000 - 6000mm	Bright surface	All type of alloy steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
379	7228.7000	Alloy Steel Angles	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	As per Standard	As per Standard	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi
380	7228.2010 7228.2090	Silico-manganese steel, Hot rolled bars	Hot Rolled Bars; Diameter : 18 - 130 mm Length : 4000 - 6000mm Flat Bars Size : 6 x 40 mm - 20 x 110 mm Length 4000 - 6000mm	Black surface	All type of alloy steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
381	7228.3090 7228.6000	Other alloy steel, Hot rolled bars	Hot Rolled Bars; Diameter : 18 - 130 mm Length : 4000 - 6000mm Flat Bars Size : 6 x 40 mm - 20 x 110 mm Length 4000 - 6000mm	Black surface	All type of alloy steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghipir Karachi Amreli Steels Ltd. D/89, Shershah Road SITE, Karachi Agha Steel Industries Plot No. NWIZ/I/P-133(SP-6) D-2 Port Qasim Authority, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
382	7302.4000	Fish-plates, iron or steel	Fish Plates for Railways	Fish Plate Combination, Joggled Fish Plate, Slotted Fish Plates and Fish Plate bolts and nuts etc.	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi
383	7303.0000	Cast Iron and Ductile Pipes	B.S.S 2035 for cast iron and I.S.O 2531 for ductile Iron Pipes [Excluding ASTM Standard Pipes]	Cast Iron and Ductile Iron	Grade 14 Mechanite Type GD and NF A 38-012	Ghulam Mohi-ud-Din & Sons, 6 Rehman Gali, Railway Road, Lahore
384	7304.1100	Line Pipe for oil or gas pipelines (Stainless Steel)	Seamless Steel Line Pipes of All Kind used for Oil & Gas Pipelines with or with out 3 layer Polyethylene /polypropylene / Fusion Bond Coating. Specification: API 9 Cr, API 13 Cr. Sizes: 0.405" to 10.750" Wall Thickness: 1.73mm to 15.9mm Length: SRL & DRL (excluding internally coated pipes)	--	--	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
385	7304.1900	Seamless Steel Line Pipes (unthreaded)	Seamless Steel Line Pipes of All Kind used for Oil & Gas Pipelines with or with out 3 layer Polyethylene /polypropylene / Fusion Bond Coating. Specification: API 5L All Grades Sizes: 1/8 Inch to 10 Inch Nominal Dia. (excluding internally coated pipes)	As per required standard/ specification	As per required standard/ specification	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
386	7304.2900	Seamless Pipes (unthreaded)	Casing & Tubing of a kind used in Drilling for Oil & Gas. Specification: API 5 CT All Grades Sizes:1/8 inch to 10 inch nominal dia. (excluding internally coated pipes)	As per required standard/ specification	As per required standard/ specification	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
387	7304.3100	Pipes, Iron or non-alloy steel (unthreaded)	Seamless Steel Pipes / Tubes of other cross-section, of iron or non-alloy steel. Specification : ASTM A 53 / ASTM A 106 , ASTM A 192, ASTM A 199, ASTM A 210, ASTM A 213, ASTM A 519, DIN 2391, DIN 2440, DIN 2441, DIN 2448, DIN 1629, DIN 1630, DIN 17173 / 2448, DIN 17175 / 2448 JIS G 3464, JIS G 3444, BS – 1387. BS 3059, BS, 3059/2, BS 1775, BS 6323, NFA 49 – 112, NFA 49 – 1445, NFA 49-211 UNI 8863; Sizes: 10.3mm to 273mm (excluding internally coated pipes)	As per required standard/ specification	As per required standard/ specification	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
388	7304.3900	Pipes of circular cross-section, of iron or non-alloy steel	Specification: ASTM A 53 / ASTM A 106 , ASTM A 192, ASTM A 199, ASTM A 210, ASTM A 213, ASTM A 519. DIN 2391, DIN 2440, DIN 2441, DIN 2448, DIN 1629, DIN 1630, DIN 17173 / 2448, DIN 17175 / 2448 JIS G 3464, JIS G 3444 BS – 1387. BS 3059, BS, 3059/2, BS 1775, BS 6323 NFA 49 – 112, NFA 49 – 1445, NFA 49-211 UNI 8863 Sizes : 10.3 mm to 273mm (excluding internally coated pipes)	As per required standard/ specification	As per required standard/ specification	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
389	7304.4100 7304.4900	Cold Drawn or Cold Rolled (Cold Reduced) Pipes / Tubes	Seamless Steel Pipes/ Tubes other cross- section, of iron alloy steel, cold drawn or cold rolled. Specification: ASTM A 53, ASTM A 106, ASTM A 179, ASTM A 192, ASTM A 210, ASTM A 519, API 5L, DIN 17175, JIS STB 35S Sizes: 10.3mm to 273mm (excluding internally coated pipes)	--	--	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
390	7304.5100	Pipes of Iron or non-alloy steel (unthreaded)	Seamless Steel Pipes / Tubes other cross-section, of iron alloy steel, cold drawn or cold rolled. Specification: ASTM A 333, ASTM A 334, ASTM A 335, ASTM A 519. Sizes: From 10.3mm to 273mm (excluding internally coated pipes)	As per required standard/ specification	As per required standard/ specification	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
391	7304.5900	Tubes of alloy steel, seamless circular cross-section (unthreaded)	Specification: ASTM A 333, ASTM A 334, ASTM A 335, ASTM A 519. Sizes : From 10.3mm to 273mm (excluding internally coated pipes)	As per required standard/ specification	As per required standard/ specification	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
392	7304.9000	Pipes of Iron or steel, seamless (unthreaded)	Specification: ASTM A 333, ASTM A 334, ASTM A 335, ASTM A 519. Sizes: From 10.3mm to 273mm (excluding internally coated pipes)	As per required standard/ specification	As per required standard/ specification	Huffaz Seamless Pipe Industries Ltd. 207-210 2nd Floor , Mashriq Centre Block-14, Gulshan-e-Iqbal, Karachi
393	7305.1100	Longitudinally Welded Pipes	ASTM A-134, ASTM A-381, ASTM A-409, ASTM A-589, ASTM A-671, ASTM A-672, ASTM A-139, ASTM A-252, BS-6323, ASTM A-139, A-120, A-653	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
394	7305.1100	Welded Steel Linepipe	M.S. and Galvanized Steel Line Pipes (Electric Resistance Welding) from 1/2" to 18" BSS 1387/1985, API 5L (PSLI), ASTM A53	HR-1, HR-2, HR-3, HR-4, HR-235, HR-274, API 5L-B API 5L X42	--	Jamal Pipe Industries (Pvt) Ltd; 88-Railway Road, Lahore
395	7305.1100	Helical Seam Submerged - Arc Welded Pipes (Spiral Welded Pipes)	219.mm upto 2438. mm in thickness of 4.0mm and upto 25.4mm and API Steel Grade Upto X-80 PSL-2 According to API-DIN-BS-AWWA-ASTM Standard. (Protective Coating both internal as well as external coating of these pipes i.e. 3 layer Poly Ethylene/ Poly Propylene Coating as per DIN 30670, CSA Z 425.20 and CSA Z 245.21]	As per API 5L	According to API Specs	Data Steel Pipe Industries (Pvt.) Ltd. Ibrahim Building, 20-West Wharf Road, Karachi
396	7305.1100	Steel Line Pipe	<u>Spirally welded (Submerged arc Welded):</u> a) Bare: Size : 6" to 126" dia, Grade upto X-80 API-5L ASTM and BS specification b) Coated with 3 layers: Polyethylene, /Polypropylene, Copolymer(Adhesive),Fusion Bonded Epoxy for 6" to 60" Dia Linepipe <u>Electric Welded</u> a) Bare: Size: ½ to 12" , Electric Resistance Welded (ERW), Electric Induction Welded (EIW) (straight seam), upto Grade API X-52, ASTM, BS Specification b) Galvanized Iron., Electric Resistance ERW and Electric Induction EIW, ASTM, and BS Standard	As per Table 5 3 A and 3 B of API Specification 5 L, ASTM and BS Specifications. As per table 3A of API. Specification 5L, ASTM and BS Specifications	As per table 2A and 2B of API specification 5L, ASTM and BS specifications As per table 2A of API specification-5L, ASTM of BS Specification	- Ramna Pipe Lahore - Shalimar Pipe Mills Lahore - Indus Steel Pipes Ltd. 7th Floor, PIC Tower, 32-A Lalazar Drive Karachi - Shashi Steel Pipe Works, Karachi
397	7305.1900	Line Pipe for oil or gas pipelines	Longitudinally Welded Pipes: ASTM A-139, A-671, A-672, A-381, A-120, A-653, A-A-252, A-409, BS-6323	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
398	7305.3100	Steel Line Pipe	Longitudinally Welded Pipes: ASTM A-139, A-671, A-672, A-381, A-120, A-653, A-A-252, A-409, BS-6323	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
399	7305.3100	Steel Line Pipe	Longitudinally Welded Pipes: ½" to 12-3/4" dia ERW/EIW Grade: A25 – X-60, PSL – 1 & 2; API 5L [Excluding Alloy Steel, NACE Compliant]	As Per API Specification 5L(43rd Edition)	As Per API specification 5L (43rd Edition)	BBJ Pipe Industries (Pvt) Ltd. 23rd, 1st Floor, Bilal Centre,Nicholson Road, Lahore
400	7305.3100	Carbon Steel Pipe/ Coating	8" to 90" diameter, wall thickness 4mm to 19.1mm, API 5L grade B to X80; PSL-1 & PSL-2; 3Layer Polyolefin Coating Coating Range 4" to 56" diameter [Excluding Alloy Steel, NACE Compliant]	As per API 5L Grade B to X80 or equivalent PSL-1 & PSL-2	As per API 5L, Grade B X80 OR equivalent PSL-1 & PSL-2	Crescent Steel and Allied Product Ltd. 9th Floor, SIDCO Avenue Centre, 264-RA Lines, Karachi-74400

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
401	7306.1900	Pipes, Line, Iron or steel	<p>(l) Wellhead completion equipment parts components and consumables used for drilling and production of oil and gas from a well onshore or off shore. (excluding following spares) Ring Gaskets, Retainers, Spacers, Seals, Gland Packing, NX Bushing, Redress Kits, Cad plated Nuts & Studs</p> <p>a) <u>Wellhead Assemblies as per API 6A Specs. For the following items:</u></p> <p>i) Casing head housing ii) Casing head spool iii) Casing hangers iv) Side outlet valves v) Wear bushings vi) Flanges (API 6A) vii) Secondary seals viii) Testing tools ix) Accessories like riser, spacers spool, mud lines and suspension systems</p> <p>b) <u>Tubing Head Spool:</u> - Secondary seal assembly, - Tubing hangers - Side outlet valves - Flanges (API 6A) - Tubing head adapters, E13 - X-mas tree assemblies - Chokes and accessories like tree caps - Back pressure valves</p> <p>c) <u>Double Studded Adapter:</u> Flanges and secondary seals and other from 1-13/16" to 26-3/4" ID flanges i.e.</p>	<p>Upto 10,000 psi</p> <p>As per API 6A specs.</p> <p>upto 30" 7" - 30" 5' - 30" 1-13/16" to 7-1/16" ID 5" - 30" 1-13/16" to 7-1/16" ID For pressure from 2000 to 10000 psi -do-</p> <p>As Per API 6A Specs.</p> <p>As Per API 6A Specs. from 1-13/16" to 26-3/4" ID</p> <p>As per API 6A only</p>	NACE Compliant	ADOS Pakistan Limited H.No. 88, Main Margalla Road, F-8/2, Khayaban-e-Iqbal Islamabad
402	7306.1900	C.I. Tubes with special Rubber Seals	For Carbonating Tower and for Ammonia Gas Cooler	--	--	Heavy Mechanical Complex Taxila SEFEC Engineering (Pvt) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
403	7306.2900	Casing and Tubing (Unthreaded)	<p>Tubing 1" to 4-1/2" Casing 4-1/2" to 13-3/8" GPI H-40; GP3 P-110; GP4 Q-125; PLS-I (API 5CT) [Excluding internal coated & threaded Alloy Steel Casing and Tubing for High Pressures Rating, Seamless Casing & Tubing, Carbon Steel, Chrome Material & Premium Threads Connections – Duly API Certified].</p>	--	--	BBJ Pipe Industries (Pvt) Ltd. 23rd, 1st Floor, Bilal Centre, Nicholson Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
404	7306.9000	Pipes of Iron or steel	Galvanized pipes. Diameters: 15mm (½"), 20mm (¾"), 25mm (1"), 32mm (1¼"), 40mm (1½"), 50mm (2"), 65mm (2½"), 80mm (3"), 100mm (4"), 125mm (5") and 150mm (6") Wall Thickness: From 1.80mm to 7.10mm. Standards: BS 1387 (1985), ASTM A53 (2002), DIN 2440 & 2441 and other upon request. Precision Steel Tubing Diameters: Round:12.70, 15.90, 17.50, 19.05, 22.20, 23.80, 25.40, 28.60, 31.80, 38.10, 42.20, 48.10 & 60.30 Wall Thickness: .60mm to 2.0mm Standards BS 6323 Part1 & 5 (1982) Shape: Square, Rectangle & Elliptical in equivalent size to above round dia. API Line Pipe for Gas Distribution, under API License Diameters: 26.7mm (¾"), 33.4mm (1"), 60.3mm (2"), 114.3mm (4") and 168.3mm (6") Wall Thickness: From 2.87mm to 7.10mm Standards: API 5L (Latest Edition) ASTM A53 (2002) and other upon request L,T & Z Profiles for Door & Windows Frames Diameter / Shape: L40, T48, Z48, L55, T60, Z60 Wall Thickness: From 0.70mm to 0.90mm Standard: IIL Standard (excluding internally coated pipes)	As per Standard	Low carbon steel	International Industries Ltd. 101 Beaumont Plaza, 10 Beaumont Road, Karachi
405	7307.2100	Stainless Steel Flanges	Different types of flanges as per customer requirement	All Steel and Stainless Steel Flanges and Flanges of Standard ANSI B16.5 etc.	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi
406	7308.1000	Fabricated Steel Profiles	Plate fabricated I & H Sections Maximum height, width and Flange/Web thickness of Sections= 2500 mm, 800 mm, 30/25 mm respectively AISI, BS-5400	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
407	7308.1000	Steel Buildings and Structure	Steel Structure for platforms, Gantries, Steel piles casing for following industries: 1. Oil & Gas fields 2. Oil Refineries 3. Fertilizer Industries 4. Cement Plants 5. Sugar Mills 6. Flood light Masts 7. Lattice type towers 8. Jetties & Terminals 9. Industrial Sheds 10. Multistoried Residential and Commercial Buildings, constructed with Steel Structure. In accordance to AISC,AISI, BS 5400, AWS - D.1.1.Masts, towers, plate girders, columns, supports, staging, walkways, factory sheds, grid and yard structures, platforms for all industrial plants (cement, sugar fertilizer, chemical, petro-chemical, oil refineries & processing, Sewage-water treatment) Industrial buildings, 20x70m to 30 to 100m.	--	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700 Brothers Engineering Ltd. 135-Upper Mall, Lahore. Heavy Mechanical Complex (Pvt) Ltd., Taxila

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
408	7308.1000	Industrial steel equipment	Ducts chutes, draughts, chimneys, cyclones, etc for all industrial plants (cement, sugar fertilizer, chemical, petro-chemical, oil refineries & processing, Sewage- water treatment)	--	--	Brothers Engineering Ltd. 135-Upper Mall, Lahore.
409	7308.1000	Steel Profiles	Plate fabricated (required by any industry)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
410	7308.1000	Duct, Chutes, Draughts, Chimneys, Cyclones for Industrial Plants	Carbon Steel (CS), Stainless Steel (SS) and Alloy Steel - All grades	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
411	7308.2000	Iron or Steel Towers; (i) Communication Towers (ii) Transmission Towers	(i) L-Type, Monopole, Tubular, Antenna Pole (Sizes 3mtr. to 85 mtr. height) (ii) Sizes 3mtr. to 85 mtr. Height	--	--	Descon Engineering Limited DESCON Manufacturing Business Area, 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
412	7308.2000	Steel Wind Tower/ Steel Mast	Windmill Tower	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
413	7308.2000	Masts, lattice and jetties of Iron or steel, for ships	1) Breasting Dolphins for Jetty upto 35000 mm long and 2300 mm diameter. 2) Mooring Dolphins for Jetty upto 17500 mm long and 1020 mm diameter. 3) Piles for Jetty upto 33500 mm long and 609 mm diameter. In all types and sizes (excluding internally coated pipes)	--	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
414	7308.2000	Wind Mill Towers/ Steel Towers	Load carrying capacity upto 200 Tons (as per requirement)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area, 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
415	7308.2000	Steel Structure	upto 45 ft.	For Transmission Lines	--	Creative Engineering (Pvt) Ltd. 160/ S, Q.I.E. Kot Lakhpat Lahore
416	7308.9010	Iron or steel Shelvings	Racking & shelving system - heavy duty pallet racking system, medium duty racking system, library shelving system, compressed filling system etc. For Warehouse, Stores, Supermarket and Factories etc.	--	--	Gujrat Steel (Pvt) Ltd. 183 A.M,Shahrah-e-Iraq, Saddar, Karachi
417	7308.9010	Gates of Iron or steel	Gates for Barrages. In accordance to AISC, AWS D.1.1 Sizes (up to 3 MTR heights, 4 MTR wide, 12 MTR lengths (Barrage & Tunnel Gate for Hydle & Irrigation purpose).	--	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700 Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
418	7308.9010	Iron or Steel Racks	Racks sizes up to width 1.2 MTR, Height 4, and 12 MTR (bolted structure and can be assembled in any dimension Fencing sizes (up to 4mtr height	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
419	7308.9090	Gates of Iron or Steel/ Penstocks	Gates for barrages According to AISC AWS D 1.1 Sizes upto 3 mtr height, 4mtr wide, 12 mtr length (barrage & tunnel gate for Hydel and irrigation purpose	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
420	7308.9090	Other Structure and parts of iron or steel	Gates sizes (up to 3 MTR heights, 4 MTR wide, 12 MTR lengths (Barrage & Tunnel Gate for Hydle & Irrigation purpose. Racks sizes up to width 1.2 MTR, Height 4, and 12 MTR (bolted structure and can be assembled in any dimension Steel Structure (for Equipment, Plant Warehouse, Building and other purposes) - Light Structure (stairways , ladder railing and Plate Form) Sizes up to 0 ~ 200 mm - Medium Structure (flooring) Sizes up to 200 ~350 - Heavy Structure (column and framing beam) Sizes depth up to 350~1500 mm	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
421	7308.1000 7308.3000 7308.4000 7308.9090	System and Steel Frameworks	--	--	--	Izhar Steel Izhar House, 35-Tipu Block New Garden Town, Lahore
422	7308.2000 7308.3000 7308.4000	Towers of iron or steel	Self supporting and lattice type masts & Towers upto 60M. (Excluding Masts and Structures for Oil/ Gas Rigs)	Flood Light Towers upto 65000 mm height and Diameter upto 1800 mm diameter.	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700 Brothers Engineering Ltd. 135-Upper Mall, Lahore. Heavy Mechanical Complex (Pvt) Ltd., Taxila
423	7308.2000 7308.9010	Power Transmission Towers of Iron or Steel	11 Kv, 66 Kv, 132 Kv, 220 Kv, 500 Kv and Tele- communication Towers, (Green field, Roof top, Triangular, Monopole in all types and sizes)	Angles, Plates and Hardware of M.S., H.T. of grade DIN17100, S355 JR, ASTM A572/572M grade 50, ASTM A394 Type 0, ISO 898 grade 5.8, 6.8 and 8.8, ASTM A36/A36M	--	Pakistan Engineering Company Limited 6/7, Ganga Ram Trust Building The Mall, Lahore
424	7308.9010 7308.9090	Steel Building and Structure	Plate Fabricated Profiles/ Pipe Racks, Modules	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
425	7309.0000	Tanks of iron or steel	Upto 35,000 cubic metre i.e. Diameter= 60 meters, Height= 17 Meters API-650, API-620, BS-2594, BS-799, BS-1564, BS- 7777, BS-2564, BS-7122, API-12B, API-12D, API- 12F, AWWA, UL No. 142, UL 58	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
426	7309.0000	Reservoirs Of Iron Or Steel	Large diameter tanks for API 620 and API 650	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
427	7309.0000	Steel Containers/ Tanks	Reservoirs, Tanks, Road Tankers, Deaerator Tanks, Feed Water Tanks, Clarified Tanks, Underground Storage Tanks, Skid Mounted Fuel Tank	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
428	7309.0000	Steel Vessels & Storage Tanks (Iron or Steel)	Tanks: API 620 and API 650/ (Fixed & Floated Roof) Vessels: Upto 150 MM Wall Thickness (Vertical and Horizontal, All types)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
429	7309.0000	Reservoirs of Iron or steel	Large diameter tanks such as storage tanks for petrochemical industry, alcohol storage tanks, molasses storage tanks, LPG Bullets and bio gas reactors. In accordance to API-650, API-620, BS-2594, BS-799, BS-7777, BS-1564, BS-2564, BS-7122	1) Circullar Capacity upto 500,000 Liters. Diameter upto 34000 mm Height upto 15000 mm. 2) Square Tanks for 26 MVA PMTs upto 4500 mm length, 1600 mm width and 2600 mm height.	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
430	7309.0000	Steel Tanks for water and oil storage	Reservoirs, tanks, vats and similar containers for any material (other than compressed or liquefied gas), of iron or steel, of a capacity exceeding 300 l, whether or not lined or heat-insulated, but not fitted with mechanical or thermal equipment. Under ground and above the ground oil/ chemical and water storage tanks; Capacity = 300 ltr to 500,000 ltre As per code API 650 and others Material = HR - 255, HR-275, HR-283, HR-285, SA-36, HR 275&25 Steel Plates., Carbon Steel, mild Steel, Stainless Steel and Alloy. Ranging from 10m to 40m in diameter. Height ranging upto 15 Meters.	--	--	Petrosin Ravi Industries Ltd. Shahra-i-Pakistan Kala Shah Kakoo G.T Road Lahore Cylinders Engg. Industries (Pvt) Ltd 9-C, 13th Commercial Street, Phase-II, Defence H. Authority, Karachi
431	7309.0000	Steel vessels and storage tanks	Pressure Vessels upto 80mm wall thickness. Storage Tanks upto 40000 m ³	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila
432	7309.0000	Tanks, iron or steel	Aluminum Tanks for Transportation of Fuel (capacity over 300L)	Tow bar fuel tanker, truck mounted fuel tanker, trailer mounted fuel tank, mobile dispenser	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi
433	7309.0000	Steel Containers / Tanks	Reservoirs, tanks, vats and similar containers: e.g. M.E.G. road Tanker barrels, Oil Storage Tanks, Low Pressure Feed Water Heater/Deaerator and Feed Water Tank. Clarifier Tanks, etc. of capacity exceeding 300 liters For any service and any type of steel; (other than compressed or liquefied gas at low temperature)	--	--	Design & Dev. Fabr. Lahore Haseeb Waqas Engineering Ltd. 103, B/1, M.M. Alam Road Gulberg.III Lahore
434	7310.1000	Steel Drums	Oil storage Drum, under storage tank of steel, skid mounted fuel tank	--	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi
435	7310.1000	Cans and Containers	For any service & of any type of steel, whether or not lined or heat insulated but not fitted with mechanical or thermal equipment (other than compressed or liquefied gas), Chlorine cylinders 01 ton capacity	--	--	Hashmi Can Co. Ltd. B-24, Manghopir Road, SITE PO Box. 3608, Karachi-75700 Brother Engg. Ltd. 135-Upper Mall, Lahore.

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
436	7310.1000 7310.2900 8419.8990	Tanks, Drums and Other Containers	Tanks, Drums, Boxes and Similar Containers (Material & Size as per Requirement)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
437	7311.0010 7311.0020 7311.0040 7311.0090	Pressure Vessels	Type: Horizontal & Vertical Size: Dish Head (2:1 tori-spherical Ø6m x 30mm thick in CS and 20mm thick in S. Steel. Plate benging 120mm thick in CS, 4,000mm long in CS. Desing Code/ Standards: ASME Sec. VIII-1-2, 3 .	--	--	Heavy Mechanical Complex-3 Hattar Road, Taxila
438	7311.0010 7311.0020 7311.0030 7311.0040 7311.0090	Storage Tanks	Type: Horizontal & Vertical Size: Dish Head (2:1 tori-spherical Ø6m x 30mm thick in CS and 20mm thick in S. Steel. Plate benging 120mm thick in CS, 4,000mm long in CS. Desing Code/ Standards: API-620.	--	--	Heavy Mechanical Complex-3 Hattar Road, Taxila
439	7311.0010 7311.0020 7311.0030 7311.0090	Iron or steel pressure vessels and drums	Pressure Vessels, Knock out drums, Steam drums, Steam saturation drums, Boiler feed water tanks, De-aerator tanks, Truck mounted, Above/Under ground LPG Vessels, LNG Spherical storage Tanks. In Accordance to ASME sec VIII Div 1 & 2. BS 5500 Cat 1&2 TEMA,	1) LPG Vessel upto 5000mm dia X 52380 mm length and 31 mm thick. 1100 m ³ storage capacity. Largest LPG vessels fabricated in Pakistan.	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
440	7311.0010/ 7311.0020/ 7311.0030/ 7311.0090	Iron or Steel Pressure Vessel, Drums, Bullets and Column	Pressure Vessel, Knock Out Drums, Steam Drums, Steam Saturation Drums ,Boiler Feed Water Tanks, Deaerator Tanks, Truck Mounted /Under Ground/above Ground LPG Vessel/Bullet /Storage Tank, LPG Transportation Bowzers, LNG Spherical Storage Tank, Column / Filter, Slug/Sludge Catcher (Finger Type/Vessel Type)	ASME SEC VIII DIV 1 & 2	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
441	7311.0020 7311.0090	Containers	For compressed or liquefied gas, of iron or steel Shop built sizes up to 5 x 5 MTR (Width, Height) Site built sizes up to Dia 20 MTR and Length 20 MTR	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
442	7311.0020 7311.0090	LPG cylinders of iron or steel	a. LPG Cylinders with capacity = (6.0kg, 11.8 Kg, 15 Kg and 45.4 Kg) b. LPG Storage Bullets (from 01 MT Capacity to 100 MT) c. LPG Transportation bowzers (10 MT to 25 MT) with under carriage. d. Pressure vessel (15 PSI to 4000 PSI) as per ASME section VIII Div 1 and material thicknes 8mm to 50.8mm	Working Pressure : 7 Bar Test Pressure : 30 Bar Burst Test Pr :70 Bar DOT, ASME & BS Standard	Material: HR,SG-255 Steel Sheets. DOT, ASME & BS Standard	Petrosin Ravi Industries Ltd. Shahra-i-Pakistan Kala Shah Kakoo G.T Road Lahore Cylinders Engg. Industries (Pvt) Ltd 9-C, 13th Commercial Street, Phase-II, Defence H. Authority, Karachi Gujrat Steel (Pvt) Ltd. 183 A.M,Shahrah-e-Iraq, Saddar, Karachi FAS Tube Mills & Engineering Industries 67 - C Steel Street (Meco)Market, Landa Bazar, Lahore -54000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
443	7311.0020 7311.0090	Pressure Vessels for LPG Storage.	As per ASME Code Sec: VIII Div-1. Ranging from 30 Tons capacity and onwards with Wall Thickness from 20mm to 70mm.	--	Material: HR,SG-255 Steel Sheets.	Cylinders Engg. Industries (Pvt) Ltd 9-C, 13th Commercial Street, Phase-II, Defence H. Authority, Karachi
444	7311.0020 7311.0090	LPG bulk storage tanks	LPG bulk storage tanks of capacity 500 kgs and above cylindrical pressure vessels of thickness upto 250mm	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
445	7312.1010	Stranded wire of Iron or steel, not electrically insulated	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	--	--	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi
446	7312.1010	P.C Strand	Size 3/8", 7/16" & 1/2"	--	C-Si-Mn-P-S-Cr-Ni-Cu Al & Mo	Cable & Conductor Ltd. 1st Floor, 41 Civic Centre Barkat Market New Garden Town Lahore
447	7312.1010	Galvanized Steel Wire Stranded	WAPDA P 12:80	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore
448	7312.1010	Galvanized steel wire	WAPDA P 12:80	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore
449	7312.1010	P.C. Strand	JIS G 3506 / SWRH-82 B (ASTM A-416/B.s. 5896 Grade 250/270-K, Normal Relaxation, Not Electrically Insulated)	7 Wire Strands 1/2", 3/8", 7/16"	C 0.81, Si 0.24, Mn 0.84, P 0.015, S 0.012	Wire Manufacturing Industry Ltd. 45-KM Lahore-Multan Road, Nathey Khalsa, Bhai Pheru District Kasur
450	7312.1010	Prestressed Concrete	JIS G 3506 / 1980 SWRH-82 B(ASTM A-421 Grade 250/270-K, Not Electrically Insulated)	Wire (variable dia)	C 0.80/.84, Si 0.22, Mn .60/.80, P .02X, S.02X, Cr .240/.260, N .010, Cu .007, Ni .014, Mo .001, V .025	Wire Manufacturing Industry Ltd. 45-KM Lahore-Multan Road, Nathey Khalsa, Bhai Pheru District Kasur
451	7312.1010	High Carbon Steel wire strand	JIS G 3536 SWRH-82B-1 (Not Electrically Insulated)	Wire (variable dia)	C 82/83, Si 23/27, Mn 76, P 11/17, S 4/6, Cr 17/19	Wire Manufacturing Industry Ltd. 45-KM Lahore-Multan Road, Nathey Khalsa, Bhai Pheru District Kasur
452	7312.1010	High Tensile Steel	JIS G 3506 /B.S. 5896 (Grade 250/270-K, Normal Relaxation, Not Electrically Insulated)	Wire (variable dia)	C .81%-83%, Mn .75-77%, P .010-.014%, S .002%-0.005%, Si .25-.26%,Sr .17%-18%	Wire Manufacturing Industry Ltd. 45-KM Lahore-Multan Road, Nathey Khalsa, Bhai Pheru District Kasur
453	7312.1010	Hard Drawn/ Spring wire	JIS G 3536(Not Electrically Insulated)	Wire (variable dia)	C .83, Mn 0.67, P 0.013, S 0.010, Si 0.19, Cr 0.250, N .006, Cu .007, Ni .014, Mo 0.25, Sn .002	Wire Manufacturing Industry Ltd. 45-KM Lahore-Multan Road, Nathey Khalsa, Bhai Pheru District Kasur
454	7312.1020	Stranded ropes of Iron or steel, not electrically insulated	ASTM, JIS all International spec	Low Carbon to High Carbon Steel Wire & Ropes	--	Chaudhri Wire Rope Industries (Pvt) Ltd. 25 Km G.T Road Muridke Lahore Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore
455	7312.1020	Steel Wire Rope	6X7FC,SC & IWrc-6X12, 6X19, 6X24, 6X36, 6X37 FC, SC & IWRD	--	C-Si-Mn-P-S-Cr-Ni-Cu Al & Mo	Cable & Conductor Ltd. 1st Floor, 41 Civic Centre Barkat Market New Garden Town Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
456	7312.1020	Wire Rope (Not electrically insulated)	SWRH 42B, 47B, 62B & 72B JIS G 3506	8 mm to 20 mm Ø	C/ 62-72, Si 195, Mn 67, P .6, S .13, Si 195-201	Wire Manufacturing Industry Ltd. 45-KM Lahore-Multan Road, Nathay Khalsa, Bhai Pheru District Kasur
457	7312.1010 7312.1020	Galvanized Steel Strands Steel Wire / Rope	BS 302, JIS G3525, BS 2763	As per Standard	As per Standard	Pakistan Wire Industries E-51, Textile Avenue, SITE, Karachi
458	7312.1090	Core Wire for ACSR	JIS G 3506 62 B, 72 B (Not Electrically Insulated)	Wire (variable dia)	C 73, m 67, P 0.06, S 0.013, Si .195	Wire Manufacturing Industry Ltd. 45-KM Lahore-Multan Road, Nathay Khalsa, Bhai Pheru District Kasur Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore
459	7313.0000	Barbed wire of Iron or steel	As per BSS-4461-1969, ASTM-A36-75, ASTM-615-76a (1977)	--	--	Metropolitan Steel Corporation Limited 706-Progressive Plaza, 101-Bemount Road, Karachi ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
460	7314.3100 7314.4100 7314.3900 7314.4900	Fencing of Iron or steel	Fencing (up to 4 mtr height)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 ASG Metals Ltd. EIZ/LL/SP-08, Eastern Industrial Zone, Port Qasim Authority, Karachi
461	7317.0090	Staples Pins of iron or steel	All Sizes	--	--	Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700
462	7318.1200	Screws (Wood, Threaded, Iron & Steel)	Gauges : 3 SG to 14 SG Lengths : 1/2" to 5" British & DIN Standards - Twinstart & Full Dia.	Countersunk & Round Head, Slotted & Phillips, Partial & Fully Threaded Screws.	Mild Steel with 0.10% Carbon & Stainless Steel.	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area, Karachi
463	7318.1400	Screws (Self-Tapping, Threaded)	Gauges : 4 SG to 14 SG Lengths : 1/2" to 5" (or Metric equivalents) BS-4174 or DIN Standards	Hardened Screws, all types of heads, Nickel, Zinc or Rainbow Plated for use in metal plates & sheets made from Medium Carbon Steel .Torque Strength upto 136 lbs/sg. Inch.	Medium Carbon Steel 0.15-0.20,	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area, Karachi
464	7318.1400	Machine Screws	Guages : 1/8 to 5/16" & M3 to M8 Lengths : upto 5" or 125mm BS-4183 & DIN Standards 963, 964 & 965.	All types of Heads, Zinc & Rainbow Plated.	Mild Steel & Stainless Steel.	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area, Karachi
465	7318.1400	Drywall (Bugle Head) Screws.	Guages : 6 to 12 SG Length : Upto 3" DIN Standard in Fine & Coarse Thread.	Hardened Screws, all types of heads, Nickel, Zinc or Rainbow Plated for use in metal plates & sheets made from Medium Carbon Steel .Torque Strength upto 136 lbs/sg. Inch. (Black Phosphated)	Medium Carbon Steel 0.15-0.20, S&P 0.045% max, & Mn 0.20 – 0.60% & Stainless Steel.	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
466	7318.1590	Bolts of Iron or steel	Dia M6 ~ M24 SAE 4.8, 5.8, 8.8, 10.9, 12.9	SAE 1,2,5,8,A574 Tensile:60,74,120,150,180 KSI Yield Strength: 36,57,92,81,130,160 KSI	S&P 0.045% max, &	Mirza Younas & Co. Zahoor Coloney Momin Pura Road, Near Bhatta Daroghawala,Lahore
467	7318.1590	Bolts of Iron or steel	Dia M6 ~ M24 M.S & High Tensile	SAE 5, SAE 8 , SAE 2 Tensile Stress 120 KSI,150 KSI,	Mn 0.20 – 0.60% & Stainless Steel.	Mirza Younas & Co. Zahoor Coloney Momin Pura Road, Near Bhatta Daroghawala,Lahore
468	7318.1590	Bolts of Iron or steel	Dia M6 ~ M24 M.S & High Tensile	SAE 2, 5, 8 Proof Stress 105~ 1050 KSI	C= 0.28~ 0.55 Mn= 0.30max Ph= 0,05 max S=0.15 max Cr= 0.25 max	Mirza Younas & Co. Zahoor Coloney Momin Pura Road, Near Bhatta Daroghawala,Lahore
469	7318.1590	Bolts of Iron or steel	Bolts, Nuts, Rivets, Studs, Washers, Screws of Steel, Mild Steel, Stainless Steel and Galvanized	Grade AISI 1008, 1010, 1012, 1025, 1030, and equivalent grade 8.8, 10.8, 12.8 and equivalent; Galvanized High Tensile Strength	--	Inayat Brothers P-27 Canal Road, Peoples Colony # 1, Faisalabad
470	7318.1590	Bolts of Iron or steel	Agricultural and all types of Bolts, Nuts and Washers	AISI 1008,1010,1012,1015,1025,1030, and equivalent High Tensile Strength	--	I. B. Industries P-27 Canal Road, Peoples Colony # 1, Faisalabad
471	7318.1590	Bolts of Iron or steel	Gauges : M3 to M8 Lengths : upto 110mm Hex Head Bolts, Flat & Indented. British & DIN Standards.	Fully or partially threaded, Zinc or Rainbow Plated.	Mild Steel, Medium Carbon Steel & Stainless Steel.	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area, Karachi
472	7318.1900	Threaded Nuts of Iron or steel	Dia M6 ~ M24 Medium,High Carbon & Alloy Steel	SAE 4.8,8.8,10.9 & 12.9	C% 15~55 P% 0.03~0.05 S% 0.03~0.05 Ni% 0.15~0.22 Cr% 0.18~0.25	Mirza Younas & Co. Zahoor Coloney Momin Pura Road, Near Bhatta Daroghawala,Lahore
473	7321.9000 7326.9090	Shelves of Iron or steel	Made of CRC, HRC, Galvanized Steel Sheet	--	--	Gujrat Steel (Pvt) Ltd. 183 A.M,Shahrah-e-Iraq, Saddar, Karachi
474	7325.1000	Articles of Cast Iron	Cast iron castings upto 28 tons weight (sigle piece) steel casting (low alloy) upto 32 tons weight (single piece)	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila
475	7325.9100	Hi-chrome grinding media balls	Hi-chrome grinding media balls of dia 22-100 mm	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila
476	7326.1100	Forged grinding media balls	Forged grinding media balls of diameter 30-120mm	--	--	Heavy Mechanical Coplex (Pvt) Ltd., Taxila
477	7326.1990	Steel free forged items	Steel free forged items upto 120kg per piece weight	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila
478	7326.1990	Articles, Forged or stamped, iron or alloy steels	Die/ Free forged, Die forging up to 5Kg. Free Forging uo tp 1000Kgs	Machined	All type of alloy steel grades. Chemical composition as per international quality standards or as specified by customers. See Annex-I	Peoples Steel Mills Ltd. Javedan Nagar, Manghpir Karachi
479	7403.1100	Cathodes	Copper Cathodes cut to pieces	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore
480	7403.1200 8544.1900 8544.4920 8544.4990 8544.7000	General House Wiring (PVC)	3/.029", 7/.029", 3/.036", 7/.036", 7/.044", 7/.052", 7/.064" BS-2004, BS-6004	T/S, Elong, DC Resistance IR, HVT	Purity: 99.99%	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
481	7407.1020	Copper Rod	ASTM B-49 8.0mm ASTM B-49 Electrical Conductor	Breaking Load Elongation Resistance	Purity: 99.99%	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700
482	7407.1020	Copper Rod	Dia 8.00 & 10.50mm ASTM B-49	--	99.9% (min)	Bawany Metals Ltd. 1001-Unitowers, I.I. Chundrigar Road, Karachi
483	7408.1900 7408.2900	Copper Wire	ASTM B-2 & B-3	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
484	7412.1000 7412.2000	Sockets for Natural Gas and LPG	Type: Bayonet, Angle Bayonet, Compression 10mm, Micro, Leakage test at 1 bar (1KV). Body: Brass (Forged), Size: 1/2:, 3/8",	--	--	Tesla Industries Pvt. Ltd. Plot No. 81-F, St. 6, I-10/3 Islamabad
485	7413.0000	Stranded wire/ cables of copper not electrically insulated.	Range of Sizes: 1.5MM ² to 1000MM ² Voltage Grade: upto 220 KV BSS-6360:7884	• HDBC • PACC	High Conductivity Copper	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
486	7413.0000	Stranded Copper Wire	Size from 1.5 mm to 1000 mm BS 6360	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
487	7413.0000	Flexible Cable	0.5mm ² - 240mm ² BS-6004, BS-6500	T/S, Elong, DC Resistance IR, HVT (PVC)	Purity: 99.99%	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
488	7413.0000	Instrument Cable	0.5mm ² - 4mm ² BS-5308, PI & PII (Shielded) (Flexible & Stranded.)	T/S, Elong, DC Resistance IR, HVT	Purity: 99.99%	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
489	7413.0000	PVC Power Cable	0.5mm ² - 400mm ² BS-6346, IEC-502 (Armoured & Unarmoured)	T/S, Elong, DC Resistance IR, HVT	Purity: 99.99%	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
490	7413.0000	XLPE Power Cable	1.5mm ² - 400mm ² BS-5467, IEC-502 (Armoured & Unarmoured)	T/S, Elong, DC Resistance IR, HVT	Purity: 99.99%	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
491	7415.1000	Nails and tacks, drawing pins, staples and similar articles	All Sizes	--	--	Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700
492	7415.2100	Washers (Brass) including spring washers.	<u>Sizes</u> a) Outer Dia upto 80mm b) Thickness upto 20mm <u>Types</u> As per customer requirements. Thrust Washers various types.	Sintered Washers made from Bronze Powder.	90% Copper & 10% Tin or 100% Bronze.	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area Karachi
493	7415.3300	Brass Screws for wood	Guages 3 - 16 & upto 4" In length - British & DIN Standards	Countersunk & Round Head, Slotted & Phillips.	67% Copper, 33% Zinc	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area Karachi
494	7601.2000	Aluminium Alloy Ingots	As per following standards; HD2, HD2G, HD4, HD1.1, LM6, LM13, LM24, LM28, ADC12, AC3A, AC4B, AC4C, ADC6, B12G19X, AS7GO6, ALSi12Cu	As per International Standards " JIS, Japan, ASTM, USA and BS, British"	As per International Standards " JIS, Japan, ASTM, USA and BS, British"	Sun Metal Industries (Pvt. Ltd. Suite # 108, Anum Trader Center, State Avenue, S.I.T.E. Karachi.
495	7601.2000	Aluminum Alloy Ingot	About 7 ~8 Kg Ingot Size 22"L x 4"W ADC-12 as per JIS, LM-06 as per B.S. LM-24 as per B.S., AC-3A as per JIS, ADC-06 as per JIS, HD-02 For Honda, HD-2G For Honda	--	Si =9~12 % Fe =0.6~1.2 % Cu =2 ~3.5 % Mn =0.10~0.80 % Mg =0.10~0.50 % Ni =0.10 % Zn=0.10~1.00 % Pb =0.10 % Sn =0.10 %	New Era Industries F61/G S.I.T.E, Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
496	7604.1010	Aluminium Rod	ASTM B-233	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
497	7604.2100	Hollow Profiles of Aluminum Alloy	Door / Window Sections BSS 1474, ASTM-B-221, BSS-3987, AAMA CLASS 1, BSS-1615	• Anodized • Powder Coated	Aluminium Alloy	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
498	7604.2990	Profiles of Aluminum Alloy	Door / Window Sections BSS 1474, ASTM-B-221, BSS-3987, AAMA CLASS 1, BSS-1615	• Anodized • Powder Coated	Aluminium Alloy	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
499	7605.1900	Aluminium Wire	ASTM B-230	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
500	7607.1100	Aluminium Cable foil for telephone industries	Aluminum Cable Foil for Telephone industry 0.200mm + '-- 0013mm both side of foil with 50u for PE/Copolymer Coating + '-- 0.004mm or 0.050mm making on overall substance 0.300mm + '-- 0.005mm (Not over 0.2mm thickness)	--	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi Pakistan Metal Industries D-76, Main Avenue, S.I.T.E. Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
501	7607.1100	Aluminium Finstock in continuous length for Air Conditioning Industry	Unprinted Aluminium Foil thickness 7-200u, One side for printing, other side heat seal coated, not over 0.2mm thick, not backed	--	--	Pakistan Metal Industries D-76, Main Avenue, S.I.T.E. Karachi
502	7607.1990 7616.9990	Aluminium disposable products for air lines & fast food industries (Kitchen Foil, Utensils)	(Aluminium Trays, Casseroles & Kitchen Foil)	--	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi Pakistan Metal Industries D-76, Main Avenue, S.I.T.E. Karachi
503	7607.1100 7607.1990	Aluminium Finstock for all types of air conditioners, deep freezers & Fridges	Aluminium foil not exceeding 0.2mm (Thickness from 0.12mm to 0.20mm both side or one side with CPV coating, hydrophilic corrosion resistant (Lacquered, Blue, Gold & Silver)	--	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi Pakistan Metal Industries D-76, Main Avenue, S.I.T.E. Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
504	7607.1990 7607.2000	Aluminium foil for pharma industries	Aluminium Foil for Blister & Strip Paking for Pharma Industries. Aluminium Foil not exceeding 0.2mm for manufacturing of above products. A. Foil 7-20u sanwich+one side polyester film & other side polyethylene. B. Foil 7-10u other side polyester film with polyester film with polyethylene coatings. C.7-10u foil with 40-50gsm parchment paper/poster paper + LDPE printed/un-printed alu alu cold forming foil for pharma industries	--	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi
505	7607.2000	Aluminium foil paper backed for cigarette industries	Aluminum Foil Paper Backed for Cigarette and tea Inds. Thickness not exceeding 0.2mm for manufacture of aluminum foil 6.0u - 7.0u for laminated with paper (tissue paper, poster paper, board 20 - 400 gsm both Silver & Gold lacquered foil. (Not over 0.2mm thickness)	N/15am, 45-60gsm elongation 2 - 2.5%	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi Pakistan Metal Industries D-76, Main Avenue, S.I.T.E. Karachi
506	7610.9000 7604.1010	Aluminium Rod	9.50 mm ASTM B-233	T/S, Elong, Torsion	Conductivity: 61.4%: Composition: Silicon: 0.1, Iron: 0.4, Copper: 0.05, Manganese: 0.01 Chromium: 0.01, Zinc: 0.05, Boron: 0.05 Gallium: 0.03, Vanadium + Titanium: 0.02 Other Elements: 0.03, Other Elements: 0.01 Aluminum: 99.5	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
507	7611.0000	Aluminium Tanks	Aluminum Tank for Transportation of Fuel (capacity over 300L)	Truck mounted Al Tank, trailer type and tow bar type Al Tank Rectangular and circular and semi clliptical storage tank. Al refuller and Bowser and mobile dispenser.	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi
508	7612.1000	Collapsible tubular Containers of Aluminum	Dia=12.5 to 45-mm	Aluminum Purity 99.75 %	--	Alucan (Pvt) Ltd. E/12, S.I.T.E. Karachi-75730
509	7614.1000 7614.9000	Aluminium Stranded Conductor	Steel Re-inforced (All Sizes) ASTM B-232 WAPDA P 50:88	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
510	7614.1000 7614.9000	Aluminum Cables	Cables, Aluminum, with steel core, not electrically	As ASTM	CU 99%	Multicore Cables 136 Abid Chambers Tempal Road Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
511	7614.1000 7614.9000	Aluminium Conductor	Steel Reinforce (ACSR). Rabbit-Dog-Gopher-Lynx-Osprey WAPDA P-50-88 Specs.	T/S, Elong, Weight H-12 Strands Aluminium	Zinc coating uniformity, Al purity	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Cable & Conductor Ltd. 1st Floor, 41 Civic Centre Barkat Market New Garden Town, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
512	7614.1000 7614.9000	Stranded wire, cables, Aluminium not electrically insulated.	Range of Sizes: 1.5MM ² to 1000MM ² Voltage Grade: upto 220 KV BSS-6360, BSS-215 (Excluding ultra violet treated cables)	ACSR	Aluminium Electrical Grade	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
513	7614.9000	Stranded wire and cables of Aluminium	Range of Sizes: 1.5MM ² to 1000MM ² Voltage Grade: upto 220 KV BSS-6360, BSS-215	AAC ACSR	Aluminium Electrical Grade	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
514	7614.9000	Aluminium Stranded Conductor	(All Sizes) ASTM B-231, as per WAPDA specs. P 63:79	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
515	7614.9000	Aluminum Conductor	Ant-Wasp (AAC) WAPDA P-63-79 Specs.	T/S, Elong, Weight	--	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
516	7614.9000	Aerial Bundle Cable	35mm ² - 120mm ² IEC-60502 NEMA (XLPE & PVC) (ABC)	T/S, Elong, Weight XLPE Aging Test	--	H.M. Esmail & Co. (H.M. Cables) SB-5, Madina City Mall 6th Floor , Abdullah Haroon Road, Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
517	7614.9000	Stranded wire, cables, Aluminium not electrically insulated.	Range of Sizes: 1.5MM ² to 1000MM ² Voltage Grade: upto 220 KV BSS-6360, BSS-215 (Excluding ultra violet treated cables)	AAC	• Aluminium Electrical Grade	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
518	7614.1000 7614.9000	Conductors (ACSR)	All Types and Sizes	--	--	Universal Cables Industries Ltd . 61-C, Jami Commercial Street # 7, Phase 7, D.H.A., Karachi.
519	7616.9920	Aluminium slugs	Diameter (outside): Range between 10mm upto 120mm Thickness: Range 3mm to 15mm Centre Hole: As per requirement	Soft, annealed and tumbled	Aluminium (Al) minimum 99.7% Iron (Fe) maximum 0.20% Silicon (Si) maximum 0.10%	Alucan (Pvt) Ltd. E/12, S.I.T.E. Karachi-75730
520	7616.9990	Articles of Aluminum Foil	Aluminum Disposable products for Airlines & Fast Food Industries (Kitchen Foil) aluminum Metal 65u to 100u with Food grade Coating. (Not over 0.2mm thickness)	--	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi
521	7616.9990	Aluminum Finstock in continuous length for air conditioning industry	Not exceeding 0.2mm thickness from 0.12mm to 0.20mm both side or one side with CPV Coating hydrophilic corrosion resistant (lacquered Blue, Golden & Silver)	--	--	Aluminum Processing Industries Int'l (Pvt) Ltd. D-76, S.I.T.E. Karachi
522	7901.1100 7901.1200 7901.2000	Zinc Dross	Fe(t) = 3.38%, Pb 0.41% Al=3.96%, Zn 91.70%	--	Fe(t) = 3.38%, Pb 0.41% Al=3.96%, Zn 91.70%	Pakistan Steel Bin Qasim P.O. Box. No.5429 Karachi-75000
523	8202.1000	Hand saws of base metal	Hand saw for wood cutting size 10 " to 36 "	1650 -1850 Nmm ²	Cr 1 . C .75 % Mn .7 % Cr .35 % si .04 %	Abid Industries CA 318 Goth Shah Beg Gabol Sector 16 B North Karachi
524	8202.3100	Steel Saws	Gang saw for stone cutting/Marble cutting	Tensile Strength 1350-1400 Nmm ²	Cr 1 , C75 , Mn .7 %Cr .35 % Si .04 %	Abid Industries CA 318 Goth Shah Beg Gabol Sector 16 B North Karachi
525	8202.3900	Steel Saws	Sizes 4 inch to 14 inch	Cr 1 , C 75 , C 60 . High Carbon alloy steel strip , High Carbon steel strip, Carbon steel strip	C 75 % , Si 0.4 , Cr 0.37 Mn 0.70 %	Abid Industries CA 318 Goth Shah Beg Gabol Sector 16 B North Karachi
526	8202.3900	Steel Saws	Circular saw for wood cutting sizes 4 " to 14"	Tensile Strength 1550 - 1750 Knmm ²	Cr 1 , C .75 % Mn .7 % Cr .38 % Si . 04%	Abid Industries CA 318 Goth Shah Beg Gabol Sector 16 B North Karachi
527	8203.2000	Hand Tools	Pliers, hand, base metal 4" to 6"	--	--	Qureshi Industries Behind Women Degree College Nizamabad (52020) Wazirabad Punjab, Dist. Gujranwala
528	8204.1100	Non-adjustable Spanners	8x10mm, 12x14mm, 16x17mm, 20x22mm, 24x26	--	--	Qureshi Industries Behind Women Degree College Nizamabad (52020) Wazirabad Punjab, Dist. Gujranwala
529	8205.4000	Hand Tools	Screwdrivers, base metal 2 way 4"	--	--	Qureshi Industries Behind Women Degree College Nizamabad (52020) Wazirabad Punjab, Dist. Gujranwala
530	8208.1000 8208.2000	Steel Blades	High Carbon Alloy Steel / High Carbon Steel Strip	CR 1 , C60-80 ,1450- 1700 Nmm ²	--	Abid Industries CA 318 Goth Shah Beg Gabol Sector 16 B North Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
531	8208.2000	Steel Blades	Wood cutting band saw blade size 10 mm -255 mmx0.5mm - 1.5 mm	High carbon alloy steel strip, carbon steel strip T S 1450 -1700 Nmm ²	C .75 , si 0.4 cr .35 mn .7 %	Abid Industries CA 318 Goth Shah Beg Gabol Sector 16 B North Karachi
532	8212.1000 8212.2000	Razors, non-electric	Double edge razor blades and plastic bonded disposable razor	--	--	Treet Corporation Limited 72-B, Kot Lakhpat Industrial Area, Lahore
533	8301.3000	Furniture Locks	Chrome plated	--	--	Babar Metal Industries E/34, Estate Avenue, S.I.T.E., Karachi
534	8303.0000	Metal Lockers	CRC sheet 0.5mm to 1.2mm	--	--	Gujrat Steel (Pvt) Ltd. 183 A.M,Shahrah-e-Iraq, Saddar, Karachi
535	8304.0000	Shelvings of base metal	Mobile Shelving (Compressed Filing System), For offices. Shelving for Supermarkets & Stores.	--	--	Gujrat Steel (Pvt) Ltd. 183 A.M,Shahrah-e-Iraq, Saddar, Karachi
536	8304.0000	Sorting Boxes for office use	Box Type Office and Base Metal for any Equipment	Skid mounted box type office, Living carvan, Kitchen, Laboratoires, Skid mounted medical treatment centre, toilets and rest houses etc.	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi
537	8308.2000	Rivets	Aluminum Blind Rivets Guages : 3.00, 4.20 & 4.80mm Lengths: 5.00 to 25.00mm	Aluminium tubes with steel mandrel.	Al. 98% Si 0.4%, Cu 0.2%, Mn 0.2%, Mg. 0.5 to 1.1%, Cr. 0.1%	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area Karachi
538	8309.9000	Threaded Bungs and bung-covers	2", 3/4" British Standard	--	--	Babar Metal Industries E/34, Estate Avenue, S.I.T.E., Karachi
539	8311.1000	Metal Electrodes	ASTM, JIS All International Spec	--	--	Chaudhri Electrode Industries (Pvt) Ltd. 29 Km Lahore Sheikupura Road Lahore
540	8402.1110	Boiler Feed Water Heaters	For upto 350 MW Boilers ASME Sec. 1 / B.S.S. & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
541	8402.1110	Oil/gas/bagasse fired water tube boiler	Oil/gas/bagasse fired water tube boiler upto 200 ton/hr capacity and 87 bar pressure	--	--	Heavy Mechanical Complex (Pvt) Ltd., Taxila
542	8402.1110	Boilers, steam generating, watertube type	Upto 65 ton/hr, 40 kg/cm ² ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
543	8402.1120	Waste Heat Recovery Boiler	Waste Heat Recovery Boiler (WHRB) capacity up to 350 TPH & 150 Kg/cm ²	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 Haseeb Waqas Engineering Ltd. 103, B/1, M.M. Alam Road Gulberg.III Lahore Brothers Engineering Ltd. Lahore 135-Upper Mall, Lahore. Heavy Mechanical Complex (Pvt) Ltd., Taxila
544	8402.1120	Boilers, steam generating, watertube type	Waste Heat Recovery Boilers, 1.5 to 50T/PH Capacity & pressure upto 6 bar to 50kg/cm ² inclusive of Parts & equipments	--	--	DDFC (Pvt) Ltd. 73-G/II, Model Town, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
545	8402.1130	Heat Recovery Steam Generators	Heat Recovery Steam Generators (HRSG) 200 MW, water tube type. Single or multiple unit, behind all types of Gas Turbines, Diesel and Gas Engines & as per customers requirements	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
546	8402.1200	Packaged type boilers	upto 25 T/hr steam & pressure upto 24 Kg/Cm2, & as per customers requirements	--	--	Haseeb Waqas Engineering Ltd. 103, B/1, M.M. Alam Road Gulberg.III Lahore Brothers Engineering Ltd. Lahore 135-Upper Mall, Lahore. DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
547	8402.1200	Boilers, steam generating, watertube type	Package Type Fire Tube Boilers, upto 30T/PH Capacity & pressure upto 24to50kg/cm2 inclusive of Parts & equipments	--	--	DDFC (Pvt) Ltd. 73-G/II, Model Town, Lahore
548	8402.1200	Boilers, steam generating, water tube type	Upto 65 ton/hr, 40 kg/cm ² ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
549	8402.1200	Boilers, steam generating, watertube type	From 4 HP TO 155 HP, Water tube boilers, 120,000 BTUS/HR to 5,200,000 BTUS/HR	External Draft Diverter, heavy duty frame construction to 30 Psi Standard and above as optional, Interior of Heater accessible for service and inspection	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi
550	8402.1200	Boilers, steam generating, watertube type	Forced Draft, Water Tube Heater With Natural Gas, 150,000 to 6,500,000 Btuh input	Heavy duty frame construction to 30 Psi and above	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi
551	8402.1200	Boilers, steam generating, watertube type	1 TPH ~ 100 TPH 1 BAR ~ 15 BAR ,5-30 TPH, 15 BAR	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi
552	8402.1200	Oil/gas/ fired, water tube, membrane walled boilers	Oil/gas/ fired, water tube, membrane walled boilers upto 45 tons/hr capacity & 64 Kg/cm ² pressure. Bagasse fired boiler of upto 45 tons/hr & pressure 42 Kg/cm ²	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
553	8402.1200	Boilers, steam generating, watertube type	Steam Generators from 100 to 1200 Kg/Hr steam output.	--	--	Fabricon (Private) Limited First Floor, Qazi House, ST-5, Block 16, Gulshan-e-Iqbal, Karachi-75300.
554	8402.1910	Fired Tube Boilers	More than 45 tons/ hr	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
555	8402.1910	Fired Tube Boilers	upto 45 tons/ hr	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
556	8402.1910	Fire tube boiler	Upto 25 ton/hr steam and 24 kg/cm ² pressure.	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
557	8402.1910	Fire tube boiler	Upto 10 ton/ hr capacity, Ø2550mm Design Code/ Standards: ASME Sec. I/ B.S.S. & as per customers requirements	--	--	Heavy Mechanical Complex-3 Hattar Road, Taxila DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
558	8402.1910	Fire Tube Boiler	Up-to 30 TPH , 2PASS, 3 PASS and 4 PASS & as per customers requirements	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
559	8402.1910	Fire Tube Boilers	0.5 to 20 tons /hr steam or hot water as per ASME Codes and customers requirement	--	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
560	8402.1920	Waste Heat Recovery Boilers	More than 45 tons/ hr	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
561	8402.1920	Waste Heat Recovery Boilers	upto 45 tons/ hr	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
562	8402.1920	Waste heat boilers (WHB's)	ASME Sect. I or VIII 0.2 tons/ hr steam to as required by customers	--	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
563	8402.1920	Waste Heat Recovery Boilers	Behind Cement Kilns, Incinerators, Furnaces, Gen Sets & Other Process Applications Upto 136 Barg & as per customers requirements	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
564	8402.1930	Heat Recovery Steam Generators	Behind gas turbines, gen sets upto 275 mw	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
565	8402.1990	Complete Hybrid Boiler.	Saturated Steam, Furnace with Combustion Grate Deduster with accessories and auxiliary machinery for boiler comprising of boiler drum, economizer, draft fan and accessories	--	--	Descon Engineering Ltd. 2-Km Defence Road Off 24th Km, Multan Road, Chung, Lahore Gresham Eastern (Pvt) Ltd. F-302, S.I.T.E., Karachi SEFEC Engineering (Pvt) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
566	8402.1990	Boilers, vapour generating, excluding watertube type	Upto 20 ton/hr, 40 kg/cm ² ASME Sec. 1 / B.S.S. & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
567	8402.1990	Boilers, vapour generating, excluding watertube type	4 Pass , Fire Tube, 250 TO 1000 H.P.	Forced Draft, consisting, Shell, Fire Tubes, Tube Plates, ASME code	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi
568	8402.1990	Boilers, hybrid, excluding watertube type	1-15 TPH, 12 Bar, 500 Kg/hr to 1000 KG/hr 2 Bar to 10 Bar & as per customers requirement	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
569	8402.1110 8402.1190 8402.1200	Thermal power plants	Thermal power plants upto 360MW	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
570	8402.1110 8402.1190 8402.1200 8402.1910 8402.1990	Coal /Biomass Fired Steam Boilers	Travelling grate bed, Bubbling fluidized bed, Circulating fluidized bed	High pressure/Low pressure steam production	--	Descon Engineering Ltd. 2-Km Defence Road Off 24th Km, Multan Road, Chung, Lahore Gresham Eastern (Pvt) Ltd. F-302, S.I.T.E., Karachi Heavy Mechanical Complex Taxila SEFEC Engineering (Pvt) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi The Sitara Engineers Nishatabad, Sheikhpura Road
571	8402.1110 8402.1200	Water tube boilers	Direct Fired Water Tube Boiler Capacity up to 350 TPH & 150 Kg/cm ²	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
572	8402.1110 8402.1200	Boilers, steam generating, watertube type	UPTO 290 TPH, 136 Barg, 535°C	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
573	8402.1110 8402.1200	Boilers, steam generating, watertube type	50-100 TPH, 50-100 Bar	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi
574	8402.1920 8402.1930	Other boilers	Any type of boiler / waste heat recovery, heat recovery steam generator excluding water tube	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM. Multan Road, Lahore
575	8402.2000	Boiler Superheaters	For upto 350 MW Boilers ASME Sec. 1 / B.S.S. & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM. Multan Road, Lahore
576	8402.2000	Boilers, high pressure	Upto 65 ton/hr, 40 kg/cm ² ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
577	8402.2000	Boilers, high pressure	Upto 290 TPH, 136 barg, 535 C	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
578	8402.2000	Boilers, high pressure	10 TPH-100 TPH 250-550 °C 30~100 Bar	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi
579	8402.2000	Boilers, super-heated water	Upto 65 ton/hr, 40 kg/cm ² ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
580	8402.2000	Boilers, super-heated water	Capacity Up to 350 TPH, 150 BARG (water tube, fire tube, waste heat recovery boiler, heat recovery steam generator)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
581	8402.2000	Boilers, high pressure	Pressure Range : 1 BAR - 100 BAR Capacity: 1 TPH ~ 100 TPH	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi
582	8402.9090 7308.9090	Boiler Equipment	Drums, Chimneys, Steel Structure, Cuts/ Chutes for upto 350 MW Boilers ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
583	8402.9090	Drums for steam boilers	ASME, Corten Steel, Size as per capacity of boiler 3Ft Dia, 15 Ft Thickness - 5mm - 25mm 8" - 16" as per customers requirements	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi DDFC (Pvt.) Ltd. 27 KM. Multan Road, Lahore
584	8402.9090 and respective headings	Parts of Boiler	Parts/Accessories/Ancillaries of all types of Boilers like Drum, Deaerator, Economizer, Condenser, Evaporator, Tube Panel etc	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM. Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
585	8402.9090	Drums for steam boilers	ASME, Corten Steel, Size as per capacity of boiler 3Ft Dia, 15 Ft Thickness - 5mm - 25mm 8" - 16"	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi
586	8402.9090 and respective headings	Parts of Boiler	Parts/Accessories/Ancillaries of all types of Boilers like Drum, Deaerator, Economizer, Condenser, Evaporator, Tube Panel etc	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
587	8402.9090	Parts of boilers	Capacity Up to 350 TPH, 150 BARG (water tube, fire tube, waste heat recovery boiler, heat recovery steam generator)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
588	8403.1000	Boilers, central heating	Fire Tube, Dry Back, Boilers For Steam and Hot Water, All As Per AMSE Codes. 250 To 1000 H.P. , 3.8 Tons to 15.4 Tons	As per ASME Code	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi Haseeb Waqas Engineering Ltd. 103, B/1, M.M. Alam Road Gulberg, III Lahore
589	8404.1000	Boiler Economizers	For upto 350 MW Boilers ASME Sec. 1 / B.S.S. & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
590	8404.1000	Boiler De-aerators	For upto 350 MW Boilers ASME Sec. 1 / B.S.S. & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
591	8404.1000	Super-heaters, steam	For upto 350 MW Boilers ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
592	8404.1000	Accumulators, Steam storage	As per requirement	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
593	8404.1000	Collectors for steam boilers	As per requirement	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
594	8404.1000	De-super-heaters for steam or vapour-Generating	As per requirement	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
595	8404.1000	Preheaters, air, for steam or vapour-	As per requirement	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
596	8404.1000	Auxiliary Plant for use with boilers of heading 8402	<ul style="list-style-type: none"> • Economizer • Dearator • Air pre heater • Steam Coil Air Pre Heater • Evaporator • Silencer • Super Heater • Collector /Accumlator for Steam - Above equipments for water tube, fire tube, waste heat recovery boiler, heat recovery steam generator of capacity Up to 350 TPH, 150 BARG)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
597	8404.1000	Auxiliary Plants - Economizer	For upto 20 tons steam boiler, as per customers requirement.	--	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
598	8404.1000	Auxiliary Plants - Super Heater	For upto 20 tons steam boiler, as per customers requirement.	--	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
599	8404.1000	Auxiliary Plants - Boiler Feed Water unit	For upto 20 tons steam boiler, as per customers requirement.	--	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
600	8404.2000	Boiler Condensers	For upto 350 MW Boilers ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
601	8404.2000	Condensers, Mixing Steam	Evaporators Vapor Cells, Falling Film Evaporators, Vacuum Pans,	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
602	8404.2000	Condensers, steam	For upto 350 MW Boilers ASME Sec. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
603	8404.2000	Condensers, mixing, steam	Evaporators, Vapour Cells, Falling Film Evaporators, Vacuum Pans, Vacuum Filters, Pressure Filters, Crystallizers, Heat Exchangers, Gas Scrubbers, Multi Trays Clarifiers, Multi Jet Condensers, Cascade Condensers, Rain & Shower Type Condensers, Fluidized Bed Dryers, Counter Flow Dryers, Rotary Dryers. In accordance to ASME Sec 1, TEMA HEI	1) Evaporators upto 5500 mm dia & 10050 mm length. 2) Shell & Tube Type Pre Condensers upto 1700 mm dia & 6000 mm length. 3) Vertical Condensers upto 2012 mm dia & 6800 mm length. Horizontal Condensers upto 2012 mm dia & 6800 mm length. 4) Shell & Tube type Heat Exchangers upto 1700 mm dia & 5000 mm length. 5) Shell & Tube type evaporators upto 5500 mm dia & 14000 mm length.	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
604	8404.2000	Condensers for steam or other vapour power units	Capacity up to 350 TPH & 150 BARG for (water tube, fire tube, waste heat recovery boiler, heat recovery steam generator)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
605	8404.2000	Condensers, steam	Steam heating Coils 1HP, 1.5 HP, 2HP, 2.5HP, 3HP, 5HP, 7.5HP, 10HP, 20HP, 30HP, 40HP, 50HP, 60HP and 80HP & as per customers requirements	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
606	8404.2000	Condensers, mixing, steam	Chilled Water Coils (Aluminium Fins-Coated & Un-coated) 6HP, 10HP, 12.5HP, 18HP, 25HP, 30HP, 38HP, 50HP, 60HP, 75HP and 100HP Chilled Water Coils (Copper Fins) 10HP, 20HP, 30HP, 40HP, 50HP, 60HP and 80HP Shell & Tube (Condensers/ Evaporators & Chillers) 3HP, 5HP, 7.5HP, 10HP, 15HP, 50HP and 75HP.	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore
607	8408.9000	Single Cylinder Diesel Engines	3HP to 36 HP	--	--	Best Engineers 31-KM Ferozepur Road, Lahore Perfect Engineering Company Moza Bahi Kot, Raiwind, Industrial Estate, Raiwind, Lahore Kam Engineering (Pvt) Ltd. Behind Glaxo Lab. Off 19 Km Ferozepur Road, Lahore Naveed Brothers 23-KM Multan Road, Mohlanwal Lahore Heavy Mechanical Complex (Pvt) Ltd. Taxila
608	8410.9010	Parts of Hydraulic turbines, water wheels, and regulators	Parts including regulators i.e. Radial Gates. Draft tube gates, fixed wheel gates, bulk head gates, penstock, draft tube, tail race liners, spirala/ involute turbine casing, head covers, botton rings, trash rack, sill beams, stop logs, wicket gates etc. (For any type and range)	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
609	8410.9090	Regulators for hydraulic turbines and water wheels	Penstocks of upto 10.6M dia x 40mm thickness AISI, BS-7191, BS-5950	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
610	8410.9090	Penstocks	Penstocks	-	-	DESCON Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
611	8413.1100	CNG Dispenser	--	--	--	Tesla Industries Pvt. Ltd. Plot No. 81-F, St. 6, I-10/3 Islamabad Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad Advance Electronics International L/21-D, Block-21, F.B. Industrial Area, Rashid Minhas Road, Karachi – 75700
612	8413.3090	Gear Oil Pump	Sizes a) Outer Dia upto 80mm b) Height upto 35mm As per customers requirements.	Hardness of upto 90 HRB. Also includes Grindings & other secondary operations	Iron / Steel.	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area Karachi
613	8413.7010	Centrifugal pumps (Submersible)	Submersible motor sewage disposal pumps with non clogging impeller	DN: 100-175, Q upto 480 m ³ /hr, H upto 250 m.	Cast Iron (GG-25),SS,Duplex and Super Duplex	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
614	8413.7010	Centrifugal pumps (Submersible)	submersible motor water lubricated vertical bore hole single or multistage pumps	DN: 75-350, Q upto 840 m ³ /hr, H upto 480m.	Cast Iron (GG-25),Bronze (G-CuSn10),SS,Duplex,Super Duplex	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
615	8413.7090	Centrifugal pumps	Stainless Steel Submersible Bore Hole Pump	--	--	HMA Pumps 604, Israr Plaza, Ground Floor, Near Lane No. 5 Main Peshawar Road, Rawalpindi Cantt. KSB Pumps Co. Ltd. 16/2, Sir Agha Khan Road, Lahore
616	8413.7090	Centrifugal pumps	Horizontal centrifugal pumps with non-clogging impeller (Excluding API 610 and NACE MR 0175 compliance)	DN: 40-700, Q: upto 10000 m ³ /hr, H upto 100m.	Cast Iron (GG-25),Bronze (G-CuSn10),Ni Resist D-2,SS (1.4408),Duplex and Super Duplex	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
617	8413.7090	Centrifugal pumps	Single stage, Axially split volute casing pump with double flow impeller (Excluding Jet pumps and downhole positive displacement pumps for artificial lift from oil wells alongwith spares)	DN: 200-350, Q:2900 cu m/hr, H upto 100 m.	Cast Iron (GG-25),Stainless Steel	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
618	8413.7090	Centrifugal pumps	High pressure multistage pump in ring section design	DN:40-150, Q: 760 m ³ /hr, H:630m (max pressure 63 bars)	Cast Iron (GG-25),Cast Steel (GS-C25N)	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
619	8413.7090	Centrifugal pumps	Vertical single stage sewage and effluent disposal pumps in wet and dry pits design with non clogging impeller.	DN:65-700,Q upto 10000 m ³ /hr, H upto 85 m.	Cast Iron (GG-25), Bronze(G-CuSn10), Wear Resist Nickel Cast Iron (ERN),Austenitic NiCrMo,Stainless Steel(1.4408),Creep Resist Ferritic,Cast Steel,Duplex and Super Duplex.	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
620	8413.7090	Centrifugal pumps	Vertical line shaft bore hole single or multistage pump (Excluding jet pumps and down hole positive displacement pumps artificial lift from oil wells along with spares)	DN: 80-500,Q upt 2600 m ³ /hr, H upto 250 m.	Cast Iron (GG-25),Bronze (G-CuSn10),Ni-Resist D2 (ERN), Duplex and Super Duplex	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
621	8413.7090	Centrifugal pumps	Tubular Casing pumps	DN: 300-800, Q upto 9500 m ³ /hr, H upto 50 m.	Cast Iron (GG-25),Ni-Resist D2,Stainless steel, Duplex and Super Duplex.	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
622	8413.7090	Centrifugal pumps	Multistage Vertical / Horizontal High Pressure Centrifugal Pump (CR) [Excluding High Pressure / Alloy Steel / API / NACE Standard Compliant]	DN 25-125. Q: up to 120 m ³ /h,H: 320 m	Cast Iron (CG-25), Stainless Steel DIN W.- Nr. (1.4301),AISI (304),Temp: 120 C°	HMA Pumps (Pvt) Ltd. B-12 , 2nd Floor , Sultan Centre , 11 - West Wharf Road Karachi
623	8413.7090	Centrifugal pumps	Booster Pumping Station [Excluding High Pressure / Alloy Steel / API / NACE Standard Compliant]	DN 25-125. Q: up to 420 m ³ /h,H: 200 m	Cast Iron (CG-25), Stainless Steel DIN W.- Nr. (1.4301),AISI (304),Temp: 120 C°	HMA Pumps (Pvt) Ltd. B-12 , 2nd Floor , Sultan Centre , 11 - West Wharf Road Karachi
624	8413.7090	Centrifugal pumps	Deep Well Turbine Pumps (BP) [Excluding High Pressure / Alloy Steel / API / NACE Standard Compliant]	DN 75-150. Q: up to 5-280 m ³ /h,H: 200 m	Cast Iron (CG-25), Stainless Steel DIN W.- Nr. (1.4301),AISI (304/316),Temp: 120 C°	HMA Pumps (Pvt) Ltd. B-12 , 2nd Floor , Sultan Centre , 11 - West Wharf Road Karachi
625	8413.7090	Centrifugal pumps	Bore Hole Submersible Pump (SP) [Excluding High Pressure / Alloy Steel / API / NACE Standard Compliant]	DN 25-125. Q: up to 280 m ³ /h,H: 600 m	Stainless Steel DIN W.- Nr. (1.4301),AISI (304),Temp: 120 C°	HMA Pumps (Pvt) Ltd. B-12 , 2nd Floor , Sultan Centre , 11 - West Wharf Road Karachi
626	8413.7090	Centrifugal pumps	End Suction Single Stage Centrifugal Pump (NB/NP) [Excluding High Pressure / Alloy Steel / API / NACE Standard Compliant]	DN 32-200. Q: up to 450 m ³ /h,H: 120 m	Pump Housing Cast Iron (EN-GJL-250),Impeller Cast Iron / Bronze (EN-GJL-250/ CuSn10),Temp: 120 C°	HMA Pumps (Pvt) Ltd. B-12 , 2nd Floor , Sultan Centre , 11 - West Wharf Road Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
627	8413.7090	Self-Priming, Centrifugal, High-Pressure Pumps	Size: DN 38x38mm to DN 100x100mm Flow: 50 gpm (11.4 cu.m/hr) to 700 gpm (159 cu.m/hr) Pressure/Head: 20 ft (6m) to 475 ft (145m)	Pump Casing: Ductile Iron ASTMA48 / Aluminum / Copper Alloy. Impeller: Close-Type, 5 To 6-Vanes. Cast Steel ASTMA48 / Bronze/ Copper Alloy / S.S. Impeller Shaft: Stress Proof Steel SAE1144 Wearing & Back Plates: ASTMA48 / Aluminum / Copper Alloy Flanges: ASTMA48 / Aluminum / Copper Alloy Gasket & O-Rings: Buna-N / Compressed Synthetic Rubber Mechanical Seal: Self-lubricated, self-aligning, double floating seal sustains max. liquid temperature up to 160F or 71°C.	--	Meraj Limited Plot No. 11, Sector 15, Korangi Industrial Area, P.O. Box 3135, Karachi – 74900
628	8413.7090	Self-Priming, Centrifugal (Non-Clog) Trash Pumps/ Irrigation pumps	Size: DN 50x50 to DN 300x300mm Flow: 10 gpm (2 cu.m/hr) to 5600 gpm (1272 cu.m/hr) Pressure/Head: 10 ft (3m) to 140 ft (43m)	Pump Casing: Ductile Iron ASTMA48 / Impeller: Close-Type, 2 To 5-Vanes. Cast Steel ASTMA48 Impeller Shaft: Stress Proof Steel SAE1144 Wearing & Back Plates: ASTMA48 Flanges: ASTMA48 Gasket & O-Rings: Buna-N / Compressed Synthetic Rubber Mechanical Seal: Self-lubricated, self-aligning, double floating seal sustains max. liquid temperature up to 160F or 71°C.	--	Meraj Limited Plot No. 11, Sector 15, Korangi Industrial Area, P.O. Box 3135 Karachi – 74900
629	8413.7090	Combined Normal and High Pressure Fire Pump	--	--	--	Meraj Limited Plot No. 11, Sector 15, Korangi Industrial Area, Karachi
630	8413.7090	Gland Pump Centrifugal Single stage end suction top discharge horizontal Shaft Tool mounted Pump.	Head : 15-210 feet Discharge : 3180-50 US gmp	Casing : S. S. (Commercial), Cast Iron Shaft : S.S., Carbon Steel Impeller : S.S., Bronze, Cast Iron Stuffing Box : Gland Packing, Mechanical Seal.		Golden Pumps (Pvt) Ltd. G.T. Road Gujranwala
631	8413.8190	Pumps	RPH PumpsHorizontal & Vertical, Split case configuration in accordance with API 610 (11th Edition) suitable for all API Pump applications in chemical, Oil & Gas sector,energy and petrochemical industry	DN:25-400,Q upto 4150 m ³ /hr, H upto 270 m,T:-70C to 450C.	Available in all types of material cmbination in accordance with API 610/ISO 13709	KSB Pumps Company Limited, 16/2, Sir Agha Khan Road, Lahore
632	8413.8190	Pumps	Horizontal volute casing and suction pump with radial vane impeller (Excluding API 610 and NACE MR 0175 Compliance)	DN:32-300,Q upto 1900 m ³ /hr, H upto 102 m.	--	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
633	8413.7090 8413.8190	Pumps	RPK Type in accordance with API 610 (6th Edition). (Excluding Jet Pumps and downhole positive displacement pumps for artificial lift from Oil Wells Alongwith spares)	DN: 80-100 Q: up to 270 cumetre/hr H: up to 58 m RPM: up to 2900	Available in Cast Steel (GS-C25N) and Stainless -Steel (1.4408) in accordance with API 610 Material Combinations	KSB Pumps Company Limited 16/2, Sir Agha Khan Road, Lahore
634	8414.5110	Ceiling Fans	80-88 Volts, not over 125 W	Grade - A	--	Metro Hi-Tech (Pvt.) Ltd., G.T. Road, Gujrat Yunas Metal Works (Pvt) Ltd. (Yunas Fan) Yunas Colony, G. T Road Gujrat
635	8414.5110	Ceiling Fans	Size: 56", Volts: 220/230, RPM: 315, Cycle: 50, Type: Capacitor, Watts: 70, Air Displacement cu.ft. /min: 12000, Service Value: 170 Size: 48", Volts: 220/230, RPM: 330, Cycle: 50, Type: Capacitor, Watts: 62, Air Displacement cu.ft. /min: 8500, Service Value: 140 Size: 36", Volts: 220/230, RPM: 400, Cycle: 50, Type: Capacitor, Watts: 55, Air Displacement cu.ft. /min: 6500, Service Value: 130	--	--	Wahid Industries Ltd. G. T. Road, Gujrat Yunas Metal Works (Pvt) Ltd. (Yunas Fan) Yunas Colony, G. T Road Gujrat
636	8414.5120	Pedestal Fan	Size: 20", Volts: 220/230, RPM: 1300, Cycle: 50, Type: Capacitor, Watts: 75, Air Displacement cu.ft. /min: 3500, Service Value: 46 Size: 22", Volts: 220/230, RPM: 1250, Cycle: 50, Type: Capacitor, Watts: 80, Air Displacement cu.ft. /min: 5000, Service Value: 50 Size: 24", Volts: 220/230, RPM: 1250, Cycle: 50, Type: Capacitor, Watts: 110, Air Displacement cu.ft. /min: 6000, Service Value: 48 Size: 26", Volts: 220/230, RPM: 950, Cycle: 50, Type: Capacitor, Watts: 110, Air Displacement cu.ft. /min: 6000, Service Value: 46	--	--	Wahid Industries Ltd. G. T. Road, Gujrat Super Asia Group of Companies Near Lahori Octori, G. T Road Gujranwala Yunas Metal Works,(Pvt) Ltd. (Yunas Fan) Yunas Colony, G. T Road Gujrat CECO Electrical Industries G.T Road Gujrat
637	8414.5130	Table Fans,	--	--	--	Super Asia Group of Companies Near Lahori Octori, G. T Road Gujranwala Yunas Metal Works (Pvt) Ltd. (Yunas Fan) Yunas Colony, G. T Road Gujrat CECO Electrical Industries G.T Road Gujrat
638	8414.5130	Table Fans	1400mm Size = 56" Volts = 220v RPM=325 Cycles = 50 Type= Capacitor Watts = 80 Air Displacement Cft/Min = 8825 Service Value = 110.31	--	--	General Fan Company (Pvt) Ltd. G.T. Road, Gujrat Yunas Metal Works,(Pvt) Ltd. (Yunas Fan)

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
639	8414.5130	Table Fans	Size: 16", Volts: 220/230, RPM: 1350, Cycle: 50, Type: Capacitor, Watts: 55, Air Displacement cu.ft. /min: 2500, Service Value: 45 Size: 18", Volts: 220/230, RPM: 1350, Cycle: 50, Type: Capacitor, Watts: 65, Air Displacement cu.ft. /min: 3000, Service Value: 46	--	--	Wahid Industries Ltd. G. T. Road, Gujrat Yunas Metal Works,(Pvt) Ltd. (Yunas Fan) Yunas Colony, G. T Road Gujrat
640	8414.5140	Exhaust Fans	Size: 8", Volts: 220/230, RPM: 1400, Cycle: 50, Type: Capacitor, Watts: 30, Air Displacement cu.ft. /min: 800, Service Value: 27 Size: 10", Volts: 220/230, RPM: 1400, Cycle: 50, Type: Capacitor, Watts: 35, Air Displacement cu.ft. /min: 1000, Service Value: 29 Size: 12", Volts: 220/230, RPM: 14000, Cycle: 50, Type: Capacitor, Watts: 50, Air Displacement cu.ft. /min: 1500, Service Value: 30 Size: 16", Volts: 220/230, RPM: 950, Cycle: 50, Type: Capacitor, Watts: 85, Air Displacement cu.ft. /min: 2500, Service Value: 38 Size: 18", Volts: 220/230, RPM: 950, Cycle: 50, Type: Capacitor, Watts: 85, Air Displacement cu.ft. /min: 3000, Service Value: 40 Size: 24", Volts: 220/230, RPM: 900, Cycle: 50, Type: Capacitor, Watts: 140, Air Displacement cu.ft. /min: 6000, Service Value: 43	--	--	Wahid Industries Ltd. G. T. Road, Gujrat Yunas Metal Works,(Pvt) Ltd. (Yunas Fan) Yunas Colony, G. T Road Gujrat
641	8414.5140	Exhaust / vent Fans (Various Types);	300 to 129,000 cfm	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad
642	8414.5190	Box Fans/Misting Fan	1400mm Size = 56" RPM = 325 Cycles = 50 Type = Capacitor Watts = 80 Air Displacement CFT/Min = 8825 Service Value = 110.31	--	--	General Fan Company (Pvt) Ltd. G.T. Road, Gujrat
643	8414.5190	Other (Fans)	Bracket Fan: Size: 16", Volts: 220/230, RPM: 1350, Cycle: 50, Type: Capacitor, Watts: 50, Air Displacement cu.ft. /min: 2500, Service Value: 45 Size: 18", Volts: 220/230, RPM: 1300, Cycle: 50, Type: Capacitor, Watts: 65, Air Displacement cu.ft. /min: 3000, Service Value: 46 Plastic Louver Fan: Size: 14", Volts: 220/230, RPM: 1350, Cycle: 50, Type: Capacitor, Watts: 55, Air Displacement cu.ft. /min: 2000, Service Value: 36	--	--	Wahid Industries Ltd. G. T. Road, Gujrat
644	8414.5990	Industrial fans	Industrial fans of rotor diameter upto 1.6 meter	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
645	8414.5990	Industrial Fans	Type: Axial and Centrifugal Types of Centrifugal Fans: Backward, Forward, Radial Air Flow Rate Range: 1000 to 500,000 CFM Static Pressure Range: 0.1 to 150 inch of WG	Material: Aluminum, Stainless Steel, FRP	--	Jalal Engineering B-425, Block 13, F.B. Area, Karachi – 75900
646	8414.8040	Air Curtains	680 to 1355 cfm	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore □
647	8414.8090	Compression Skid	Reciprocating Types	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
648	8415.1010	Air Conditioners:	Window or wall type	Window or wall type	--	Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Pakistan Elektron Ltd (PEL) 14-km, Ferozepur Road Lahore Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi
649	8415.1020	Air-conditioners, self-contained,	12000BTU to 60000-BTU	Split Type	--	Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Pakistan Elektron Ltd (PEL) 14-km, Ferozepur Road Lahore Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
650	8415.1020	Air Conditioners:	Self contained or split type comprising of inner and outer unit 48,000 to 240,000 BTU/hr	Self contained or split type	--	<p>Habibullah Industries (Pvt)Ltd, 3rd Floor,Progressive Plaza, Beaumont Road,Civil Lines Karachi</p> <p>Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozpur Road Lahore</p> <p>Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore</p> <p>Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore</p> <p>Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad</p> <p>Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi</p>
651	8415.1020	Air-conditioners	Split Type 12000BTU to 60000-BTU	Self contained or split type	--	<p>Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozpur Road Lahore</p> <p>Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore</p> <p>Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore</p> <p>Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad</p> <p>Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
652	8415.1010 8415.1090	Air-conditioners, self-contained, wall type	9000 BTU, 12000 BTU, 18000 BTU, 24000 BTU along with commercial HVAC equipment upto 60000 BTU	--	--	<p>Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozpur Road Lahore</p> <p>Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore</p> <p>Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore</p> <p>Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad</p> <p>Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi.</p>
653	8415.8100	Air Conditioners	Wall/floor/ceiling/cassette type etc.(9,000 to 30,000 Btu/hr)	--	--	<p>Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, Raiwind Road, Lahore</p> <p>Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad</p> <p>Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore</p> <p>Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad.</p> <p>Habibullah Industries (Pvt) Ltd. 3rd Floor, Progressive Plaza, Beamount Road, Civil Lines, Karachi.</p> <p>Dawlance (Pvt) Ltd. Dawlance Centre, 7/4 Civil Lines 9, Dr. Ziauddin Ahmed Road, Karachi</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
654	8415.8100	Air Cooled Self contained Air Conditioners;	39,000 to 471,000 Btu/hr	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad. Habibullah Industries (Pvt) Ltd. 3rd Floor, Progressive Plaza, Beamount Road, Civil Lines, Karachi
655	8415.8100	Trolley mounted self contained units	50,400 to 600,000 Btu/hr	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad. Habibullah Industries (Pvt) Ltd. 3rd Floor, Progressive Plaza, Beamount Road, Civil Lines, Karachi
656	8415.8100	Air Cooled Split Type, Em Series (Cooling/Heating)	49,200 / 49,500 Btu/hr	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad. Habibullah Industries (Pvt) Ltd. 3rd Floor, Progressive Plaza, Beamount Road, Civil Lines, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
657	8415.8100	Water Cooled Packaged Air Conditioners;	45,000 to 498,000 Btu/hr	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad. Habibullah Industries (Pvt) Ltd. 3rd Floor, Progressive Plaza, Beamount Road, Civil Lines, Karachi
658	8415.8100	Hybrid Cooling System	--	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad
659	8415.8100	Air Conditioning/ Heating Unit	--	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad.
660	8415.8100	Free Cooling Unit, Flexi Box 450/48 TWCA	--	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore
661	8415.8200	Fan coil units	Other, incorporating a refrigerating unit. Fan Coil Units Ceiling Suspended ducted type, Fan Coil Units with Sheet Metal Body Industrial type. Computer Room Airconditioners 48,000 to 240000 BTU's /HR.with Humidifiers & Electric Heater.	--	--	Habibullah Industries (Pvt)Ltd, 3rd Floor, Progressive Plaza, Beamount Road, Civil Lines Karachi Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
662	8415.8300	Air Handling Units	1500 to 50,000 cfm - Horizontal draw through - Vertical draw through - Multi Zone blow through - Single Zone blow through - Double Skin	Construction with Bio-Pharma grade material and specified filters to control microbial counts. Plug Fan and Frequency Devices (VFDs) for pharmaceuticals industry.	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad Habibullah Industries (pvt) Ltd. 3rd Floor, Progressive Plaza, Beaumont Road, Civil Lines, Karachi Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad
663	8415.8300	Fan Coil Units	300 to 1600 cfm	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore □
664	8415.8300	Electric Steam Humidifiers;	Steam output: (3.0 & 6.0 kg/Hr)	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad
665	8415.8300	Hot Water Generators (Gas Fired);	Heating capacity: 35,000 to 360,000 & as per customers requirements	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
666	8415.8300	Air handling/ Humidification / Filtration Plant	All Types and Sizes Made up of G.I. sheets, M.S. Sheets, Angle Irons & AI Sheets etc.	For Textile Mills (Spinning, weaving, Knitting) Power Plants, Tobacco Factories, Paper Plants etc. etc.	--	Manstock Engineering Company (Pvt) Ltd. 11/A (Commercial), 2nd Floor, Sector XX, Kh.-e-Iqbal, Phase-3, Lahore Cantt.

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
667	8415.1020 8415.1090 8415.8100 8415.8300	Air Conditioners:	<ul style="list-style-type: none"> - Packaged Type 02-60 HP - Split Type ES Series 0.75 Ton to 2.5 Ton - EQ Series LCD Display 1.0 Ton to 1.25 Ton - Window type A/C 1.5 Ton to 2.5 Ton - Air cooled self contained 4-30 Tons - Air Cooled split packaged 4-30 Tons - A/Cs with ducted and vertical Cabinet Ttype evaporators - EM Series floor standing plastic body 1.5 - 4.25 Tons - Cassette type EY series 1.5 - 6.0 Tons - Water / air cooled packaged type A/Cs 4-42 Tons 	--	--	<p>Habibullah Industries (Pvt)Ltd, 3rd Floor,Progressive Plaza, Beamount Road,Civil Lines Karachi</p> <p>Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore</p> <p>Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad</p> <p>Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore</p> <p>Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad.</p>
668	8415.9011 8415.9019	Evaporators, refrigerating	Evaporators (for Air Conditioners) 1HP (old model), 1HP (new model), 1.5HP (old model), 1.5HP (new model), 2HP, 2.5HP, 3HP, 5HP, 7.5HP, 10HP, 15HP, 20HP, 30HP, 40HP, 60HP, 80HP and 120HP.	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore
669	8415.9029	Condensers for Air- conditioners,	Condensers (Air-conditioners) (Coated & Uncoated) 1HP (old model), 1HP (new model), 1.5HP (old model), 1.5HP (new model), 2HP, 2.5HP, 3HP, 5HP, 7.5HP, 10HP, 15HP, 20HP, 30HP, 40HP, 60HP, 80HP and 120HP.	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore
670	8415.9099	Cooling & Heating Coils used in air conditioners	Custom Made	--	--	<p>Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad</p> <p>Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore □</p>
671	8417.1010	Kilns, non-electric	Kiln upto 5000 mm dia x 65 mm thickness Capacity upto 4,000 TPD Cement Plants "HEI" (Heat Exchange Institute)	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
672	8417.1010	Kilns, non-electric	As per requirement	--	--	DESCON Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
673	8417.1010	Kilns, non-electric	As per fabrication drawings and Client's requirement.	Rotary Kilns upto 556 Tons weight for Cement Plants.	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
674	8417.1010	Kilns for cement plants	Kilns for cement plants of all capacities	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
675	8417.1010	Kiln for Cement Plant	As per requirement	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
676	8417.1090	Furnaces, Industrial , non-electric,	Heaters/Furnaces for Refineries and Fertilizer Plants upto 100,000 bpd & 970 tpd respectively "HEI" (Heat Exchange Institute)	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
677	8418.1000	Refrigeration/ freezing/air conditioning machines;	Combined refrigerator-freezers, fitted with separate external doors	--	--	Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore United Refrigeration Industries Ltd. and Dawlance (Pvt) Ltd. Dawlance Centre, 7/4 Civil Lines 9, Dr. Ziauddin Ahmed Road, Karachi
678	8418.2100	Refrigeration/ freezing/air conditioning machines;	Refrigerators, House hold type (Compression type)	--	--	Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore United Refrigeration Industries Ltd. and Dawlance (Pvt) Ltd. Dawlance Centre, 7/4 Civil Lines 9, Dr. Ziauddin Ahmed Road, Karachi
679	8418.2100	Refrigerators, compression-type, electrical, domestic	Combined refrigerator-freezers, fitted with separate external doors	--	--	Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore United Refrigeration Industries Ltd. and Dawlance (Pvt) Ltd. Dawlance Centre, 7/4 Civil Lines 9, Dr. Ziauddin Ahmed Road, Karachi
680	8418.2900	Refrigeration/ freezing/air conditioning machines;	-Refrigerators (direct cool/no-frost) -Deep Freezers, -Triplet Freezers -Bottle coolers	--	--	Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore United Refrigeration Industries Ltd. and Dawlance (Pvt) Ltd. Dawlance Centre, 7/4 Civil Lines 9, Dr. Ziauddin Ahmed Road, Karachi Varioline Intercool Pakistan (Pvt) Ltd. 3-KM Kahna Kacha Road Kahna Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
681	8418.3000	Refrigeration/ freezing/air conditioning machines;	Freezers of the chest type, not exceeding 800 l capacity	--	--	Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore Cool Industries (Pvt) Limited 9th KM Multan Road Hanjarwal Lahore United Refrigeration Industries Ltd. and Dawlance (Pvt) Ltd. Dawlance Centre, 7/4 Civil Lines 9, Dr. Ziauddin Ahmed Road, Karachi Varioline Intercool Pakistan (Pvt) Ltd. 3-KM Kahna Kacha Road Kahna Lahore
682	8418.4000	Refrigeration/ freezing/air conditioning machines;	Freezers of the upright type, not exceeding 900 litres capacity	--	--	Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore United Refrigeration Industries Ltd. and Dawlance (Pvt) Ltd. Dawlance Centre, 7/4 Civil Lines 9, Dr. Ziauddin Ahmed Road, Karachi
683	8418.5000	Refrigeration/ freezing/air conditioning machines;	Other furniture (chests, cabinets, display counters, show-cases and the like) for storage and display, incorporating refrigerating or freezing equipment.	--	--	Pakistan Elektron Ltd (PEL) 14-km, Ferozepur Road Lahore Cool Industries Ltd (Waves) 9th KM Multan Road, Hanjarwal, Lahore Varioline Intercool Pakistan (Pvt) Ltd. 3-Km, Ferozepur Road, Lahore Mumtaz Engineering (Pvt) Ltd. 141- Industrial Area, Kot Lakhpat Lahore
684	8418.6910	Milk Cooling Tanks	Milk chillers, direct expansion and ice bank type, capacities : uptill 3400 liters , manufactured under license from "packo Inox-belgium"	--	--	Unitech International (Pvt.) Ltd. Plot # 09, Holiday Park, Musharafabad , Raiwind Road, Lahore.
685	8418.6990	Cold Storage Units	Not below (-4°C) temp.	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Pakistan Insulations (Pvt.) Ltd. 107 Business Avenue PECHS BLock-6, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
686	8418.6990	Refrigerated containers/Cold Rooms/Walk ins Refrigeration Units and Insulated Reefer Boxes	Refrigerated Containers suitable for mounting on locally manufactured vehicles/chasis. Cold Rooms, Walk ins	--	--	Kold Kraft (Pvt) Ltd, 247/S, Industrial Estate Kot Lakhpat, Lahore Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Technologies (Pvt) Ltd. Plot No. 270 Industrial Triangle Kahuta Road Islamabad Pakistan Insulations Pvt. Ltd. 107 Business Avenue PECHS BLock-6, Karachi Varioline Intercool Pakistan (Pvt) Ltd. 3-KM Kahna Kacha Road Kahna Lahore
687	8418.6990	Air Cooled Packaged Water Chillers;	34,800 to 1944,000 Btu/hr	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad. Habibullah Industries (Pvt) Ltd. 3rd Floor, Progressive Plaza, Beamount Road, Civil Lines, Karachi
688	8418.6990	Water Cooled Packaged Water Chillers	40,200 to 2180,400 Btu/hr	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore Ageco (Pvt) Ltd. Office No. 7&8, 1st Floor, Hill View Plaza, Blue Area, Islamabad.

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
689	8418.6990	Flooded Type Water Cooled Chiller	--	--	--	Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore Sabro Group (S.a Brother) Street No. 77,78, Sector I-9/2 Islamabad Petal Engineering (Pvt) Ltd 10 Umar Khan Road, Manawan near Batapur Lahore
690	8418.9100	Evaporators, refrigerating	--	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore Varioline Intercool Pakistan (Pvt) Ltd. 3-KM Kahna Kacha Road Kahna Lahore
691	8418.9100	Coolers, evaporative air	Evaporators for Deep Freezers and Visi Coolers 1/5HP, 1/4HP, 1/3HP and 1/2hp	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore
692	8418.9990	Condensers for Deep Freezers & Water Coolers	Condensers (For Deep Freezers & Visi Coolers) 1/5HP, 1/4HP, 1/3HP and 1/2HP	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore Varioline Intercool Pakistan (Pvt) Ltd. 3-KM Kahna Kacha Road Kahna Lahore
693	8418.9990	Condensers, refrigerating	Condensers for Refrigerators (Sheet on Tube) 1/16HP, 1/12HP, 1/10HP, 1/8HP, 1/6HP, 1/5HP, 1/4HP and 1/3HP. Condensers for Refrigerators (Wire on Tube) 1/12HP, 1/10HP, 1/8HP, 1/6HP, 1/5HP, 1/4HP and 1/3HP. Bunch Condensers for Deep freezers & Water Coolers (Wire on Tube) 1/2HP - 8 Row, 1/3HP - 6 Row, 1/4HP - 4 Row 1/5HP - 4 Row, 1/6HP - 3 Row, 1/8HP - 2 Row	--	--	Breeze Frost Industries (Pvt) Ltd. Harbanspura Road, P.O. Tajpura, Lahore
694	8418.9990 8419.5000 8419.4000	Falling Film Evaporator	Heating Surface 55m2 Surface	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
695	8418.9990 8479.8990	Pig Launcher/ Reciever	As per requirement	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
696	8419.3900	Dryer	All Types and Sizes (except for vaccum dryers used in Tanneries)	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpura, G.T. Road Gujranwala SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi Heavy Mechanical Complex (Pvt) Ltd. Taxila
697	8419.3900	Spray Dryer Machine with all standard accessories	--	--	--	SEFEC Engineering (Pvt) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
698	8419.4000	Crude Oil Distillation Towers/Columns	For Refineries of upto 100,000 bpd and for Chemical, Petrochemical & Fertilizer Plants. Diameter x Height x Wall Thickness of Towers/Columns range from 1500-3500 mm x 10000mm - 35000mm x 10-50mm. ASME Sec. VIII Div. 1 & 2	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
699	8419.4000	Plant, distilling, Industrial	As per fabrication drawings and Client's requirement. In accordance to ASME Sec VIII, Div 1& 2 / B.S.S. & as per customers requirements	--	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
700	8419.4000	Distilling or rectifying plant	Refinery/ Oil & Gas Distillation Towers Type = Atmospheric Pressure, Pressure and Vacuum Type Distillation Towers Pressure range = Full Vacuum to 1500 PSI Temperature Range = -100 F to 600 F Material used = Carbon Steel, Normalized Carbon Steel, Stainless Steel and Alloy Steel Maximum Length = 40000mm & Max. dia = 3400mm Wall thickness = 5mm thk to 50.8mm thk & as per customers requirements	--	--	Petrosin Ravi Industries Ltd. Shahra-i-Pakistan Kala Shah Kakoo G.T Road Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
701	8419.4000	Crude Oil Distillation Tower/ Column	For Refineries, Chemical, Petrochemical, Fertilizer	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
702	8419.4000	Ethanol Plant/ equipment	Upto 100,000 L / day	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
703	8419.4000	Distillation Plant		--	--	FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi
704	8419.4000	Oil Distiller	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
705	8419.4000 8419.5000 8419.8990 and respective headings	Absorption Tower, Columns, Process Reactors, Heat Exchange, Condensers, Air Coolers, LPG/Oil/LNG Storage Tanks, Heat Recovery Boilers, Steel Structure, Process and Utility Piping, Gas Sweetning Unit, Amine Absorption, Flare Stack System, LPG Recovery Unit, Sulphur Recovery Unit.	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
706	8419.5000	Heat Exchangers	Shell & Tube Type (as per TEMA standard for oil /gas processing, chemical & fertilizer plants) Range upto 2500psi & as per customers requirements	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
707	8419.5000	Heat exchange units, Industrial	Shell & Tube Type of Carbon, Alloy & Stainless Steel. Fixed & Floating Tube sheets with straight & U-Tubes. Air Cooled with Finned Tubes of Carbon, Alloy & Non-Ferrous Materials ASME Sec. VIII Div. 1 & 2, TEMA, HEI, API-660, API-661, ANSI B-78.1, ANSI B-78.2 & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
708	8419.5000	Heat exchangers	Type: U-Tube, Fixed, Floating, Horizontal & Vertical Size: Dish Head (2:1 tori-spherical Ø6m x 30mm thick in CS and 20mm thick in S. Steel. Desing Code/ Standards: ASME Sec. VIII-1-2, 3 TEMA-RCB	--	--	Heavy Mechanical Complex-3 Hattar Road, Taxila

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
709	8419.5000	Heat exchange units, Industrial	<p>For following plants: 1. Ethanol Plant 2. Urea Formaldehyde Plants 3. Cement Industries 4. Sugar Industries 5. Oil Refineries 6. Bio Gas Plants 7. Water treatment Plants 8. Soap & Detergents Plant 9. Food, Drugs and Cosmetics Industries 10. Chipboard and Medium Density Fiber Board Plants 11. Environmental and Effluent Treatment Plant 12. Other process and manufacturing industries In Accordance to ASME Sec VIII Div 1 & 2, TEMA, HEI, HITI</p> <p>Plant, machinery and equipment for Sugar, Fertilizer, Chemical, Petro-Chemical, oil and gas projects & Refinery; a) Cascade and barometric type evaporation units , crystallizer, condenser for sugar remelter, sulphitator, dryer, coolers, air heaters, grates and combination grates ; b) Pressure vessels Cylindrical upto 250 mm & spherical upto 30 mm plate thickness c) Columns (stripper, absorption, distillation, dehydration, d) Reactors e) Tanks, mixers, agitator tanks f) Economizers g) Bulk storage tanks h) Deaeration equipment & de-gassifiers i) Furnaces/fired heater j) Cyclone scrubbers & dust collectors k) Rotary equipment e.g. dryers, coolers, granulators, drum den, calcinator & rotary kilns l) Finishing machines m) Vacuum condensers n) Crystallizer o)</p>	1) Air Cooled Cross Flow Heat Exchangers upto 45 Bars and Tube specifications as 9377 mm length, 2668 mm width & 972 mm height. 2) Shell & Tube Type Pre Condensers upto 1700 mm dia & 6000 mm length. 3) Vertical Condensers upto 2012 mm dia & 6800 mm length. 4) Horizontal Condensers upto 2012 mm dia & 6800 mm length. 5) Shell & Tube type Heat Exchangers upto 1700 mm dia & 5000 mm length. 6) Shell & Tube type evaporators upto 5500 mm dia & 14000 mm length.	--	<p>A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700</p> <p>DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore</p>
710	8419.5000	Heat exchange units, Industrial ,	Plate Type (Gasketed) Heat Exchanger as per customer requirement and in accordance with ASME codes, of any capacity.	--	--	Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi
711	8419.5000	Heat exchange units, Industrial	Shell & Tube Type Heat Exchanger as per customer requirement and in accordance with ASME codes, of any capacity & as per customers requirements	--	--	<p>Industrial & Mechanical Engineers 403, Noor Estate Building Shahrah-e-Faisal Karachi</p> <p>DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore</p>
712	8419.5000	Heat exchange units, Industrial	Plate Type Heat Exchanger (Gasketed)	--	--	<p>NKR Engineering (pvt) Ltd. 304, Anum Classic, 48 Darul Amman Society Opposite Duty Free Shop, Shahra-e-Faisal, Karachi</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
713	8419.5000	Heat exchange units	a. Type = Shell/ Tube, as per TEMA Standard Pressure Range = 15 PSI to 1500 PSI Temperature Range = -150 to 500F Material used = Carbon Steel, Stainless Steel, Brass and Alloy Minimum Dia = 300mm, Max Dia = 1500mm Minimum Length = 1000mm; Max Length = 10000mm b. Type = Fin Fan/ Air Cooled Cooler Pressure Range = 15 PSI to 1500 PSI Temperature Range = ambient to 600F Material used = Carbon Steel, Stainless Steel, Brass and Alloy Minimum Size = 5000mm; Max Size = 12000mm as per customers requirements	--	--	Petrosin Ravi Industries Ltd. Shahra-i-Pakistan Kala Shah Kakoo G.T Road Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
714	8419.5000	Heat Exchange Units	Heat Exchanger (Shell and tube type, size 300Kg/cm ² pressure Heat Exchanger (Air Cooled Exchanger/FinFan Cooler - Induced/Forced Draft & as per customers requirements	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
715	8419.5000	Heat Exchangers	Heat Exchanger (Shell and tube type, size 300Kg/cm ² pressure Heat Exchanger (Air Cooled Exchanger/FinFan Cooler - - Induced/Forced Draft & as per customers requirements	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
716	8419.5000	Shell and Tube Heat Exchangers	--	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
717	8419.5000	Cooling Box	For Carbonating Tower and for Ammonia Gas Cooler	--	--	Heavy Mechanical Complex Taxila SEFEC Engineering (Pvt) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
718	8419.5000	R22 Receiver	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
719	8419.5000	Low Temperature Suction Trap	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
720	8419.5000	Medium Temperature Suction Trap	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
721	8419.5000	Air Receiver	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
722	8419.5000	Fuel Gas Ko Drum	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
723	8419.5000	Flare Ko Drum	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
724	8419.5000	Teg Vent Gas Knock Out Drum	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
725	8419.8100	Kettles, steam, Industrial	Pressure Vessels with steam heating helical coils inside and fitted with or without agitator. Diameter upto 5000mm, height 6000mm and wall thickness upto 30mm fabricated of carbon, alloy or stainless steel. ASME Sec. VIII Div. 1 & 2 & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
726	8419.8100	Kettles, steam, Industrial	Capacity Up to 350 TPH, 150 BARG (water tube, fire tube, waste heat recovery boiler, heat recovery steam generator)	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
727	8419.8910	Cooling Towers	Cooling Tower Designs: Counterflow and Crossflow Air Flow: Induced and Forced Fills: Film Fill and Splash Fill Type: Industrial and Package Size per Cell: 50 GPM to 5000 GPM	Structure: Stainless Steel, Galvanized Mild Steel, FRP	--	Jalal Engineering B-425, Block 13, F.B. Area, Karachi – 75900 ARCO International 305-307, Poonch House Plaza, Adamjee Road, P.O. Box 1056, Rawalpindi Imtiaz Engineering Services 12, 3rd Floor, Hyder Plaza Main Rashid Minhas Road Gulshan-e-Iqbal, Block-5, Karachi Liang Chi Industry Pakistan (Pvt) Ltd. 304 Anum Classic, 48 Darul Aman Society, Opposite Duty Free Shop, Shara-e-Faisal, Karachi - 75350
728	8419.8990	Kettles for Pharmaceuticals Industry	Pressure Vessels with Limet Coil, Jackets for steam heating & cooling in stainless steel or higher alloys design as per ASME Sec. VIII Divt. 1 & 2 complete with agitator & variable / fixed speed drives & as per customers requirement.			DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
729	8419.8990	De-Ethanizer OH Drum	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
730	8419.8990	Blow Case Vessel	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
731	8419.8990	Water Degassing Boot	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
732	8419.8990	Expandor Suction Drum	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
733	8419.8990	Low Temperature Separator	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
734	8419.8990	De-Ethanizer Column	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
735	8419.8990	LPG/NGL Splitter OH Drum	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
736	8419.8990	Slops Tanks	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
737	8419.8990	Chilled Water Expansion Tank	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
738	8419.8990	Flare Knok out drum	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
739	8419.8990	NGL Flash Vessel	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
740	8419.8990	Thermosyphon Receiver	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
741	8419.8990	Condensate Flash Vessel	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
742	8419.8990	Digester & Reactor for Pulp & Paper Plant	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
743	8419.8990	Thermal Oil Boiler System (Hot Oil Boiler)	All types/sizes	--	--	Descon Engineering Ltd. 2-Km Defence Road Off 24th Km, Multan Road, Chung, Lahore The Sitara Engineers Nishatabad, Sheikhpura Road Heavy Mechanical Complex Taxila SEFEC Engineering (Pvt) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
744	8419.8990	Slug Catcher	Finger type, Vessel type & as per customers requirements	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
745	8419.8990	Complete Ethanol Plants	Low carbon stainless steel, consisting of Distillation Columns, Shell and Tube Type Heat Exchangers, Fermentation tanks, Plant piping, Molasses Storage tanks, Bio Gas reactors and other large and small tanks. We also do complete erecting and installation of these plants. In accordance to ASME/ANSI 31.3, API 650, API 620, CODAP, TEMA type B&C / B.S.S. & as per customers requirements	Each Ethanol plant comprises of the following: 1) 10 nos of Distillation columns with diameter ranges from 300 mm to 2300 mm and length of upto 47000mm. 2) 13 nos of shell and tube type heat exchangers with dia 400 mm to 2450 mm. 3) 22 nos of tanks with dia 2200 mm to 6000 mm. All equipments are made from SS316L and SS304L	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
746	8419.8990	Machines, condensing, for air or gas Industries	Shell & Tube Type of Carbon, Alloy & Stainless Steel. Fixed & Floating Tube sheets with straight & U-Tubes. Air Cooled with Finned Tubes of Carbon, Alloy & Non-Ferrous Materials ASME Sec. VIII, Div 1 & 2, TEMA, HEI, HTI	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
747	8419.8990	Knock Out Drums	--	--		IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
748	8419.8990	Coalescer Vessels	--	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
749	8419.8990	Columns and Strippers	--	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
750	8419.8990	Spherical Tank (LPG)	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
751	8419.8990	Seal System Nitrogen Receiver	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
752	8419.8990	Instrument Air Receiver	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
753	8419.8990	Plant Air Receiver	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
754	8419.8990	Nitrogen Receiver	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
755	8419.8990	Steel Vessels and equipment	LPG Tanks - Static (Cylindrical upto 125 Mton capacity, Spherical upto 500 Mton capacity) LPG Bowzers capacity 30 Ton Storage Pressure Vessel (cylindrical/spherical), up to 250 mm plate thick (Columns, Stripper, absorption, distillation, dehydration, Deaeration Equipment & De Gasifiers etc.) & as per customers requirements	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000 DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
756	8419.8990	Pasteurizers, electro-thermic, Industrial	Juice and milk pasteurizers	--	--	NKR Engineering (Pvt) Ltd. 304, Anum Classic, 48 Darul Amman Society Opposite Duty Free Shop, Shahra-e-Faisal, Karachi
757	8419.8990	Crystallizers, sugar refining, Industrial	For upto 6,000 TCD Sugar Plant ASME Sec. VIII, Div. 1 & 2	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
758	8419.8990	Crystallizers, sugar refining , Industrial	Sugar Mill eqpt.of upto 10,000tpd: Cane Carrier, Cane leveler, Cane cutting knives, Cane shredder, Prepared cane elevator, Cane crushing mills, cooling water piping, Inter conveyors, Service platform & gangways MS & SS receiving tanks, imbinition & juice piping, service hand box only, belt conveyor, Juice Heaters, Bucket elevator, Lime slaker, Flashing vessel, Door type & SRI type clarifier, Vacuum filters, Cascade condenser Mud overflow tank, Mud mixer Cyclone, bagacillo separator and ducting, Bagacillo screen with hopper Evaporators, Condensate receiver, Vacuum pans(batch type), Crystallizers (air cooled & water cooled) Vertical crystallizer, Open seed crystallizer, Vacuum crystallizers, Multi jet condensers, Continuous centrifugals, Feed mixer, Screw conveyor, Sugar remeltor, Magma minglers single/double paddle, Raw sugar remelter, First/ Second carbonation tank tank, Remelt sulphitator, Rotary pressure filter, Aeration tank, Telofloc clarifier, Scum clarifier, hopper conveyor, White sugar dryer, Air heater Dry cyclone, wet cyclone, Sugar Storage bins, Boiler supporting structure, Working platform, Steel casing, Air heater Dumping grates & feeder, Economizer, I.D.F.D. & S.A. fans, Fly ash arrestor, Observation ports, inspection/ access doors, Hoppers, Flue gas ducts,	1) Vertical Crystallizer upto 300 tons weight, 4000 mm diameter and 13000 mm length. 2) Air Cooled Crystallizer upto 3000 mm diameter and 5500 mm length. 3)Vacum Crystallizer upto 2800 mm diameter and 5000 mm length. 4) Agitators upto 8000 mm diameter and 6500 mm length. 5) Condensers upto 1400 mm diameter and 5600 mm length. 6) Seperators upto 1500 mm diameter and 9500 mm length. 7) Filters and screens upto 5000 mm dia and 6000 mm length. 8) Mixers upto 2400 mm dia and 8000 mm length. 9) Pressure Filters and Reactors upto 3000 mm dia and 4000 mm length. 10) Vacuum Filters upto 3000 mm dia and 6000 mm length	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
759	8419.8990 and respective headings	Absorption Tower, Columns, Process Reactors, Heat Exchange, Condensers, Air Coolers, LPG/Oil/LNG Storage Tanks, Heat Recovery Boilers, Steel Structure, Process And Utility Piping, Gas Sweetening Unit, Amine Absorption, Flare Stack System, LPG Recovery Unit, Sulphur Recovery Unit.	-	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
760	8419.8990	Chemical Injection / Dosing Skids such as: • Corrosion Inhibitor Skid • Methanol Injection Skid • Drag Reducing Agent injection skid • Anti-Foam Injection skid • De-Emulsifier Injection skid • Wax Inhibitor Injection skid • Odorizer Injection skid	Pneumatic & Motor Driven, Solar CI Skid 10,000 PSI (g)	Gas Driven, Motor Driven, Solar Powered	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
761	8419.8990	Gas / Fuel Conditioning Skids • Instrument Gas Scrubber Skid • Sour Gas Conditioning Skid • Scrubbers • Filters	Stainless Steel, Carbon Steel, Alloy Steel	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
762	8419.8990 8419.8910	Tanks, fitted with heating or cooling elements,	Atmospheric Tanks from 500 barrels to 380,000 barrels capacity. Large tanks can be of fixed roof, floating roof or dome roof. ASME Sec. VIII, Div. 1 & 2, API-650, API-620, API-12B, API-12D, API-12F	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM. Multan Road, Lahore
763	8419.8990 8418.6990	Evaporators	For sugar mills Up to 1250 Tons per hours	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpura, G.T. Road Gujranwala
764	8419.9990	Cooling & Heating Coils used in Refrigerators	Custom Made	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad Coolpoint (Pvt) Ltd Adda Plot, Sharaiz Avenue jatti Umra Road, 'Raiwind Road, Lahore □

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
765	8421.2100	Pressure Sand Filter, Multi Media Filter, (Automatic/Manual Operation) Cartridge Filters	Filtration Media Sand, Gravel, Anthracite (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore
766	8421.2100	Activated Carbon Filter (Automatic/Manual Operation)	Filtration Media Granular or Powderd Activated Carbon (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
767	8421.2100	Iron Removal Filters (Automatic / Manual Operation)	Filtration Media Birm, Filter Ag and Manganese Green (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore
768	8421.2100	Water Softener Plants (Automatic & Manual Operation)	Filling Media Cation Exchange Resin (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
769	8421.2100	Demineralized/ De-ionization Plant [Continuous Electro de Ionization (CEDI) and Electro De Ionization (EDI)] comprising of cation exchange column, Anion Exchange column, De-alkalizer , Degassifier, De carbonation column & Mix Bed Polisher column. (Automatic & Manual Operation)	Strong, Weak Cation & anion Exchange Resin including Mixed Bed Grade (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore
770	8421.2100	Automatic WFI / Distilled Water Plant	(all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
771	8421.2100	Reverse Osmosis (RO) / Desalination Plants	Removal of ions / salts through Reverse Osmosis Membranes. (all capacities for all industrial sectors)	--	--	<p>Water Engineering & Management Services 19-N, Model Town Extension, Lahore</p> <p>Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700</p> <p>B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad</p> <p>FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi</p> <p>Aqua Regia House No. 33, G-4 Johar Town Lahore</p> <p>Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore</p>
772	8421.2100	Ultra Filtration (UF) Plants	Removal of Suspended Solids through Ultra Filtration Membranes (all capacities for all industrial sectors)	--	--	<p>Water Engineering & Management Services 19-N, Model Town Extension, Lahore</p> <p>Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700</p> <p>B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad</p> <p>FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi</p> <p>Aqua Regia House No. 33, G-4 Johar Town Lahore</p> <p>Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
773	8421.2100	Nano Filtration (NF) Plants	Removal of Selective ion through Nano Filtration Membranes (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore
774	8421.2100	Industrial Wastewater / Effluent Treatment Plant	Biological System (Aerobic/Anaerobic), Membrane Bio Reactor (MBR), Dissolved Air Floatation (DAF) Unit, (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
775	8421.2100	Sewage Treatment Plant	Biological System (Aerobic/Anaerobic) (all capacities for all industrial sectors)	--	--	Water Engineering & Management Services 19-N, Model Town Extension, Lahore Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700 B. H Industries (Pvt) Ltd. 05-Chenab Market Madina Town Faisalabad FD & C (Pvt) Ltd. F -116, S.I.T.E. Karachi Aqua Regia House No. 33, G-4 Johar Town Lahore Faiz Enterprises 3/II, Shadman Plaza Shadman Market Lahore
776	8421.2900	Dearator Feed Tank Vessel	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
777	8421.2900	Filters for oil refineries	As per fabrication drawings and Client's requirement.	Sand Filters for Oil Refineries. Inner dia 1980mm x 2930mm length. All water collection and Air distribution system is made of SS-304 material	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700 Fluid Technology International 424, 4th Floor, Bhayani Centre, Block M, North Nazimabad, Karachi-74700
778	8421.2900	Air Filters / Oil Filters	Air Filters for Power Generation and Customized Industrial application other than automotive (All Types and Sizes)	--	--	Malik Auto and Agricultural Ind. (Pvt) Ltd. 80-Badami Bagh, P.O. Box 465 Lahore Qaim Automotive Mfg. (Pvt) Ltd. 203-206, Prince Centre, Preedy Street Saddar, Karachi-74400 Skyways Manufacturers (Pvt) Ltd. A/1-A-3, SITE Karachi Essa Engineering Industries (Pvt) Ltd. S-19/A, c. Allana Road, S.I.T.E. Karachi
779	8421.2900	Clarifiers	36' x 18' (upto 141000 Gallons) Dorr Olive, SRI, FCB Type	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpuraa, G.T. Road Gujranwala

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
780	8421.3940	Air Filters	Other than automotive (All Types and Sizes)	--	--	Malik Auto and Agricultural Ind. (Pvt) Ltd. 80-Badami Bagh, P.O. Box 465 Lahore Qaim Automotive Mfg. (Pvt) Ltd. 203-206, Prince Centre, Preedy Street Saddar, Karachi-74400 Skyways Manufacturers (Pvt) Ltd. A/1-A-3, SITE Karachi
781	8421.3950	Bag Filters	Other than automotive Used for air filtration as substitute of cartage air filter and also used for removal of dry and wet smokes for cleaning the air or controlling the pollution as part of national environmental quality standards. (All Types and Sizes)	Usages: Gas turbines, generators, (air intake for circulation) cement, Coal power stations for controlling the emissions for environmental controls, dust collectors, vacuum cleaners and for all the machines which are producing fumes, unwanted vapors which act as air cleaner for operation as creating suction or for purpose of environment standard compliance. Bag filters are also used for liquid filtration in which case the filter media is for filtration of liquid and with the change of filter media the character of bag filtration can be changed.	--	Malik Auto and Agricultural Ind. (Pvt) Ltd. 80-Badami Bagh, P.O. Box 465 Lahore Qaim Automotive Mfg. (Pvt) Ltd. 203-206, Prince Centre, Preedy Street Saddar, Karachi-74400 Skyways Manufacturers (Pvt) Ltd. A/1-A-3, SITE Karachi
782	8421.3990	Incinerators	For Oil and Gas/Refinery and Industrial units		-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
783	8421.3990	Gas Filter Separators	--	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
784	8421.3990	Three Phase Separators	--	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
785	8421.3990	Two Phase Separators	--	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
786	8421.3990	Instrument Gas Scrubbers	--	--	--	IKAN Engineering Services (Pvt) Ltd. 34-Km, Shamki Bhattian, Multan Road, Lahore DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
787	8421.3990	Filters, vacuum	Having diameters of 3500mm and length of 6000mm ASME Sec. VIII, Div. 1 & 2	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
788	8421.3990	Filters, vacuum	For Sugar mills and other allied Industries .In accordance to ASME sec VIII Div 1 & 2.	1) Vacum Filters upto 60 M ² area, 3000 mm diameter and 6000 mm height	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
789	8421.3990	Plate and frame type filter	36' x 36' (upto 650' filtering) For Ceramic & Sugar Industry	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpuraa, G.T. Road Gujranwala
790	8421.3990	Vacuum Filter	13' x 32' - 1310 filtering area Rotary Filter type	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpuraa, G.T. Road Gujranwala
791	8421.3990	Pressure Filter	As per Sugar Industry Specifications and other as per client design	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpuraa, G.T. Road Gujranwala
792	8421.3990	Filters, Air	Other than automotive (All Types and Sizes)	--	--	Malik Auto and Agricultural Ind. (Pvt) Ltd. 80-Badami Bagh, P.O. Box 465 Lahore Qaim Automotive Mfg. (Pvt) Ltd. 203-206, Prince Centre, Preeedy Street Saddar, Karachi-74400 Skyways Manufacturers (Pvt) Ltd. A/1-A-3, SITE, Karachi
793	8421.3990	Gas Filter Separator System	Dia 8", 12", 18", 24" and 30" with optional instruments like level gauges, pressure gauges, level controller, control valve pressure regulator etc. Equipment to be complete with quick opening end enclosure, filter elements and mist eliminator	Design Pressure 1400 psig; Temp. 130°F, Flow ASME "U", Stamp coded to Section VIII Div. I. Flow Range from 1 mmscf to 150 mmscf.	Standard	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
794	8421.3990	2 and 3 Phase Separators (Test & Production)	60 MMSCFD	Mobile Test Separators	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
795	8421.3990	Deodorizer Vessel	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
796	8421.3990	Guel Gas Scrubber	as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
797	8421.3990	Vertical Scrubber	Capacity. Flow 450 mmscf	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
798	8422.3000	Liquid / Solid & Bulk Packaging Machines	<u>Liquid Packaging Machines</u> Output: 1000 to 2700 pouches per hour Capacity : 5ml to 5000ml Weight: 200 to 550 kg Dimensions: L: 600~872 mm x W: 355~830 mm x H: 1795~3000 mm <u>Solid Packaging Machines</u> Output: 18 to 45 pouches per min Capacity: 5 grams to 2000 grams Weight: 575 to 600 Kgs Dimensions: L:1110~1160 mm x W: 830~1700 mm x H: 2080~2750 mm <u>Bulk Packaging Machines</u> Metering Mode: Weighing (Net weight form) Output: 6~9 bag per min Capacity: 05~50 Kg (20~100 kg for oversized ones) Weight: 800 kgs, Weight accuracy: 0.2% Dimensions: 3700 (variable depending on the conveyor) x 1600 x 3100 mm	Pouch Type: pillow/standing shape, center/side/sachet 3 side, 4 side seal with or without photocell or continuous /centralized design Options: Strip applicator, date coding system, English folding system, feeding conveyor, conveyor, thermic sealing system. Packaging Materials: PE, BOPP, PP, nylon, laminate, cotton, jute, paper aluminum foil etc. Water:100 Ltr/hr, 2° C > 10°, P 2 bar Air : 800 Ltr / min, P 6 bar Power : 220/380 V, 1 phase & 3 phase, 50 Hz, 2~7 KW	--	Salam Enterprises (Pvt) Ltd. Plot No. 20 Rasheed Industrial Estate, 18 KM Feroze Pur Road, Lahore
799	8422.3000	Machines, filling, for bottles, cans,	Variable specifications as per requirements for Juice, Water Treatment, Cosmetics and liquid Food processing.	--	--	Al-Qarni Flow Tech International 9/34 Civic Centre New Garden Town, Lahore
800	8424.1000	Fire Extinguishers	<u>Fire Extinguishers of AFFF Type</u> Size: 10 litres (portable); 45 and 150 litres (Trolley mounted); 1000 litres (trailer mounted) <u>Dry Powder Type</u> Size: 1 to 12 Kg (portable); 20 to 100 Kgs (trolley mounted); 250, 500, 1000kgs (trailer mounted) <u>Halotron-1 Type</u> Size: 1 to 12 Kg (portable); 20 to 100 Kgs (trolley mounted); 250, 500kgs (trailer mounted) <u>Water type</u> Size: 10 litres (portable); 45 & 150 litres (trolley mounted)	--	--	Haseen Habib Corporation [Pvt] Limited 123/3 Quaid e Azam Industrial Estate Lahore
801	8426.1110	Cranes	Type: Electrical Over Head Cranes Size: 150 Tons Desing Code/ Standards: FEM, CMAA.	--	--	Heavy Mechanical Complex-3 Hattar Road, Taxila
802	8426.1110	Overhead travelling cranes	Overhead travelling cranes 0.5 tons to 300 tons	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
803	8426.1990	Grantry Cranes	0.5 tons to 250 tons.	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila Heavy Mechanical Complex-3 Hattar Road, Taxila
804	8426.3000	Jib Cranes	Size: 3 Ton	--	--	Heavy Mechanical Complex-3 Hattar Road, Taxila
805	8426.3000	Jib Cranes	Jib cranes upto 5 tons and monorail cranes upto 10 tons	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
806	8426.4100	Catering High Loader	Upto 22ft working height from ground suitable for aircraft upto Boeing 777	--	--	Bilal Engineering Company G.T Road Opp. Rescue 1122 Office Pindi Bypass, Gujranwala

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
807	8426.9100	Cranes, designed for mounting on road vehicles	Lift Capacity: 800, 1000, 1500, 2000, 2500 and 3000 kgs. Can be Mounted on any available local truck chassis.	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi
808	8426.9900	Cableways / Cable trays	Ladder Type & Perforated Type (size 100mm ~ 700mm wide)	--	--	Desccon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
809	8427.2010	Forklift Truck	Upto 3 tons lifting capacity	--	--	Millat Tractors, Ltd. Sheikhupura Road, Shahdara Lahore
810	8428.3100	Conveyors, continuous-action, for goods or materials (Specially designed for underground use)	Width = 1,000 mm Length = 100 Meters BS-6318 & as per customers requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
811	8428.3200	Bucket Elevators	Bucket capacity = 0.3 cubic meters Height = 30 Meters BS-6318	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
812	8428.3300	Belt Conveyors	Width = 1,000 mm Length = 100 Meters BS-6318	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
813	8428.3910	Conveyors (for Cement plants)	Width = 1,000 mm Length = 100 Meters BS-2890 & as per customer requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
814	8428.3990	Conveyors	Width = 1,000 mm Length = 100 Meters BS-2890 & as per customer requirements	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
815	8429.2000	Graders	50 Tons per hours	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpuraa, G.T. Road Gujranwala
816	8429.4000	Static Road Rollers	Static Road Rollers 10 to 12 tons Upto 55 HP	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
817	8429.5100	Loaders, shovel, front-end, mechanical, self-propelled	1 - 3 cub meter bucket handler tractor front end loader for Industrial and Agricultural work.	[Bucket Attachment of the Tractor used on the front Side of Tractor for the Uplifting of Garbage or Construction Disposables.]	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi
818	8431.4900	Blades for Tractors	Dozing Blades for different hp of Tractors; Width: 6ft, 7ft, 8ft	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
819	8431.4300 8430.4100 8430.4900	Drilling Equipment and Drill Collars	(l) <u>Rotary Drilling Equipment and Threaded Connections including:</u> i) Stabilizers ii) Drill Collars iii) Heavy Weight Drill Pipes (excluding friction welded drill pipes) i v) Drill String Subs v) Bit Subs vi) Kelly and Kelly Saver Subs (square and hexagonal) f) Casing pup joints and X-overs, i) Casing pup joints ii) Tubing pup joints iii) Casing X-Over iv) Tubing X-over g) Re-threading i) Threading on tubing ii) Threading on Casing Pipe Excluding finished threaded casing and tubing for oil and gas wells. h) Mud tanks for drilling rigs, mud hoppers, mud agitators, mud guns i) Seismic drilling rigs; - Man portable type	Made from 4140H forged steel or special steel, as per API 7 Specs. Upto 36" 4-1/2" to 9-1/2" Upto 31 ft Upto 5.1/2" i) <u>Following API Threads & Connections:</u> - BTC, EUE, 8 Round, 10 Round ii) <u>Following Premium Threads & Connections</u> - RTS i) <u>Following API Threads & Connections:</u> - BTC, EUE, 8 Round, 10 Round ii) <u>Following Premium Threads & Connections</u> - RTS 100 to 500 ft. Mountable on Off Road buggies/ Trucks 100 to 500 ft. Mountable on Off Road buggies/ Trucks	NACE	ADOS Pakistan Limited H.No. 88, Main Margalla Road, F-8/2, Khayaban-e-Iqbal Islamabad
820	8432.1010	Chisel ploughs, for agricultural Machines	Ploughs for 2,3,4,5 Discs. Reversible and Standard with tubular frame. With 2 Discs: 42" With 3 Discs: 63" With 4 Discs: 84" With 5 Discs: 105"	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi
821	8432.1090	Ploughs, for agricultural Machines	Ploughs for 2,3,4,5 Discs. Reversible and Standard with tubular frame. With 2 Discs: 42" With 3 Discs: 63" With 4 Discs: 84" With 5 Discs: 105"	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi
822	8432.2100	Harrows, disc, for agricultural Machines	14, 16, 18, 22 and more discs with hydraulic attachments With 14 Discs: Front 70" & Rear 65" With 16 Discs: Front 78" & Rear 70" With 18 Discs: Front 86" & Rear 78" With 22 Discs: Front 102" & Rear 94"	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi
823	8432.2910	Cultivators, for agricultural Machines	5, 9, 11, 14, 19 tines with ront and fixed frame. Have an options with Tyres assembly and Hydraulic Functions With 5 Tines: 66" With 9 Tines: 86" With 11 Tines: 96" With 13 Tines: 106" With 19 Tines: 146"	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
824	8432.4000	Spreaders, manure	200lit fertilizer spreaders tractor mounted, and pto operated.	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi
825	8432.8090	Machines, stone-removing, agricultural	Laser Land Leveling system consisting of: 1. Rotary laser transmitter 2. 360 degree laser receiver 3. Control Box 4. Bottomless bucket hydraulic scraper	Minimum 300 meter radius operating range Within one millimeter per 20 meter level accuracy 0 to 50 degree Celsius operating temperature Moisture and dust proof Mil.Spec. C-5015 electrical connectors	--	Pakistan Atomic Energy Commission Applied Physics Division PINSTECH Nilore, Islamabad
826	8432.9000	Mouldboards for plough	2,3,4 furrows with Hydraulically Revisable and One-way Simple fabrication. For 2 Furrow: 32" For 3 Furrow: 60" For 4 Furrow: 88"	--	--	Agripak International A - 263 Block - C, North Nazimabad, Karachi
827	8438.3010	Sugar plants	Complete Sugar plants upto 12000 TCD	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
828	8438.3010	Sugar Plant / Equipment	As per requirement	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
829	8438.3090	Diffusing apparatus for sugar extraction,	For upto 6,000 TCD Sugar Plant API 650, API 620, ASME Sec. VIII Div. 1	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
830	8438.3090	Extracting Equipment	Equipment for extraction in sugar industry: Cane Carrier. Cane leveler. Cane cutting knives. Cane shredder Prepared cane elevator Cane crushing mills Mill cooling water piping. Inter conveyors Service platform & gangways Receiving tanks made of mild steel & stainless	1) High extraction can crushing rollers with hydraulic arrangement and feed rollers. 2) De- Pithers. 3) Cane Shredders upto 8000 TCD. 4) Cane Cutters upto 5060 mm wide. 5) Centrifugal machines. 6) Chip Board forming machines. 7) Brequetting Presses. 8) Rotary Bagasse Feeders for Boilers. 9) Cane Levellers. 10) Lime Slackers.	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
831	8438.3090	Diffusing apparatus for sugar extraction,	As per fabrication drawings and Client's requirement. In accordance to API 650, API 620, ASME Sec VIII Div 1	1) High extraction can crushing rollers with hydraulic arrangement and feed rollers. 2) De- Pithers. 3) Cane Shredders upto 8000 TCD. 4) Cane Cutters upto 5060 mm wide. 5) Centrifugal machines. 6) Chip Board forming machines. 7) Brequetting Presses. 8) Rotary Bagasse Feeders for Boilers. 9) Cane Levellers. 10) Lime Slackers.	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
832	8438.8090	Machines, cutting and rolling, for tea	As per fabrication drawings and Client's requirement.	--	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
833	8438.8090	Agitator for sugar plants	Up to 40 Feet dia As per Sugar Mills Client Specification	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpuraa, G.T. Road Gujranwala

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
834	8445.4010	Weft Pirn Winder	Horizontal Type used for filling of bobbins for weaving process. Machine stops automatically after completion of Bobbins. The capacity is from 12 spindles to 48 Spindles.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
835	8445.4010	Weft Pirn Winder	Vertical Type used for filling of bobbins for weaving process. Machine stops automatically after completion of Bobbins. The capacity is from 12 spindles to 48 Spindles.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
836	8445.4020	Cone Winders.	For the rewinding of cones in weaving mills. Machine stops automatically after completion of Process. The capacity is from 06 spindles to 48 Spindles.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
837	8445.4090	Sectional Warping Machines	from 72" to 210" widths. For the filling of warp beams for all kind of looms. Mechanical machines equipped with Auto electric warp stop motion, variable motor system. Creel capacity as per requirement.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
838	8446.2100	Terry Towel Drop Box Shuttle loom.	Shuttle power loom for the Weaving of Export Quality Terry Towel products. Loom width ranging from 64" to 105".	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
839	8446.2100	Automatic Cop Change Shuttle Loom	For weaving of Towel and Fabric. For fabric: width of loom from 44" to 126". For Towel: width of loom, from 64" to 105". The ejection of empty bobbin from shuttle and insertion of filled bobbin from magazine to shuttle is automatic.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
840	8446.2100	Grey Cloth Plain Shuttle Loom.	From 44" to 120" width Grey Cloth Plain Shuttle Looms used for the weaving of fabric.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
841	8446.3000	Terry Towel Rapier Loom.	With Provision of Manual and electronic Jacquard , Paper and Electronic dobby. Width of looms from 76" to 110". Shuttle less technology used for the weaving of terry towel products. Paper and Electronic dobby can be used on the loom. Up to 18 Nos frames can be operated. 4 Clours, clour selector is installed. The manual and electronic Jacquard can also be fitted on these looms.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
842	8446.3000	Grey Cloth Rapier Looms.	With Provision of Manual and electronic Jacquard, Paper and Electronic dobby. Grey Cloth Rapier loom. Width of looms from 56" to 134". Shuttless technology used for the weaving of fabric. Electronic and manual Jacquards are used on these looms. The Paper and Electronic dobby can also be installed.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.
843	8448.1100	Dobbies for looms	Mechanical, used for the designing of different kind of Towel and fabric, and also used for the brand name writing on the edge of fabric. Range, from 8 lever to 22 levers, 1 cylinder to 4 cylinders in heavy and light duty.	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhupura Road, Faisalabad.

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
844	8448.4210	Reeds for looms	i) <u>Profile / Terry Reeds</u> Density: 3.0 d/cm to 40 d/cm, M/c width: 150 cm to 390 cm ii) <u>Flat Reeds.</u> Density: 3.0 d/cm to 40 d/cm, M/c width: 150 cm to 390 cm	i) Highest quality Stainless Steel ii) Highest quality Carbon/ Stainless Steel	i) Stainless Steel: 90% aluminum: 5% Misc: 5% ii) Carbon Stainless Steel: 90% aluminum: 5% Misc: 5%	Textile Technics (Pvt.) Ltd. 6th Floor EFU House, Gulberg Road, Lahore
845	8448.4210	Reeds for looms	Tunnel Reeds for Air Jet looms Flat reeds for Water Jet, Rapier, Projectile, Shuttless and Shuttle looms. Double / towel looms Circular reeds Sizing reeds Knotting reeds (All sizes and counts)	All are synthetic bound, soldered and pitch bound bindings.	--	Abid Industries E-43, SITE Karachi – 75700
846	8448.4290	Heald-frames for textile weaving Machines	Heald Frames for shuttless looms in all sizes	--	--	Abid Industries E-43, SITE Karachi – 75700
847	8448.4990	Beams and Emry Rolls	Forall types of looms and weaving machines	--	--	Talib Brothers Engineering Works P-290, Sant Singh Road, Opposite Javed Weighing Scale, Sheikhpura Road, Faisalabad.
848	8450.1200 8450.1900	Washing machines	Voltage: 220V AC, Net Weight Kgs: 19.60, Gross Weight Kgs: 24.00, General Operation Duration: 1-15 minutes, Frequency: 50/60 HZ, Input: 220 Volts/ 175 watts, Capacity of wash tub: 85 litres	--	--	Wahid Industries Ltd. G. T. Road, Gujrat
849	8450.1200	Washing machines	With built-in centrifugal dryer	--	--	Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi.
850	8450.1900	Washing machines	Single Tub Washer	--	--	Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi.
851	8458.1100	CNC Lathes, horizontal, numerically controlled	Desktop CNC Lathe with X=145, Z=225, with CNC Control Center distance 270mm, for Educational & Training Institutes	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
852	8458.1100	CNC Milling Machine numerically controlled	Desktop CNC Milling Machine with X=240, Y=170, Z=220, CNC Control, Table 500x160. for Educational & Training Institutes	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
853	8458.1100	CNC Turning Centre numerically controlled	CNC Control, and Tool Turret. with X=190, Z=400, Swing 380mm Center distance 450mm, for mass production	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
854	8458.1100	CNC Lathe numerically controlled	CNC Control, and Tool Turret. with X=150, Z=600, Swing 365mm Center distance 700mm, for Production and Educational purpose	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
855	8458.1900	Lathes, horizontal, Precision type with and without DRO	Precision Centre Lathe Centre distance upto 1500 mm	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
856	8459.2910	Machine-tools, Drilling by removing metal, not numerically Controlled	Universal Drilling Machine with Drilling capacity upto 32mm & boring capacity upto 65 mm in Cast Iron	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
857	8459.2910	Machine-tools, Drilling by removing metal, not numerically controled	Pillar Drilling Machine with Drill Capacity upto 20 mm in Steel	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
858	8459.3100	Machine-tools, boring Milling by removing metal, (Numerically Controlled)	Modular boring Heads, 02 ways & 4 ways configuration. Drilling Capacity 32 mm in Cast Iron & 25mm In steel.	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
859	8459.3910	Machine-tools, boring by removing metal	Vertical Copy Milling, Drilling boring Machine Drill Dia 25 mm	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
860	8459.5100	Machine-tools, Milling by removing metal, numerically controled	Desktop PC Based for Educational & Training Institutes Milling Machine, Knee Type Numerically Controlled	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
861	8459.5910	Machine-tools, Milling by removing metal, knee-type,	Knee Type Milling Machine Horizontal, Vertical & Universal Version with long Traverse upto 810 mm and table size upto 1300x300 mm	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
862	8459.6910	Machine-tools, Milling by removing metal, not numerically controled	Turret Milling Machine (Bridge Port Type) Travels long. 750, Cross 300, Vert. 400 mm	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
863	8459.6920	Machine-tools, Milling by removing metal, not numerically controled	Universal Engraving Machine Clamp Area 500x200 mm Pantograph ratio 1:1 to 1:50	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
864	8465.9110	Machine-tools, sawing, for working wood/ cork/ hard rubber	Blade Length not exceeding 45.7 cm	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
865	8474.1010	Cement Plant/ equipment	7200 Tons/ day	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
866	8474.1010	Machines, screening, for earth, stone,	For Cement Plants of upto 3500 TONS/DAY AISI	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
867	8474.1010	Machines, screening, for earth, stone,	For Cement Plants of upto 3500 TONS/DAY AISI	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
868	8474.1020	Machines, screening, for earth, stone,	For Cement Plants of upto 3500 TONS/DAY AISI	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
869	8474.2010	Machines, grinding / crushing, for earth, stones,	For Cement Plants of upto 3500 TONS/DAY AISI	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
870	8474.2010	Machines, crushing, for earth, stone,	As per fabrication drawings and Client's requirement.	--	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
871	8474.2010	Machines, grinding / crushing, for earth, stones,	For Cement Plants of upto 3500 TONS/DAY AISI	--	--	SEFEC Engineering (Pvt.) Ltd. 44-C, First Floor, 11th Jami Commercial Street, Phase-VII, Defence Housing Authority, Karachi
872	8474.2090	Machines, crushing, for earth, stone,	As per fabrication drawings and Client's requirement.	--	--	A.B.S Engineering Corporation (Pvt) Ltd. F-492, S.I.T.E, Karachi- 75700
873	8474.8090	Machines, agglomerating, for mineral products	Two three phase separators, absorption tower columns wall thickness upto 120 mm, process reactors wall thickness up to 120 mm , pressure vessels based on ASME codes, tubular heat exchangers tema standards, tubular condensers TEMA standards, plain / fin tube air collar , LPG storage tanks base on ASME codes , Oil storage tanks base on API codes , Heat recovery boilers, steel structures, process & utilities piping off , site utilities, Gas sweetening unit ,Amine absorption unit ,Gas dehydration unit, Glycol dehydration plant, Flare Stack system, LPG recovery unit, Sulphur recovery unit.	--	--	Petrosin Ravi Industries Ltd. Shahra-i-Pakistan Kala Shah Kakoo G.T Road Lahore Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
874	8474.9020	Parts of Cement plant	Cement plant upto 4000 TPD	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
875	8479.6000	Room Air Coolers	Power source: 220 CV/230V, 50 Hz, Fan Speed: High 1350 RPM, Low 1150 RPM, Water Tank Capacity: 60 litres, Net weight: 45.50 Kg, Gross wieght: 49.50 Kg	--	--	Wahid Industries Ltd. G. T. Road, Gujrat
876	8479.8290	Pharmaceutical Machines	Mixer/ Blenders Capacity upto 5.0 tons/ hr	--	--	FD & C Equipment (Pvt) Ltd. F-116.S.I.T.E., Karachi-75730
877	8479.8990	Dehumidifiers	De-humidifying capacity: (50L/day to 120L/day)	--	--	Sabro Technologies (Pvt) Ltd. Plot No. 270, Industrial Triangle Kahuta Road Islamabad
878	8479.8990	2 and 3 Phase Separators (Test & Production)	60 MMSCFD & as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore
879	8479.8990 8422.4000	Pharmaceutical Machines	Cream Ointment & Paste Processing and packaging machines Capacity upto 1500 Kg/Hr	--	--	FD & C Equipment (Pvt) Ltd. F-116.S.I.T.E., Karachi-75730
880	8479.8990/ 8479.8290	Gas / Fuel Conditioning Skids . Instrument Gas Scrubber Skid . Sour Gas Conditioning Skid . Scrubbers . Filters	Stainless Steel, Carbon Steel, Alloy Steel & as per customer requirements	--	--	DDFC (Pvt.) Ltd. 27 KM, Multan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
881	8479.8990	Pharmaceutical Machines	<u>Tablet Processing Machines</u> (i) Wet Granulator and Kneader Capacity upto 1 ton/ batch (ii) Dryer Capacity upto 1 ton/ batch (iii) Milling and wet/ dry sizer Capacity upto 800 Kg/hr (iv) Sifter and Sever Capacity upto 500 Kg/Hr	--	--	FD & C Equipment (Pvt) Ltd. F-116.S.I.T.E., Karachi-75730
882	8479.9090	Vacuum Pans for sugar mills	120 Tons Strike Cap. For Sugar Mills	--	--	The Star Mughal Industries (Pvt) Ltd. Sharifpuraa, G.T. Road Gujranwala
883	8481.3000	Check Valves	Cast Steel Check Valves Flanged 2" to 18" (excluding valves complying with valid API 6D ans NACE compliance)	As per API - 600	ASTM-A 216 WCB	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
884	8481.3000	Check Valves	B.S. 5153; upto 24" dia (excluding valves complying with valid API 6D ans NACE compliance)	Cast Iron	Grade 14 Mechanite Type GD	Ghulam Mohi-ud-Din & Sons, 6 Rehman Gali, Railway Road, Lahore
885	8481.3000	Check Valves	ANSI B 16.5; upto 24" dia (excluding valves complying with valid API 6D ans NACE compliance)	Cast Steel/ Carbon Steel	A216 GrWCB	Ghulam Mohi-ud-Din & Sons, 6 Rehman Gali, Railway Road, Lahore
886	8481.3000	Non Return Valves also known as Check Valves.	(a) Swing Type: Sizes: 1-1/2" to 24" Standard: BS 5153 & BS 4090 & BS 12334. JIS 10K, JIS 16K, Class 125 & Class 150 (b) Wafer Type: Sizes: 1-1/2" to 24" Standards: BS 5155 & BS 593, JIS 10K, JIS 16K (c) Lift Check Valve (Spring Loaded): Sizes: 1-1/2" to 24" Standards: DIN 3230 & EN 558, JIS 10K, JIS 16K (Excluding of API, ANSI, & NACE Certification)	Pressure rating: PN-10 & PN-16, PN-25 & Class 125 & Class 150 Temp. rating: Upto 200°C Upto 350°C Pressure rating: PN-10 & PN-16 Temp. rating: Upto 200°C Upto 350°C Pressure rating: PN-10, PN-16, PN-25 Temp. rating: Upto 200°C Upto 350°C	Cast Iron GG25, Ductile Iron EN-JS-1050, Nodulor Iron GGG40.3	SAFCO (Scon Valves) 1st Floor, Asif Chambers 14-A, Davis Road, Lahore
887	8481.4000	Air Relief Valves	Kinetic: upto 24" dia (Excluding valves with NACE compliance, Alloy Steel and with valid API 6A & 6D certification except those under PCT 7306.1000)	Cast Iron	Grade 14 Mechanite Type GD	Ghulam Mohi-ud-Din & Sons, 6 Rehman Gali, Railway Road, Lahore
888	8481.8090	Gate Valves/ Sluice Valves	B.S.S. 5163, 5150, 3464, 1218, AWWA C-500; upto 24" dia [Excluding Critical Downhole valves with NACE compliance, Alloy Steel and with valid API 6A & 6D certification except those under PCT 7306.1000]	Cast Iron	Grade 14 Mechanite Type GD	Ghulam Mohi-ud-Din & Sons, 6 Rehman Gali, Railway Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
889	8481.8090	Gate Valves	ANSI B 16.5; upto 24 " dia [Excluding valves with NACE compliance, Alloy Steel and with valid API 6A & 6D certification except those under PCT 7306.1000]	Cast Steel/ Carbon Steel	A216 GrWCB	Ghulam Mohi-ud-Din & Sons, 6 Rehman Gali, Railway Road, Lahore
890	8481.8090	Gate Valves	Cast Steel Gate Valves Flanged OS & Y Type Solid Wedge. 2" to 18" (excluding valves with NACE compliance)	As per API - 600	ASTM-A 216 WCB	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
891	8481.8090	Globe Valves	Cast Steel Globe Valves Flanged 2" to 14" (excluding valves complying with NACE)	--	ASTM-A 216 WCB	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
892	8481.8090	Gate Valve,	PN 1.6, DN 50, 65, 80, 100, 125, 150, 250, PN 10, DN 50, 100, 150, 250, 300, PN 2.5, DN 20, 25, 50, 65, 80, 100, 200, 250 PN 4.0, DN 50, 80, 100, 125, 150	--	--	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore ADOS Pakistan Limited H.No. 88, Main Margalla Road, F-8/2, Khayaban-e-Iqbal Islamabad
893	8481.8090	Ball Valves	Flanged, 16P-DN25, DN50, DN80, DN100, DN150, Material : CF8, Operation type: Manual/Gear Flanged, 16P-DN80, Body: CF8, Lining: structural ceramics, Operation type: Manual	--	--	ADOS Pakistan Limited H.No. 88, Main Margalla Road, F-8/2, Khayaban-e-Iqbal Islamabad
894	8481.8090	C.I. Gate Valves	Cast Iron Gate Valves Flanged 2" to 20"	--	Grey Cast Iron	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
895	8481.8090	C.I. Globe Valves	Cast Iron Globe Valves Flanged 2" to 14"	--	Grey Cast Iron	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
896	8481.8090	C.I. Check Valves	Cast Iron Check Valves Flanged 2" to 16"	--	Grey Cast Iron	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
897	8481.8090	C.I. Rubber Diaphragm Valves	Cast Iron Rubber Diaphragm Valves 2" to 10"	--	Grey Cast Iron	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
898	8481.8090	Gate Valve, Rising Stem (OS&Y) & Non Rising Stem also known as SLUCE Valve.	Sizes: 2" to 24" Standards: BS 5150 & EN 1171, Class 125, JIS 10K, JIS 16K, Class 150 & DIN 3352-1 (PN10) (Excluding of API, ANSI, & NACE Certification)	Pressure rating: PN-10 & PN-16 , PN-25 & Class 125 & Class 150 Temp. rating: Upto 200°C Upto 350°C	Cast Iron GG25, Ductile Iron EN-JS-1050, Nodular Iron GGG40.3	SAFCO (Scon Valves) 1st Floor, Asif Chambers 14-A, Davis Road, Lahore
899	8481.8090	Globe Valve, also known as Steam Valve.	Sizes: 1/2" to 24" Standards: DIN 3230 & EN 558 & JIS 10K, JIS 16K, Class 150 & Class 125 (Excluding of API, ANSI, & NACE Certification)	Pressure rating: PN-16, PN25 & Class 125 & Class 150 Temp. rating: Upto 200°C Upto 350°C	Cast Iron GG25, Ductile Iron EN-JS-1050, Nodular Iron GGG40.3	SAFCO (Scon Valves) 1st Floor, Asif Chambers 14-A, Davis Road, Lahore
900	8481.8090	Strainer Valve also known as (Filter).	Sizes: 2" to 24" (Excluding of API, ANSI, & NACE Certification)	Pressure rating: PN-16, PN-25 Temp. rating: Upto 200°C Upto 350°C	Cast Iron GG25, Ductile Iron EN-JS-1050, Nodular Iron GGG40.3	SAFCO (Scon Valves) 1st Floor, Asif Chambers 14-A, Davis Road, Lahore
901	8481.8090	Double Regulating Valve also known as Balancing Valve & Combination Flow Regulating Valve & Circuit Setter Valve	Sizes: 2-1/2" to 12" Standards: BS 5152 & EN 13789 (Excluding of API, ANSI, & NACE Certification)	Pressure rating: PN-16, PN-25 Temp. rating: Upto 200°C Upto 350°C	Cast Iron GG25, Ductile Iron EN-JS-1050, Nodular Iron GGG40.3	SAFCO (Scon Valves) 1st Floor, Asif Chambers 14-A, Davis Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
902	8481.8090	Butterfly Valve (Wafer Type)	Sizes: 2" to 24" Standards: BS 5155 & EN 558 & DIN 3202 & EN 593 & Class 125 & Class 150, & JIS 10K, JIS 16K (Excluding of API, ANSI, & NACE Certification)	Pressure rating: PN-10 & PN-16 Temp. rating: Upto 200°C Upto 350°C	Cast Iron GG25, Ductile Iron EN-JS-1050, Nodular Iron GGG40.3	SAFCO (Scon Valves) 1st Floor, Asif Chambers 14-A, Davis Road, Lahore
903	8481.8090	Stop Valves	PN 10, DN 25, PN 1.6, DN 20, DN10 PN10,	--	--	Popular Pipe Fitting Manufacturers 24-Shalamar Town Lahore
904	8483.3010 8483.3020	Bearings, Plain Shafts, excluding carbon or graphite.	Self Lubricating, Sintered bearings. a) Inner Diameter : 40mm b) Outer Diameter: 50mm c) Lengths : 65mm	Cylindrical, Flanged and Spherical.	97% Iron & 3% Copper, 80% Iron & 20% Copper, 80% Copper and 20% Iron and 100% Bronze.	Adamjee Engineering (Pvt.) Ltd. Plot No. 1 & 16, Sector 20, Korangi Industrial Area Karachi
905	8483.4090	Gears, power transmission	Ring, spiral bevel, spur, shafts & couplers	Hardened and carburized	Various grades of mild steel	Millat Equipment Ltd. 10 KM, Raiwind Road Lahore Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
906	8501.4010 8501.4090	Single Phase Squirrel cage electric induction motors	200V-240V, 50HZ, Range : 0.5 HP (0.37KW) to 2HP (1.5KW)	--	--	MECO (Pvt) Ltd. Peco Road, Kot Lakhpat, Lahore
907	8501.5190	3-Phase Vertical hollow shaft electric motors.	380V-480V, 50/60 Hz Range : 10HP (7.5Kw) to 220Hp (164Kw)			MECO (Pvt) Ltd. Peco Road, Kot Lakhpat, Lahore
908	8501.5190 8501.5310	Electric Motors (Low Voltage Induction Motors)	Horizontal, Vertical, Solid Shaft & Hollow Shaft Motors. 3 phase squirrel cage Induction motor excluding flame proof motors, Range 0.55KW to 355KW Efficiency Class IE1 & IE2	-	-	KSB Pumps Company Limited, 16/2, Sir Agha Khan Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
909	8502.1120	Diesel Power Generating Sets	Of an output of above 5KVA but not exceeding 20 KVA	--	--	<p>Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi</p> <p>General Electromax Company 11-Km Jaranwala Road, Near Nazir CNG, Lahore</p> <p>The Imperial Electric Co. (Pvt) Ltd. 28-Egerton Road, Lahore</p> <p>Power Vision Systems (Pvt) Ltd., 16KM, Multan Road, Pakka Mile Stop Shahpur Kanjran, Lahore</p> <p>Millat Tractors Ltd. Sheikhupura Road, P.O.Box 12023, Shahdra Lahore</p> <p>Synergy Corporation A-16, Sector 6-F, Mehran Town, Korangi Industrial Area, Karachi</p> <p>Iman Group Plot No. 227, St No. 7, Sector I-9/2 Industrial Area, Near Dry Port Islamabad</p> <p>Advance Electronics International</p>
910	8502.1130	Diesel Power Generating Sets	Of an output of above 20KVA but not exceeding 50 KVA	--	--	<p>Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi</p> <p>General Electromax Company 11-Km Jaranwala Road, Near Nazir CNG, Lahore</p> <p>The Imperial Electric Co. (Pvt) Ltd. 28-Egerton Road, Lahore</p> <p>Power Vision Systems (Pvt) Ltd., 16KM, Multan Road, Pakka Mile Stop Shahpur Kanjran, Lahore</p> <p>Millat Tractors Ltd. Sheikhupura Road P.O.Box 12023, Shahdra Lahore</p> <p>Synergy Corporation A-16, Sector 6-F, Mehran Town, Korangi Industrial Area, Karachi</p> <p>Pana Communication Inc Plot No. 227, St No. 7, Sector I-9/2 Industrial Area, Near Dry Port Islamabad</p> <p>Advance Electronics International</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
911	8502.1190	Diesel Power Generating Sets	Of an output of above 50KVA but not exceeding 75 KVA	--	--	<p>Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi</p> <p>General Electromax Company 11-Km Jaranwala Road, Near Nazir CNG, Lahore</p> <p>The Imperial Electric Co. (Pvt) Ltd. 28-Egerton Road, Lahore</p> <p>Power Vision Systems (Pvt) Ltd., 16KM, Multan Road, Pakka Mile Stop Shahpur Kanjran, Lahore</p> <p>Millat Tractors Ltd. Sheikhupura Road P.O.Box 12023, Shahdra Lahore</p> <p>Synergy Corporation A-16, Sector 6-F, Mehran Town, Korangi Industrial Area, Karachi</p> <p>Iman Group Plot No. 227, St No. 7, Sector I-9/2 Industrial Area, Near Dry Port Islamabad</p> <p>Advance Electronics International Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi</p>
912	8502.1190	Diesel Power Generating Sets	20 KW - 75 KW Diesel Daewoo, Perkins, Peugeot	--	--	<p>Advance Electronics International Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
913	8502.1200	Diesel Power Generating Sets	Of an output of above 75KVA but not exceeding 375 KVA	--	--	<p>Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi</p> <p>General Electromax Company 11-Km Jaranwala Road, Near Nazir CNG, Lahore</p> <p>The Imperial Electric Co. (Pvt) Ltd. 28-Egerton Road, Lahore</p> <p>Power Vision Systems (Pvt) Ltd., 16KM, Multan Road, Pakka Mile Stop Shahpur Kanjran, Lahore</p> <p>Millat Tractors Ltd. Sheikhupura Road P.O.Box 12023, Shahdra Lahore</p> <p>Synergy Corporation A-16, Sector 6-F, Mehran Town, Korangi Industrial Area, Karachi</p> <p>Iman Group Plot No. 227, St No. 7, Sector I-9/2 Industrial Area, Near Dry Port Islamabad</p> <p>Advance Electronics International</p>
914	8502.1310	Diesel Power Generating Sets	Of an output of above 375KVA but not exceeding 1100 KVA	--	--	<p>Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi</p> <p>General Electromax Company 11-Km Jaranwala Road, Near Nazir CNG, Lahore</p> <p>The Imperial Electric Co. (Pvt) Ltd. 28-Egerton Road, Lahore</p> <p>Power Vision Systems (Pvt) Ltd., 16KM, Multan Road, Pakka Mile Stop Shahpur Kanjran, Lahore</p> <p>Synergy Corporation A-16, Sector 6-F, Mehran Town, Korangi Industrial Area, Karachi</p> <p>Iman Group Plot No. 227, St No. 7, Sector I-9/2 Industrial Area, Near Dry Port Islamabad</p> <p>Advance Electronics International L/21-D, Block-21, F.B. Industrial Area, Rashid Minhas Road, Karachi – 75700</p>

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
915	8502.1390	Diesel Power Generating Sets	Of an output of above 1100KVA but not exceeding 1250 KVA	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi General Electromax Company 11-Km Jaranwala Road, Near Nazir CNG, Lahore The Imperial Electric Co. (Pvt) Ltd. 28-Egerton Road, Lahore Synergy Corporation A-16, Sector 6-F, Mehran Town, Korangi Industrial Area, Karachi Iman Group Plot No. 227, St No. 7, Sector I-9/2 Industrial Area, Near Dry Port Islamabad Advance Electronics International L/21-D, Block-21, F.B. Industrial Area, Rashid Minhas Road, Karachi – 75700
916	8502.2000	Generating Sets with spark- ignition internal combustion piston engines	Above 5KVA to 1250 KVA	--	--	Gresham's Eastern (Pvt) Limited F-302, S.I.T.E, Karachi Advance Electronics International L/21-D, Block-21, F.B. Industrial Area, Rashid Minhas Road, Karachi – 75700
917	8504.2100	Transformers	Liquid dielectric distribution transformers with power handling capacity 5 kVA to 650 kVA and voltages 230V to 132000V. Rating use at nominal system voltage upto 145000V and current rating upto 6000A.	--	--	Validus Engineering (Pvt) Ltd. B-72, Estate Avenue, SITE, Karachi-75700
918	8504.2100	Transformers	<u>Distribution Transformers (Pole Mounted)</u> - Capacity: 10 KVA to 630 KVA - 11 KV/ 415 Volt Step Down - 33 KV/ 415 Volt Step Down - 11 KV / 420 Volt Step Down <u>Pad Mounted Transformer (Kiosk)</u> - Capacity: 63 KVA (Single Phase), 100 KVA, 200 KVA, 400 KVA & 630 KVA (3-Phase) with H.V. & L.V. Panels (Step Down)	--	--	Transfopower Industries (Private) Limited 2 Km, Katar Bund Road, Off. Multan Road, Thokar Niaz Beg, Lahore Elmetec (Pvt) Ltd. 19 KM Ferozepur Road, Lahore
919	8504.2200	Transformers	Liquid dielectric distribution transformers with power handling capacity exceeding 650 KVA but not exceeding 10,000 KVA and voltages 230V to 132000V. Rating use at nominal system voltage upto 145000 volts and current upto 6000 Amps	--	--	Validus Engineering (Pvt) Ltd. B-72, Estate Avenue, SITE, Karachi-75700 Elmetec (Pvt) Ltd. 19 KM Ferozepur Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
920	8504.2200	Power Transformers / Furnance Transformers/ Special Transformers	<u>Power Transformers</u> - Capacity: 750 KVA to 5000KVA - 11 KVA/ 415 Volt Step Down - 33 KV / 415 Volt Step Down - 11 KVA/ 420 Volt Step Down <u>Furnance Transformers</u> - Upto 5000KVA - Specific requirement of the Customers <u>Special Transformers</u> - Upto 5000KVA - Specific requirement of the Customers	--	--	Transfopower Industries (Private) Limited 2 Km, Katar Bund Road, Off. Multan Road, Thokar Niaz Beg, Lahore
921	8504.2300	Transformers	Liquid dielectric distribution transformers with power handling capacity over 10,000 KVA voltages 230V to 132000V. Rating use at nominal system voltage upto 145000V and current rating upto 6000A.	--	--	Validus Engineering (Pvt) Ltd. B-72, Estate Avenue, SITE, Karachi-75700
922	8504.3100	Instrument Transformers	Power Handling capacity not exceeding 1 KVA (Dry Type) As per IEC / WAPDA / KESC Specifications	Oil Immersed	--	Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700 Elmetec (Pvt) Ltd. 19 KM Ferozepur Road, Lahore
923	8504.3200	Distribution Transformers	<u>Distribution Transformers (Pole Mounted)</u> - Capacity: 5 KVA to 15 KVA - 11 KVA/ 415 Volt Step Down - 33 KV/ 415 Volt Step Down - 11 KVA / 420 Volt Step Down	Pole Mounted As per IEC/ WAPDA/ KESC Specifications	--	Transfopower Industries (Private) Limited 2 Km, Katar Bund Road, Off. Multan Road, Thokar Niaz Beg, Lahore Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700 Elmetec (Pvt) Ltd. 19 KM Ferozepur Road, Lahore
924	8504.3300	Transformers	Power Handling capacity exceeding 16 KVA but not exceeding 500 KVA As per IEC / WAPDA / KESC Specifications	Oil Immersed	--	Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700 Elmetec (Pvt) Ltd. 19 KM Ferozepur Road, Lahore
925	8504.3300	Oil-Immersed Transformers	300KVA to 1700KVA			Transfopower Industries (Pvt) Ltd. 2 km, Katar Bund Road, Off Multan Road Lahore Validus Engineering (Pvt) Ltd. B-72, Estate Avenue, SITE, Karachi-75700 Pakistan Elektron Ltd (PEL) 14-km, Ferozepur Road Lahore Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
926	8504.3400	Transformers	Ratings upto 160MVA, Voltage rating upto 220KV, Oil filled type, standard IEC76,	--	--	Heavy Electrical Complex Industrial Estate Distt. Haripur
927	8504.3400	Power Transformers / Furnance Transformers/ Special Transformers	<u>Power Transformers</u> - Capacity: 750 KVA to 5000KVA - 11 KVA/ 415 Volt Step Down - 33 KV / 415 Volt Step Down - 11 KVA/ 420 Volt Step Down <u>Furnance Transformers</u> - Upto 5000KVA - Specific requirement of the Customers <u>Special Transformers</u> - Upto 5000KVA - Specific requirement of the Customers	As per IEC/ WAPDA/ KESC Specifications	--	Transfopower Industries (Private) Limited 2 Km, Katar Bund Road, Off. Multan Road, Thokar Niaz Beg, Lahore Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700 Elmetec (Pvt) Ltd. 19 KM Ferozepur Road, Lahore
928	8504.4010 8504.4090	Uninterrupted power supply (UPS)	500VA to 6600VA	Standard & Long Backup	--	Saltec Powerlink 18C/5, Khyabane Tanzeem DHA 5 , Karachi
929	8504.4090	Rectifiers, electric	Rectifiers categorized by DC voltage rating and the load current in a standard voltage rating of 24V, 48V/ 220V- AC to 48V/24V-DC power supply Coulomb-1000	Metal body	--	Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad
930	8504.4090	Rectifiers, electric	200Vac to 48VDC, 10 to 40 Amps with or without battery backup (0.5 to 8 hours) SMPS technology	--	--	Saltec Powerlink 18C/5, Khyabane Tanzeem DHA 5 , Karachi
931	8504.4090	Power Supply Units	Input 19-36 VDC, Output 24VDC at 6-Amps and 24 Amps for 15 mSec & 50 VDC at 1.5 Amps Voltage Regulation- 20% Max	--	--	East West Infiniti (Pvt) Ltd. Plot 146 Industrial Triangle, Kahuta Road, Islamabad
932	8504.9090	Speed Checking System for Vehicular Traffic	Speed Sensors capable of reading at up to 1.5 KM High resolution digital still camera / video recorder Number plate / Drivers face recognition Named / Unnamed operation modes Wireless communication enabled for remote	--	--	East West Infiniti (Pvt) Ltd. Plot 146 Industrial Triangle, Kahuta Road, Islamabad
933	8506.1000	Dry Battery Cell	R-20 (UM-1) & R-6 (UM-3) manganese Dioxide, non-rechargeable	--	--	Kohinoor Battery Mfrs. (Pvt) Ltd., Tibet Centre, M.A. Jinnah Road, Karachi-74400
934	8506.1000	Dry Battery Cell	Size: R-20, R-6 & R-3	--	--	Indus Battery Industries (Pvt) Ltd. F-244, Manghopir Road S.I.T.E Karachi
935	8507.1010	12 V 4Ah	3/4 Ah	Dry Charge Motorcycle Battery	LI Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
936	8507.1010	12 V 6Ah	5 Ah	Dry Charge Motorcycle Battery	SLI & LI Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
937	8507.1010	12 V 8Ah	7 Ah	Dry Charge Motorcycle Battery	SLI & LI Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
938	8507.1010	12 V 10Ah	9 Ah	Dry Charge Motorcycle Battery	SLI & LI Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
939	8507.1010	6 V 210 (Tubular Plate)	210 Ah	GCF-210	Wet Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
940	8507.1010	6 V 220 (Flat Plate)	220 Ah	GCF-220	Wet Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
941	8507.1010	6 V 240 (Flat Plate)	240 Ah	GCF-240	Wet Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
942	8507.1010	8 V 160 (Flat Plate)	160 Ah		Wet Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
943	8507.1010	6-DZM-28 6-DZM-20	28 Ah 17/20 Ah	Sealed Lead Acid Batteries	AGM Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
944	8507.2010	Sealed Lead Acid Batteries (Maintenance Free Batteries)	12 Valve Regulated Lead Acid (VRLA) Batteries 24 AH to 200AH 2V cell 200AH to 3000AH (for use in telephone exchanges)	--	--	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
945	8507.2090	12 V 3.5 A (VRLA MCB)	3/4 Ah	VRLA Motorcycle Battery	AGM Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
946	8507.2090	12 V 7 A	7 Ah	VRLA	AGM Type	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
947	8507.2090	Other Lead Acid Batteries/ Industrial Cells	12 Batteries, 24AH to 200AH 2V Cell 200AH to 3000AH Sealed & VRLA Batteries	--	--	Pakistan Accumulators (Pvt) Ltd. Head Office House No. 2, Street 63, F-8/4, Islamabad
948	8507.2090	Lead Acid Battery	2-6 Volts (For standby Storage, switch gears, Solar Panels etc.)	--	--	Exide Pakistan Ltd. A/45, Hill Street, P.O. Box No. 3680 SITE Karachi-75400
949	8514.2000	Furnaces, Induction or dielectric, electric,	From 50kg upto 50MT	--	--	Electro Heat (Pvt) Ltd 10-km Ottawa More G.T. Road, Gujranwala
950	8516.5000	Microwave Ovens	Up to 75 liters	--	--	Dawlance (Pvt) Ltd. Dawlance Center 7/4, Civil Lines 9 Dr. Ziauddin Ahmed Road Karachi.
951	8516.8090	Electric Elements for heating	220/240 V A.C. , Wattage 2000-3000 Flange 2.5" BSW	Material Copper, incoloy, SS, Titanium, Dia 8mm, Length 11", 14", 18", 23", 27", 30", 36"	--	Tesla Industries Pvt. Ltd. Plot No. 81-F, St. 6, I-10/3 Islamabad
952	8517.1220	Fixed Wireless/ Cellular Terminals With GSM Modules	FWT-1000G: Fixed Wireless GSM Terminal for add on for PABX FWT	--	--	Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad Microtech Industries (Pvt) Ltd. Plot No. 2, Street No. 2, Attari Industrial Estate, 18 Km, Ferozpur Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
953	8517.1220	Fixed Wireless Terminals (FWT)	Based on CDMA technology, supports CDMA bandwidth and provide data, voice and SM services through the CDMA network. Main functions as below: 1). Voice communication function. 2). UIM-card: Supporting UIM-card function. 3). Data communication function: Packet, Asynchronous data and PC fax services. 4). Security: PIN-Locking functions.	--	--	Zhongxing Telecom (ZTE) Pakistan (Pvt.) Ltd. Plot # 424, Street # 16, I-9/3, Opp I-9 Police Station, Islamabad
954	8517.1290	Wireless payphones	GSM wireless payphone Terminal (Model: PWT 1400G) PWT 1400G is an Integrated GSM wireless payphone (Indoor) supports a broad range of voice and data services i.e. Standard payphone operation, fax transmission, Internet access, with built in GSM transceiver in tri band 900MHz, 1800MHz & 1900MHz.	--	--	Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad
955	8517.1290	Telephone sets, Line transmission, without cordless	Land Line & GSM Payphone	--	--	Microtech Industries (Pvt) Ltd. Plot No. 2, Street No. 2, Attari Industrial Estate, 18 Km, Ferozpur Road, Lahore
956	8517.1290	Telephones, card-operated	Wireline Chipcard Based Indoor and Outdoor Payphone (Models:PT1100, PT1400, PTO2000) Comprehensive call logging and reporting facility. Complete remote configuration, Management and control through NMS. Security against fraud. Multi-level alarm reporting facility. Incoming call barring facility. Multiple call charging options. Self-test and diagnostic for on-site maintenance. 4Kbyte tariff table storage capacity, Visual on-line up-date of call charges to user. 20 x 4 character display. Built-in modem. Functional keys with programmable option. Line-powered with line voltage of 48V or 60V DC . Reads all chip cards conforming to ISO 7816.	Plastic Casing in three catching colors with a so	--	Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad
957	8517.1290 8517.1890	Payphone	WLL CDMA Wireless Payphone Terminal (Model: PWT1400C) PWT1400C with standard antenna connection to establish RF link with the corresponding CDMA based station of a cellular or WLL network and wireless payphone operation takes place.	--	--	Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad
958	8517.6290	PABX	Megaswitch-500 Upto 500 Lines	--	--	Megatech Communications (Pvt.) Ltd. 47, Banglore Town Off: Tipu Sultan Road. Karachi
959	8517.6290	PABX	Megaswitch-100 Upto 150 Lines	--	--	Megatech Communications (Pvt.) Ltd. 47, Banglore Town Off: Tipu Sultan Road. Karachi
960	8517.6290	PABX	Megaswitch Series 50 Upto 48 Lines	--	--	Megatech Communications (Pvt.) Ltd. 47, Banglore Town Off: Tipu Sultan Road. Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
961	8517.6290	PABX	Megaswitch Serires 30 Upto 32 Lines	--	--	Megatech Communications (Pvt.) Ltd. 47, Banglore Town Off: Tipu Sultan Road. Karachi
962	8517.6290	PABX	Telemate-XII (2+10 Lines)	--	--	Megatech Communications (Pvt.) Ltd. 47, Banglore Town Off: Tipu Sultan Road. Karachi
963	8517.6290	Telephone exchanges	Fixed Line Telephone Switching System (ZXJ10) This Switch has distributed modularized structure that consists of modules and cards that work together in a complete task. The total quantity of modules & cards is 32 amongst 25	--	--	Zhongxing Telecom (ZTE) Pakistan (Pvt.) Ltd. Plot # 424, Street # 16, I-9/3, Opp I-9 Police Station, Islamabad
964	8517.6290	Telephone exchanges	Standard	--	--	Telephone Industries of Pakistan Khanpur Road, Haripur
965	8517.6290	Telephone exchanges	Configuration Types: Local Exchange Tandem Exchange Transit Exchange International Gateway Functions: Voice switching / network (PSTN) Data switching / network Intelligent Network Connectivity: 200,000 subscribers per exchange. 60,000 ports per exchange.	--	--	Alcatel Pakistan (Pvt) Ltd. Sector H-8/4 Islamabad
966	8517.6290	Telephone exchanges	Modern electronic digital switching system (EWSD)	--	--	Telephone Industries of Pakistan Khanpur Road, Haripur
967	8517.6290	Optical Transmission Equipments (Optical Transmission Products SDH,NG-SDH)	NG-SDH integrates the functions of traditional SDH (including ADM, TM, REG), DXC IP/ATM and DWDM in one. The system support the following functions: 1). MSTP (Multi-Service Transport Platform) function. 2). Provide high-speed, large capacity information transmission. 3). Offer multi service access of STM-64/OC-192, STM 16/OC-48, STM-4/OC-12, STM-I/OC-3, E4, E3/T3, E1/T1, 10M/100M, GE, ATM, ESCON etc. 4). Suitable for the transmission of IP and ATM services. 5). Perform multi protocol encapsulation, virtual concatenation, bandwidth share, service convergence, VLAN partition-LCAS, STP, etc. 6). Has the functions of ATM cell exchange, service convergence, statistic multiplex and VP-ring.	--	--	Zhongxing Telecom (ZTE) Pakistan (Pvt.) Ltd. Plot # 424, Street # 16, I-9/3, Opp I-9 Police Station, Islamabad
968	8517.6290	Line Protection Units	LPU: Line Protection Units Misuse protection and direct communication with network Management System.	--	--	Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad
969	8517.6290	Electronic Field Telephones Inter Trench Communication (ITC-2000)	<u>EFT-101</u> - Operating Voltage 4.5VDC - Fre Range 300 to 3400 Hz - Impedance 600 Ohms <u>ITC-2000</u> - Operating Voltage 4.5VDC - Environmental Temperature -15 to +55C - Impedance -20 to +60C	Military standards	--	National Radio Telecommunication Corporation Marketing & Sales Deptt National Radio Telecommunication Corporation T&T Colony Haripur

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
970	8517.6290	Digital Electronic Field Telephone Exchanges	<u>PFX-6416 and PFX-3208</u> - Power Requirement 220VAC/24VDC - Ring Voltage 90 VAC. 25 Hz - Operating Temperature -30 to +55C <u>PFX-1204</u> - Power Requirement 180 to 260VAC/24VDC - Ring Voltage 90 VAC. 25 Hz - Operating Temperature -30 to +55C <u>PFX-5200C</u> - Power Requirement 90 to 260VAC/48VDC - Ring Voltage 2000 Ohms - Operating Temperature -10 to +50C <u>Automag 412</u> - Power Requirement 220VAC/12VDC - Ring Voltage 90 V±20VAC - Operating Temperature -10 to +45C	--	--	National Radio Telecommunication Corporation Marketing & Sales Deptt National Radio Telecommunication Corporation T&T Colony Haripur
971	8517.6930	Mobi Router (GSM Call Router)	Mobi Router (GSM Call Router)	--	--	Microtech Industries (Pvt) Ltd. Plot No. 2, Street No. 2, Attari Industrial Estate, 18 Km, Ferozpur Road, Lahore
972	8518.2100	Loudspeakers, Single, mounted in their enclosures	Speaker for Car Radio & Cassette player	--	--	Automate Industry C-23, Estate Avenue, S.I.T.E , Karachi
973	8519.8910	CD players, audio, without sound recording device	Radio CD/MP3 Players	--	--	Automate Industry C-23, Estate Avenue, S.I.T.E , Karachi
974	8523.2100	Cards incorporating a magnetic stripe	Magnetic Card			Kwick High Tech & Solutions (Pvt) Ltd. Plot No. 100-A, Street No. 14 Sector I-9/2, Industrial Area, Islamabad.
975	8523.2910 8523.2930	Cassettes, magnetic, audio, blank, width not over 4mm	Blank/Recorded	--	--	B. S. Magnetic (Pvt) Ltd. LA-1/8, Block 22, Federal B. Industrial Area Karachi
976	8523.4110	CD-R, blank, for computer	CD-R (Blank)	--	--	Oyster Technologies (Pvt) Ltd Plot No.08, Sector 24, Korangi Industrial Area, Karachi
977	8523.4120	DVD, for computer	DVD-R	--	--	Oyster Technologies (Pvt) Ltd Plot No.08, Sector 24, Korangi Industrial Area, Karachi
978	8523.5210	SIM cards	GSM SIM Cards			Kwick High Tech & Solutions (Pvt) Ltd. Plot No. 100-A, Street No. 14 Sector I-9/2, Industrial Area, Islamabad.
979	8523.5220	Memory Cards	Nadra/Banking Cards			Kwick High Tech & Solutions (Pvt) Ltd. Plot No. 100-A, Street No. 14 Sector I-9/2, Industrial Area, Islamabad.
980	8525.5090	Ground to Air UHF / VHF Communication Radio	Synthesized VHF/UHF Transceivers 32 Programmable channels, Channel scanning , Dual Channel () Watch 108 ~ 137 MHz & 225-400 MHz frequency ranges Built in Test equipment	--	--	East West Infiniti (Pvt) Ltd. Plot 146 Industrial Triangle, Kahuta Road, Islamabad

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
981	8525.5090	Upgraded VHF/FM Radio Set VHF/ FM Frequency Hopping Manpack & Vehicular Radio Sets	<u>PRC-77/PK</u> - Operating Voltage 4.5 VDC - Storage Temperature -20 To +60C - Environmnetal Temperature -15 TO +55C <u>9600 Series</u> - Operating Temp Range -40 to +60C - Storage Temperature -55 To +70C - Environmnetal Temperature 3120	--	--	National Radio Telecommunication Corporation Marketing & Sales Deptt National Radio Telecommunication Corporation T&T Colony Haripur
982	8525.6020	Payphone	PWTO 2000G: GSM Wireless out door Payphone Terminal chip card outdoor wireless payphone, built In GSM transceiver in tri band 900 MHz.	--	--	Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad
983	8525.6060	Vehicle Tracking System	Vehicle Tracking System	--	--	Microtech Industries (Pvt) Ltd. Plot No. 2, Street No. 2, Attari Industrial Estate, 18 Km, Ferozpur Road, Lahore
984	8527.2110	Players, radio cassette, for motor vehicles	Car Radio/Cassette/CD/MP3 Players, Speakers. Antenna	--	--	Automate Industry C-23, Estate Avenue, S.I.T.E , Karachi
985	8528.7211	Television sets, colour	Liquid crystal display (LCD)	--	--	Dynasel Ltd. 20/II, Block-D, Model Town, Lahore New Allied Electronics Industries (Pvt) Ltd. 7th Floor, Lakson Squaire Building No.1, Sarwar Shaheed Road, Karachi Singer Pakistan Ltd. 608, 6th Floor, Beaumont Plaza, Beaumont Road, Near PIDC House, Karachi
986	8528.7212	Television sets, colour	Compatible NTSC/PAL	Image displays	--	Sysco Industrial Company 4th Floor Al-Hayat Centre 14/A Hall Road Lahore
987	8528.7212	Television sets, colour	14", 20", 21", 25" 29" Luminar Brand Color TV Sets	--	--	S.N.H Industries (Pvt.) Ltd. L-9 Block 21 F. B Industrial Area Karachi 75950
988	8528.7220	Receiver sets	Reception apparatus for receiving satellite signals of a kind used with TV (Satellite dish receivers)	--	--	Dynasel Ltd. 20/II, Block-D, Model Town, Lahore New Allied Electronics Industries (Pvt) Ltd. 7th Floor, Lakson Squaire Building No.1, Sarwar Shaheed Road, Karachi Singer Pakistan Ltd. 608, 6th Floor, Beaumont Plaza, Beaumont Road, Near PIDC House, Karachi
989	8528.7212 8528.7300	Television receiver sets, colour, black & white or other monochrome.	Colour Television Sets of screen sizes 14" to 62" including Conventional type TV sets, Flat TV sets, Projection TV sets, Plasma TV sets.	--	--	Dynasel Ltd. 20/II, Block-D, Model Town, Lahore New Allied Electronics Industries (Pvt) Ltd. 7th Floor, Lakson Squaire Building No.1, Sarwar Shaheed Road, Karachi Singer Pakistan Ltd. 608, 6th Floor, Beaumont Plaza, Beaumont Road, Near PIDC House, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
990	8529.1090	Antennas for radios and television sets	Antenna Ass'y for Car Radio	--	--	Automate Industry C-23, Estate Avenue, S.I.T.E , Karachi
991	8529.9090	Television body	Plastic Covers front and back for televisions	--	--	Synthetic Products Enterprises (Pvt) Ltd. 127-S S.I.E Kotlakhpat Township Lahore
992	8532.1000	Capacitors, fixed, power	Single Phase capacitors for voltage up to 2000 V, Three Phase Capacitors for voltage up to 1000 V, 50 and 60 Hz, dry type as well as oil impregnated, In rating up to 200 kVAR.	--	--	Amber Capacitors Ltd. 16 Link McLeod Road, Lahore
993	8532.1000	L.V. Power factor improvement capacitors single phase and three phase	0.50 KVAR upto 200 KVAR 220 VAC upto 660 VAC	Plastic and Aluminum Body	--	Khawaja Electronics (Pvt) Ltd. 4-H, Gulberg-III, Lahore
994	8532.2200	Capacitors, fixed, Aluminum electrolytic	Capacitors in Voltages up to 440V 50/60 Hz, rating up to 400 MFD	--	--	Amber Capacitors Ltd. 16 Link McLeod Road, Lahore
995	8532.2200	Capacitors for motor start application	20UF upto 400UF 100 VAC upto 660 VAC	Aluminum and backelite body	--	Khawaja Electronics (Pvt) Ltd. 4-H, Gulberg-III, Lahore
996	8532.2500	Capacitors, fixed, dielectric, of paper or plastic	Capacitors of voltage up to 660 V, 50/60 Hz, in aluminum and plastic casings	--	--	Amber Capacitors Ltd. 16 Link McLeod Road, Lahore
997	8532.2500	Capacitors for domestic appliances	0.50 uf upto 100 UF 100 V.A.C upto 660 V.A.C.	Plastic and Aluminum Body	--	Khawaja Electronics (Pvt) Ltd. 4-H, Gulberg-III, Lahore
998	8532.2500	Special application capacitors	0.25 UF upto 3.0 UF 2 K.V upto 12K.V.	M.S & S.S. Container	--	Khawaja Electronics (Pvt) Ltd. 4-H, Gulberg-III, Lahore
999	8532.2900	Capacitors Up to 11 KV /12/3Kv High Voltage /Shunt Capacitors	Single Phase Capacitors for voltage up to 12000 volts oil impregnated, in rating 25 kVAR up to 600 kVAR	Mild Steel	--	Khawaja Electronics (Pvt) Ltd. 4-H, Gulberg-III, Lahore
1000	8534.0000	Printed Circuit Boards	Single, Double Sided and multilayer, rigid, bare PCBs for all types of Electronic Products.	--	--	National Institute of Electronics Ministry of Science & Technology H. No. 17, Sector H-9, P.O. Box 1406, Islamabad Smart PCBs Service Road, Shaheen Town near Airport Chowk, Rawalpindi
1001	8535.1000	Fuse Dropout/ Cutout	For 11KV Transmission Lines	--	--	Creative Engineering (Pvt) Ltd. 160/ S, Q.I.E. Kot Lakhpat Lahore
1002	8535.2110 8535.2190	Circuit breakers	Automatic, voltage below 72.5 kV Oil / Vacuum Type	--	--	Schneider Electric Pakistan (Pvt) Ltd. (formerly AREVA T&D Pakistan (Pvt) Ltd) D-163, S.I.T.E Karachi Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700
1003	8535.3010	Isolating Switches	Isolating Switches (Air Insulated) and make-and-break switches for a voltage upto 145kV	--	--	Emco Industries Limited 2nd Floor, Saudi Pak House, 14-Egerton Road, Lahore
1004	8535.4010	Lightening Arrestors	Voltage limiters and Surge suppressors over 1 KV	--	--	Emco Industries Limited 2nd Floor, Saudi Pak House, 14-Egerton Road, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1005	8536.4900	Annunciators	Transformer temperature gauges, Trip circuit DC supervision relays, Under Voltage relays, Motor protection relays, Panel humidity controllers, Timers, Flasher relays, Automatic transfer switch.	--	--	E-Labs 456/7, Lane12 A Iqbal Park Cantt. Lahore.
1006	8536.5099	Electric Switches	Plugs and Socket-Outlets, voltage not over 1 KV, for household and similar purposes electrical switches, power plugs/sockets assemblies for household/ industrial application - outlets without interlock for fixed - outlets for selv - for adaptors - outlets with in terlock for fixed installations- Appliance couplers for - Part 2-1: Sewing machine couplers -Part 2-2: Interconnection couplers for household and similar equipment -- Part 2-3: Appliance coupler with a degree of protection higher than IPX0 -IEC system of plugs and socket-outlets - Part 1: 16 A 250 V a.c. -IEC system of plugs and socket-outlets - Part 2:15 A 125 V a.c. - IEC system of plugs and socket-outlets - Part 3: SELV plugs and socket-outlets, 16 A 6V, 12 V, 24 V, 48 V, a.c. and d.c. -"Plugs, socket-outlets, vehicle couplers and vehicle inlets - Conductive charging of electric vehicles - Part 1: Charging of electric vehicles up to 250 A a.c. and 400 A d.c." - surge voltages in low-voltage AC Power circuits- Radio-noise emissions from low-voltage electrical and electronic equipment in the ranage of 9 KHZ to 40 GHz -	--	Polycarbonate, Multigrade PVC,Cu 99.9%,ABS,PC,	The Crown Engineering Works (Pvt) Ltd. 17-KM, SHEikhupura Road, Lahore
1007	8536.6910	DPs	- 10 Pairs - 20 Pairs - 50 Pairs - 100 Pairs	Pillar Type DPs, Pole Type, Cross Connectoin Cabinets, DP Thermo Plastic (Pole type)	--	National Radio Telecommunication Corporation Marketing & Sales Deptt National Radio Telecommunication Corporation T&T Colony Haripur

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1008	8536.6990	Electrical Plugs and Sockets	Plugs and Socket-Outlets, voltage not over 1 KV, for household and similar purposes electrical switches, power plugs/sockets assemblies for household/ industrial application - outlets without interlock for fixed - outlets for selv - for adaptors - outlets with in terlock for fixed installations- Appliance couplers for - Part 2-1: Sewing machine couplers -Part 2-2: Interconnection couplers for household and similar equipment -- Part 2-3: Appliance coupler with a degree of protection higher than IPX0 -IEC system of plugs and socket-outlets - Part 1: 16 A 250 V a.c. -IEC system of plugs and socket-outlets - Part 2:15 A 125 V a.c. - IEC system of plugs and socket-outlets - Part 3: SELV plugs and socket-outlets, 16 A 6V, 12 V, 24 V, 48 V, a.c. and d.c. -"Plugs, socket-outlets, vehicle couplers and vehicle inlets - Conductive charging of electric vehicles - Part 1: Charging of electric vehicles up to 250 A a.c. and 400 A d.c." - surge voltages in low-voltage AC Power circuits- Radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 KHz to 40 GHz -	--	Polycarbonate, Multigrade PVC,Cu 99.9%,ABS,PC,	The Crown Engineering Works (Pvt) Ltd. 17-KM, SHeikhupura Road, Lahore
1009	8537.1090	Control Panels	L.T. Switchgear panels upto 1,000 Volts and lighting / power distribution boards, control panels, control signaling and relay panel for grid stations, rectifier panel upto 200 Amps. Motor Control Centers including Programmable Logic Controllers and related instrumentation and control, sugar, steel rolling, low voltage switchgears PFI Plant. [Excluding panels of proprietary compressor engine Oil & Gas application valves pumps & actuators and in explosion & flame proof exclusion. Certified by ATX, explosion proof].	--	--	Siemens Pakistan Engineering Co. Ltd. B-72, Estate Avenue, SITE, P.O. Box No. 7158 Karachi-75700 Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700 Elmetec (Pvt) Ltd. 19 KM Ferozepur Road, Lahore
1010	8536.9090	Junction Boxes	Electrical Wiring Accessories, voltage not over 1KV (Excluding explosion & flame proof)	--	--	Clipsal Pakistan (Pvt) Ltd. 101-102, Sector 15, Korangi Industrial Area, Karachi
1011	8537.1090	Switchboards	Direct-on-line starter 10HP NSD starter 15 HP, Motor control unit 25 HP, automatic starter of delta type of 50 HP, 5-250 HP ASD Starter, 5-15 HP DOL Starter. [Excluding certified by ATX, Explosion Proof]	--	--	Siemens Pakistan Engineering Co. Ltd. B-72, Estate Avenue, SITE, P.O. Box No. 7158 Karachi-75700
1012	8537.2000	Control Panels	3 Phase, upto 60KVA, protection panel for severe over voltage (slow & fast), phase-neutral reversal, etc [Excluding panels of proprietary compressor engine Oil & Gas application valves pumps & actuators and in explosion & flame proof exclusion. Certified by ATX, Explosion Proof]	Microprocessor based, with remote alarm interface	--	Saltec Powerlink 18C/5, Khyabane Tanzeem DHA 5, Karachi

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1013	8537.2000	Control Panels	H.T. Circuit breakers (Switchgear) panels upto 4000A, 40KA & 17500 Volts [Excluding panels of proprietary compressor engine Oil & Gas application valves pumps & actuators and in explosion & flame proof exclusion. Certified by ATX, Explosion Proof]	--	--	Siemens Pakistan Engineering Co. Ltd. B-72, Estate Avenue, SITE, P.O. Box No. 7158 Karachi-75700 Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700 Elmetec (Pvt) Ltd. <u>19 KM Ferozpur Road, Lahore</u>
1014	8537.2000	Switchboards, Switchgears & Panels	Up to 17.5 kv; 4000 AMP, 40 KA	--	--	Schneider Electric Pakistan (Pvt) Ltd. (formerly AREVA T&D Pakistan (Pvt) Ltd) D-163, S.I.T.E Karachi Johnson & Phillips (Pakistan) Ltd. C-10, South Avenue, S.I.T.E. P.O Box No. 3603, Karachi - 75700
1015	8539.2200	Electric Bulbs	Bulbs from 25W to 200W, Life upto 1000 Hrs, voltage over 100 V	--	--	Khyber Electric Lamps 483/E-1, Tariq Road, Peshawar Cantt. Peshawar
1016	8541.4000	Photovoltaic Modules (Solar Panels)	Maximum Power: 5 Watts to 300 Watts Nominal Voltage: 6V/ 12V / 24V	Photovoltaic Cells Junction Box: Plastic Frame: Aluminium Front Side: Tempered Glass Back Side: Tedlar Cell Encapsulation: EVA - Operating Temp. -40°C to +90 °C - Storage Temp. -40°C to +90 °C - Pressure bearing < 5400 Pa - Wind bearing < 2400 Pa - Hail Impact test 25mm diameter hail - Ball at 23.00 m/s, directed at 11 impact location - Temp. Coff of Isc +0.05% / C - Temp. Coff. of Voc – 0.34% / C - Temp. Coff. of Pm-0.5%/C - Power Output Tolerance + 3%	--	Tesla Industries Pvt. Ltd. Plot No. 81-F, St. 6, I-10/3 Islamabad
1017	8542.3300	Pair Gain System	Optical 4, 8 & 12 clear 64 Kbps channels over one single copper pair.	--	--	National Radio Telecommunication Corporation Marketing & Sales Deptt National Radio Telecommunication Corporation T&T Colony Haripur
1018	8544.1110	PVC Cable	10mm to 300mm sq. (Excluding ultra violet treated cables)	Copper-Aluminium PVC, Polythylene	--	Cable & Conductor Ltd. 1st Floor, 41 Civic Centre Barkat Market New Garden Town, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1019	8544.1190	PVC Cable	10mm to 300mm sq. (Excluding ultra violet treated cables)	Copper-Aluminium PVC, Polyethylene	--	Cable & Conductor Ltd. 1st Floor, 41 Civic Centre Barkat Market New Garden Town, Lahore Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1020	8544.1190	Enamelled Copper Wire	Type of Varnish: Plyurethane, Polyester Imide; Diameter Test: Bare Dia as per international standard, Coated dia: Grade-2, Elangation Test of thin guages: 25% to 27%, Elangation Test of thick guages: 28% to 36%, Break Down Voltage Test: 6 Kv to 12 Kv (Excluding ultra violet treated cables)	--	--	Wahid Industries Ltd. G. T. Road, Gujrat Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore
1021	8544.2000	Telephone Cables PVC Insulated	Range of Sizes: 1 Pair to 50 Pair Pakistan Cable's spec and as per others specification e.g Europeans,American, Japanese,etc (Excluding ultra violet treated cables)	Armoured / Un-Armoured	• High Conductivity Copper • Electrical Grade PVC	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1022	8544.2000	Welding Cable	Range of Sizes: 16MM ² to 300MM ² BSS-638 (Excluding ultra violet treated cables)	Rubber Sheathed	• High Conductivity Copper • Electrical Grade PVC	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1023	8544.2000	LSF Cable / HFFR for all GWC/LV/MV/ Flexible cable	Range of Sizes: as per Customers requirement IEC-60502, BSS-7211, BSS-6724 Also as per others specification. e.g Europeans,American, Japanese,etc (Excluding ultra violet treated cables)	• Low Smoke & Fume • Halogen Free Fire Retarded	• High Conductivity Copper • Electrical Grade PVC	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1024	8544.2000	Insulated Cable	Drop Wire and Spiral - 4 Range of Sizes: as per Customers requirement (Excluding ultra violet treated cables)	--	• High Conductivity Copper • Electrical Grade PVC	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1025	8544.2000	Shooting Wire	Voltage Grade: upto 300/500 Volts (Excluding ultra violet treated cables)	--	<ul style="list-style-type: none"> High Conductivity Copper Electrical Grade PVC 	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1026	8544.2000	Cables, co-axial	Cable Bond etc (Excluding ultra violet treated cables)	--	--	Automate Industry C-23, Estate Avenue, S.I.T.E , Karachi Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1027	8544.4910	Telephone Cables	All telephone cables i.e. telecommunication cables, indoor telephone cables, audio/radio frequency cables, junction cables, primary cables, secondary cables, jelly filled cables, drop wire, switch board & jumper cables. (Excluding ultra violet treated cables)	--	--	Atlas Cables (Pvt) Limited, Karachi 9th Floor Textile Plaza, Mumtaz Hasan Road P.O. 5195, Karachi-74000 A.G.E. Cables 97-A Industrial Estate, Jamrud Road, Peshawar Premier Cables 924/2 Gul-e-Rehmat Building Opposite Sabil Masjid, 18-C Clayton Road Guru Mandar Karachi-74800 Pakistan Telephone Cables Room No. 107, Elahi Center Preedy Street Saddar, Karachi-74400
1028	8544.4910	Telephone Cables	All telephone cables i.e. telecommunication cables, indoor telephone cables, audio/radio frequency cables, junction cables, primary cables, secondary cables, jelly filled cables, drop wire, switch board & jumper cables. (Excluding ultra violet treated cables)	--	--	Atlas Cables (Pvt) Limited, Karachi 9th Floor Textile Plaza, Mumtaz Hasan Road P.O. 5195, Karachi-74000 A.G.E. Cables 97-A Industrial Estate Jamrud Road, Peshawar Premier Cables 924/2 Gul-e-Rehmat Building Opposite Sabil Masjid, 18-C Clayton Road Guru Mandar Karachi-74800 Pakistan Telephone Cables Room No. 107, Elahi Center Preedy Street Saddar Karachi-74400 Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1029	8544.4920	Multicore core, flexible, flat type copper, insulated (all features together)	From 1 mm ² to 400 mm ² Voltage grade upto 1000 Volts BS 6004; BS 6346 (Excluding ultra violet treated cables)	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700
1030	8544.4920	Multicore core, flexible, flat type copper, insulated (all features together)	From 1 mm ² to 400 mm ² Voltage grade upto 1000 Volts BS 6004; BS 6500 (Excluding ultra violet treated cables)	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700
1031	8544.4990	Air field lighting cable and Submersible Cables	Range of Sizes: as per Customers requirement Voltage Grade: a) Upto 5KV b) upto 600/1000 Volts As per customer required Specs and as per others specification. e.g Europeans,American, Japanese,etc (Excluding ultra violet treated cables)	PVC Sheathed	<ul style="list-style-type: none"> High Conductivity Copper Electrical Grade PVC 	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1032	8544.4990	Control Cables	With copper conductor 600/1000 volts WAPDA P100:2005 (Excluding ultra violet treated cables)	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700
1033	8544.4990	Insulated wire, cables	Single Core & Multicore (Including Co-axial cable) PVC/XLPE Range of Sizes: 0.5MM ² to 1000MM ² Voltage Grade: Up to 15KV BSS-6004, IEC-227, IEC-60227, IEC-502, IEC 60502, BSS-6346. Also as per others specifications e.g Europeans, American, Japanese,etc (Excluding ultra violet treated cables)	<ul style="list-style-type: none"> Armoured / Un-Armoured PVC Sheathed 	<ul style="list-style-type: none"> High Conductivity Copper Electrical Grade PVC XLPE 	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1034	8544.4990	L.V cable	Copper or Aluminium conductor. XLPE or PVC insulated cable. Single Core & Multicore Range of Sizes: 1.5MM ² to 1000MM ² Voltage Grade: upto 1900/3300 volts BSS-6346, IEC-502, IEC -60502. Also as per others specification.e.g Europeans, American, Japanese,etc (Excluding ultra violet treated cables)	<ul style="list-style-type: none"> Armoured / Un-Armoured PVC Sheathed 	<ul style="list-style-type: none"> High Conductivity Copper Aluminium Electrical Grade Electrical Grade PVC XLPE 	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1035	8544.4990	M.V.Cables	Copper or Aluminium conductor, XLPE Insulated cable. SingleCore & Multicore Range of Sizes: 16MM ² to 630MM ² Voltage Grade: upto 15000 volts IEC-502 IEC - 60502. Also as per others specification.e.g Europeans, American, Japanese,etc (Excluding ultra violet treated cables)	<ul style="list-style-type: none"> Armoured / Un-Armoured PVC Sheathed 	<ul style="list-style-type: none"> High Conductivity Copper Aluminium Electrical Grade Electrical Grade PVC XLPE 	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1036	8544.4990	Flexible Cables	Range of Sizes: 0.5MM ² to 630MM ² Voltage Grade: 300/500 Volts IEC-60227, BSS-6004, BSS-6500, IEC-227 Also as per others specification.e.g Europeans, American, Japanese etc (Excluding ultra violet treated cables)	<ul style="list-style-type: none"> Armoured / Un-Armoured PVC Sheathed 	<ul style="list-style-type: none"> High Conductivity Copper Electrical Grade PVC 	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1037	8544.4990	Control Cables PVC /XLPE Insulated	Range of Sizes: 5 Core to 61 Core Voltage Grade: upto 600/1000 Volts BSS-6346, IEC-502, IEC-60502. Also as per others specification.e.g Europeans, American, Japanese, etc (Excluding ultra violet treated cables)	<ul style="list-style-type: none"> Armoured / Un-Armoured PVC Sheathed 	<ul style="list-style-type: none"> High Conductivity Copper Electrical Grade PVC XLPE 	Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700 Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1038	8544.4990	Electric Cables	Upto 1000 Volts Sizes: 0.005mm to 630mm (Excluding ultra violet treated cables as well as, Cables with following Grades/ Specifications; AESS XF, ARX, AVXS, AVSSHF, CHFOS, FL-PE, HFSSF, SHE-J, SHSHYCJ, AEX F, AVSS XF, CAVS, CHFUS, HF, HF-ASAQ, HSHEQ, AVSSHF (Shield wire), YAEXF, TW20#02000, SHE-JF, HEBX, PEST, AEX, AVSSXCSS2FX1, AVXF, AVXSYF, AVX, HSHEJ, ARXF, AVSXY, AVSSXCS, AVSX, AVSXF,OHFAS, CIVUS, IVSSH, IVSSHF, ALVUS, ALVSS, PESXF/ PEXBS.	--	--	Universal Cables Industries Ltd . 61-C, Jami Commercial Street # 7, Phase 7, D.H.A., Karachi. Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1039	8544.4990	PVC wiring cable	From 1 mm ² to 1000 mm ² Voltage grade upto 1000 Volts BS 6004 (Excluding ultra violet treated cables as well as, Cables with following Grades/ Specifications; AESS XF, ARX, AVXS, AVSSHF, CHFOS, FL-PE, HFSSF, SHE-J, SHSHYCJ, AEX F, AVSS XF, CAVS, CHFUS, HF, HF-ASAQ, HSHEQ, AVSSHF (Shield wire), YAEXF, TW20#02000, SHE-JF, HEBX, PEST, AEX, AVSSXCSS2FX1, AVXF, AVXSYF, AVX, HSHEJ, ARXF, AVSXY, AVSSXCS, AVSX, AVSXF, AVSSX, SHE-HP, SHE-JB, VSSXTF, OHFAS, CIVUS, IVSSH, IVSSHF, ALVUS, ALVSS, PESXF/ PEXBS.	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1040	8544.4990	PVC Insulated Armoured Power Cable	From 16 mm ² to 1000 mm ² 600/1000 Volts BS 6346 (Excluding ultra violet treated cables)	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1041	8544.4990	Low smoke zero helogen Cable	From 1 mm ² to 1000 mm ² Voltage grade upto 1000 Volts BS 7846 (Excluding ultra violet treated cables as well as, Cables with following Grades/ Specifications; AESS XF, ARX, AVXS, AVSSHF, CHFOS, FL-PE, HFSSF, SHE-J, SHSHYCJ, AEX F, AVSS XF, CAVS, CHFUS, HF, HF-ASAQ, HSHEQ, AVSSHF (Shield wire), YAEXF, TW20#02000, SHE-JF, HEBX, PEST, AEX, AVSSXCSS2FX1, AVXF, AVXSYF, AVX, HSHEJ, ARXF, AVSXY, AVSSXCS, AVSX, AVSXF, AVSSX, SHE-HP, SHE-JB, VSSXTF, OHFAS, CIVUS, IVSSH, IVSSHF, ALVUS, ALVSS, PESXF/ PEXBS.	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700
1042	8544.4990	Flame retardant cables	From 1 mm ² to 1000 mm ² Voltage grade upto 1000 Volts BS 6387 (Excluding ultra violet treated as well as, Cables with following Grades/ Specifications; AESS XF, ARX, AVXS, AVSSHF, CHFOS, FL-PE, HFSSF, SHE-J, SHSHYCJ, AEX F, AVSS XF, CAVS, CHFUS, HF, HF-ASAQ, HSHEQ, AVSSHF (Shield wire), YAEXF, TW20#02000, SHE-JF, HEBX, PEST, AEX, AVSSXCSS2FX1, AVXF, AVXSYF, AVX, HSHEJ, ARXF, AVSXY, AVSSXCS, AVSX, AVSXF, AVSSX, SHE-HP, SHE-JB, VSSXTF, OHFAS, CIVUS, IVSSH, IVSSHF, ALVUS, ALVSS, PESXF/ PEXBS.	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1043	8544.4990	Air Field Lighting cable	FAAL-824 IEC 502 (Excluding ultra violet treated cables)	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1044	8544.6000	Underground XLPE Insulated Medium voltage & High voltage Cable	Upto 15 KV IEC 502 (Excluding ultra violet treated cables)	--	--	Newage Cables (Pvt) Ltd. Newage Mansion Mcleod Road, Lahore Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore Pakistan Cables Limited B-21, SITE, P.O. Box No.5050, Karachi - 75700
1045	8544.7000	Optical fibre cables	1.Direct Buried/Armoured from 1 to 288 fiber count standard loose tube design (both dry block and jelly filled construction) 2.Duct Type/un-Armoured from 1 to 288 fiber count standard loose tube design (both dry block and jelly filled construction) 3.All Dielectric Self Supporting Aerial cable (ADSS) Un-armoured from 1 to 288 fibre count standard loose tube design (both dry block and jelly filled construction) 4.Direct Buried un- (Excluding ultra violet treated cables)	The cable is manufactured to with stand the harsh environments of underground direct buried or in ducts and against aerial stresses with customer required Tensile Strengths	The cable is manufactured with several co-polymer coated and several other materials like PBT,Thixotropic	Frontier Cable Industries (Pvt) Ltd. Plot No. 13, Phase 4, Hattar Industrial Estate, District Haripur, NWFP Fast Cables Ltd. 192-Y Block, Commercial Area, Phase-III DHA, Lahore
1046	8544.7000	Optical fibre cables	(Single Mode and Multimode,) Buried Cable, Duct Cable, Aerial Cable, Central loose tube cable, Gc-652 complied and Gc-655 Complied. Patch Cord and pigtail (all connector type) Single mode and Multimode Patch Cord, Pigtail. (Excluding ultra violet treated cables)	Cable dia 12 to 18 mm.	--	LT Engineering & Trade Services (Pvt) Ltd. Lub Thatto, Hassanabdal-43730
1047	8546.2000	Insulators	Power Insulators	Tensile Strength of Insulators, 70Kn to 120KN	--	Emco Industries Limited 2nd Floor, Saudi Pak House, 14-Egerton Road, Lahore
1048	8546.9000	Insulators, electric, excluding glass and ceramic	95 BIL at 210 PMA Size dia.75x130mm =17373 N as per Din 1451, CEI-ICE273 Size dia. 84x175mm =11938 N as per Din 1451, CEI-ICE273	--	--	Schneider Electric Pakistan (Pvt) Ltd. (formerly AREVA T& D Pakistan (Pvt) Ltd) D-163, S.I.T.E Karachi
1049	8607.1900	Wheels, locomotives or rolling-stock	Traction Pinion and Gears 17T, 18,T, 19T, 24T, 60T, 92 Teeth	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1050	8705.3000	Fire Fighting Vehicles	Fire fighting vehicles, built on locally-available Chasis	--	--	Haseen Habib Corporation [Pvt] Limited 123/3 Quaid e Azam Industrial Estate, Lahore Colibrative Heavy Industries (Pvt) Limited. Chowk Saeed, Sagian Bypass Road, Shahdhara, Kot Abdul Malik, Lahore Meraj (Pvt) Limited Plot No. 11, Sector 15, Korangi Industrial Area, P.O. Box 3135 Karachi – 74900 Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi Automobile Corp. of Pakistan (Pvt) Ltd. 14, Dockyard Road, West Wharf, Karachi Pakistan Vehicle Engineering (Pvt) Ltd. D-134, S.I.T.E, Manghopir Road, Karachi
1051	8705.9000	Truck Mounted Drilling Rigs and accessories	Drilling Depth Capacity upto 2000 meter	--	--	Better Engineered Solutions (Pvt) Ltd. 102, Pacific Centre, F-8 Markaz Islamabad
1052	8705.9000	Vehicle Mounted Logging, Geophysical Instruments	Logging Depth Capacity upto 2000 meter	--	--	Better Engineered Solutions (Pvt) Ltd. 102, Pacific Centre, F-8 Markaz Islamabad
1053	8705.9000 8707.9090	Special Purpose Vehicle	Suction and jetting vehicles, Crash Tender, Rescue vehicle, recovery vehicles, wreckers, tow trucks, skip loaders, refuse compactor collector, street sweeper, beach sweeper, cranes, aerial ladder, snorkell, tank transporter, flatbed trailer, low bed trailer, Mobile workshop, mobile kitchen, mobile toilets etc.	--	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi Colibrative Heavy Industries (Pvt) Limited. Chowk Saeed, Sagian Bypass Road, Shahdhara, Kot Abdul Malik, Lahore Meraj (Pvt) Limited Plot No. 11, Sector 15, Korangi Industrial Area, P.O. Box 3135 Karachi – 74900 Automobile Corp. of Pakistan (Pvt) Ltd. 14, Dockyard Road, West Wharf, Karachi Pakistan Vehicle Engineering (Pvt) Ltd. D-134, S.I.T.E, Manghopir Road, Karachi Gujrat Steel (Pvt) Ltd. 183 A.M,Shahrah-e-Iraq, Saddar, Karachi
1054	8716.9000	M.S. Shaft (Hot Rolled)	Range 25 to 175mm Length = 6 to 12 Mtr.	ASTM A-36, SR-24, AISI-1010, AISI-1017, A-36 and as per Pakistan Steel and Peoples Steel Mills Standard.	As Per Standard	Jabbar Steel Industry A-46/C S.I.T.E Near Pakistan Cable Karachi.
1055	8803.9000	Drop tanks and air dispensers	Drop tanks and air dispensers for aircraft	--	--	Heavy Mechanical Complex (Pvt) Ltd. Taxila
1056	8903.9100 8903.9200 8903.9300	Fiber Glass Boats	Ranging from 10 ft to 70 ft long (International Maritime Specs)	As per Standard	As per Standard	Business & Engineering Trends 100-A Wazir Ali Road, Upper Mall Opposite Lahore Gymkhana Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1057	8905.9000	Light-vessels	Range up to 4mm ~ 20 mm plate thickness	--	--	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
1058	8907.9000	Tanks, storage, floating	All type of floating storage tanks for oil feilds	Skid mounted storage tanks for fuels, eatable oils and water, round storage tankds with fixed proof for oil/ fuel, Round storage with floating roof for oil/ fuel.	--	Metal Engineering Works (Pvt) Ltd. S-4, S.I.T.E., Karachi
1059	9018.3110	Regular Syringes with needles	1-CC, 3-CC, 5-CC, 10-CC, 20-CC, 50-CC, 60-CC	E.O. Sterilized, 3-part, luer or slip lock, gasket, plunger, barrel. Precise calibrate graduation barrel mark scale printing. Needle with color hub.	Medical grade raw materials	Silver Surgical Complex (Pvt.) Ltd. Silver House, 11/E, Block-6, P.E.C.H.S., Karachi
1060	9018.3110	Insulin Syringes with needles	1-ml, 1-CC	E.O Sterlized single use 1-ml/CC insulin Unibody syringe with self destructive plunger, precise calibrate graduation barrel mark scale printing.	Medical grade raw materials	Silver Surgical Complex (Pvt.) Ltd. Silver House, 11/E, Block-6, P.E.C.H.S., Karachi
1061	9018.3120	Regular Syringes without needles	1-CC, 3-CC, 5-CC, 10-CC, 20-CC, 50-CC, 60-CC	E.O. Sterilized, 3-part, luer or slip lock, gasket, plunger, barrel. Precise calibrate graduation barrel mark scale printing. Needle with color hub.	Medical grade raw materials	Silver Surgical Complex (Pvt.) Ltd. Silver House, 11/E, Block-6, P.E.C.H.S., Karachi
1062	9018.3940	Intravenous Catheters / IV Cannula and parts	14-G, 16-G, 18-G, 20-G, 22-G, 24-G, 26-G	E.O. Gas sterilized Radio Opaque Catheter tube. Stainless Steel needle with sharp grinded tip for easy insertion and painless cannulization. Providing of a vent fitting preventing blood escape and medicine. (3-types, injection port and straight).	Medical grade raw materials	Silver Surgical Complex (Pvt.) Ltd. Silver House, 11/E, Block-6, P.E.C.H.S., Karachi
1063	9018.3940	One way stopper/ 3-way stopper	Connector for I.V. Cannula/ catheter	E.O. Sterilized, Blister pack, connector.	Medical grade raw materials	Silver Surgical Complex (Pvt.) Ltd. Silver House, 11/E, Block-6, P.E.C.H.S., Karachi
1064	9018.4900	Scalers, dental	High grade	--	--	Acumen Surgical (Pvt) Ltd. Jinnah Town, Capital Road, Sialkot
1065	9028.0000	Gas Metering Skid	Senior/ Junior Orifice	-	-	Descon Engineering Limited DESCON Manufacturing Business Area 2 KM Defence road, Off: KM Multan Road, Chung Lahore – 53000
1066	9028.1000	Gas Meters, Parts thereof	Aluminum Body, Case & Covers of Gas Meter Gas Meter G 1.6 Gas Meter G 4, Gas Memter V3	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1067	9028.1000	Gas Meters	<p>i) <u>Gas Meters (G 1.6)</u></p> <ul style="list-style-type: none"> - Max low rate(capacity) = 2.5 cubic meter per hour, - Min low rate (capacity) = 0.016 cubic meter per hour - Max working pressure = 1 bar, - Temperature range = 20-60C <p>ii) <u>Gas Meters (G-4)</u></p> <ul style="list-style-type: none"> - Max low rate (capacity) = 6.0 cubic meter per hour, - Min low rate (capacity) = 1. cubic meter per hour, - Max working pressure = 1 bar, - Ttemperature range = 20-60C <p>iii) Housing of Gas Meters Gas Meters (G-1.6) & (G-4)</p>	--	--	Sui Southern Co. Ltd. (Meter Manufacturing Plant) ST-B/B-14, Sir Shah Muhammad Suleman Road Gulshan-e-Iqbal, Karachi
1068	9028.3000	Meters, electricity	Solid State & Pre Paid Energy Meter	--	--	Microtech Industries (Pvt) Ltd. Plot No. 2, Street No. 2, Attari Industrial Estate, 18 Km, Ferozpur Road, Lahore
1069	9028.3000	Meters, electricity	<p>1)- Single Phase AC Energy Meters, 10/40 Amps, 240V, 50 Hz Accuracy Class-2 housed in polycarbonate meter box with magnetic bearing.</p> <p>2)- 3-Phase, 4-wire, 3-Element, Electromechanical AC Energy Meters, 15(90) Amps, 230/400V, 50 Hz, Accuracy Class 2.0 Housed in polycarbonate Meter box with L.E.D.s with Magnetic Bearings.</p> <p>3)- Static 3-Phase, 4-wire, whole current energy meter with multi rate tariff (Class-1) in polycarbonate cover.</p>	--	--	Escorts Pakistan Ltd Escorts House, 26-Davis Road Lahore
1070	9028.3000	Meters, electricity	<p>Single Phase Meters 10 to 60 Amps</p> <p>3-Phase Meters 10 to 100 Amps</p> <p>CT & PT Operated 3 Pahse Meters 5 Amps</p>	--	--	KBK Electronics (Pvt) Ltd. (formerly SB Electronics Engineering & Control (Pvt) Ltd.) 86, Tariq Block, New Garden Town Lahore
1071	9028.3000	Meters, electricity	<p>Single Phase Electromechanical Meter, Single Phase Electronic Meter, Three Phase Electromechanical Meter; Three Phase Electronic Meter, MDI Meter (LT/HT), KVARH Meter (LT/HT), Three Phase CT Operated Electronic Meter, Prepaid Meter, Electronic Module for MDI</p>	--	--	Syed Bhais (Pvt) Ltd. 200 Ferozpur Road Lahore 54600

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1072	9028.3000	Meters, electricity	Single Phase Electromechanical Meter, Single Phase Electronic Meter, Three Phase Electromechanical Meter; Three Phase Electronic Meter, MDI Meter (LT/HT), KVARH Meter (LT/HT), Three Phase CT Operated Electronic Meter, Prepaid Meter, Electronic Module for MDI, Meter components i.e., Current Coil Assy, Potential Coil Assy, Rotor Assy, Brake Magnet Assy, Meter Base Assy, Meter Fame, Meter Cover Assy, Meter Security Box, Terminal Block Assy & Brass/Copper Terminals,	--	--	Syed Bhais (Pvt) Ltd. 200 Ferozepur Road Lahore 54600
1073	9028.3000	Meters, electricity	Single phase and three phase 220 volts, 400 volts and 50 c/s	--	--	Pakistan Elektron Limited (PEL) 14-Kilometer, Ferozepur Road Lahore
1074	9028.3000	Static Single Phase Energy Meters	For measurement of KWH and MDI (Maximum Demand Indicator) for domestic and commercial users with anti tampering features. (As per WAPDA's design)	--	--	Creative Electronics (Pvt) Ltd. 160/S, Q.I.E. Kot Lakhpat, Lahore
1075	9028.3000	Static Three Phase Whole Current Energy Meters	Three Phase 04 wire TOD (Time of Day) and MDI (Maximum Demand Indicator) multiple tariff meter, anti tampering, date and time recording features. (As per WAPDA's design)	--	--	Creative Electronics (Pvt) Ltd. 160/S, Q.I.E. Kot Lakhpat, Lahore
1076	9028.3000	3 Phase 4 wire LT (TOU) CT Operated Static Energy Meters	Static 3 phase 4 wire multi-rate meters for measurement of active & reactive energy/ load, with memory features to record events and transfer data. (As per WAPDA's design).	--	--	Creative Electronics (Pvt) Ltd. 160/S, Q.I.E. Kot Lakhpat, Lahore
1077	9028.3000	3 Phase 4 wire HT (TOU) CT & PT Operated Static Energy Meters	For measurement of active, reactive energy, Indicating Maximum Demand/ load profile with specific characteristics to store and transfer data. (As per WAPDA's design).	--	--	Creative Electronics (Pvt) Ltd. 160/S, Q.I.E. Kot Lakhpat, Lahore
1078	9032.1090	Gas Controller Thermostat	Temperature Range 30 degree C - 70 Degree C, Differential < 5 degree C, Current 16 Amps Max, Material Brass. Sensor Length 7", 11", 18". Temperature Selection 40 degree C to 80 degree C, Inlet and Pilot Filters, Thermoelectric flame failure safety device. Brass body, inlet 1/2" NPT, Outlet 3/4" 18 TPi, Max inlet Gas Pressure 5" of water column.	--	--	Tesla Industries Pvt. Ltd. Plot No. 81-F, St. 6, I-10/3 Islamabad
1079	9032.8990	Stabilizers, voltage	Smart Line Conditioners 1 phase: 2 to 10KVA (with or without Isolation Transformer) 3 phase: upto 30KVA (non-isolated transformer)	Specially designed for Pakistani power conditions, and most suitable for IT & Telecom industry.	--	Saltec Powerlink 18C/5, Khyabane Tanzeem DHA 5 , Karachi
1080	9301.1000	Mortars, military	Heavy Mortar 120 mm, Light Mortar 81 mm, Mortar 60 mm	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
1081	9301.2000	Launchers, rocket	Under Barrel Grenade Launcher GL-40	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1082	9301.2000	Launchers, rocket	Rocket Propelled Grenade Launcher RPG-7	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
1083	9301.2000	Tear Gas Gun	37/38mm Tear Gas Gun (Shell Grenade Launcher)	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1084	9301.2000	Grenade Launcher	40mm Shot Range Grenade Launcher (SRGL) / 40mm Hand Held Grenade Launcher (HHGL)	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1085	9301.9029	Rifles, military	Recoilless Rifle 106 mm	--	--	Pakistan Machine Tool Factory (Pvt) Limited PMTF Road, Off National Highway, Landhi, Karachi-75030
1086	9303.2011	Gauge Pump Action Shotgun	12 Gauge Pump Action Shotgun "Shooter"	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1087	9303.2019	Shotgun	12 Gauge Single Barrel Shotgun	--	--	Daudsons Armour (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1088	9303.2019	Rifle	.22 Rifle	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1089	9303.2019	Single Pistol	Pistol Pyrotechnic (Single Pistol)	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1090	9303.2020	Double Barrel Shotgun	12 Gauge Double Barrel Shotgun	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1091	9306.2900	Mortar Training Bomb	60mm, 81mm, 120mm Mortar Training Bomb	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1092	9306.9000	Bombs (munition)	MK82,MK83,MK84 Low Drag General Purpose.	--	--	Daudsons Armoury (Pvt) Ltd. Industrial Estate Kohat Road , Peshawar
1093	9402.9020	Hospital beds with mechanical fittings	Patient Motorized / Electrical Beds for ICU and CCU etc.	--	--	G. Med Equipment 11A Hurbance Pura Road, Near Railway Crossing P. O. Tajpura Lahore Cantt. Strongman Medifur Systems (Pvt) Ltd. Plot No. 166 Street No. 9, I-10/3 Industrial Area, Islamabad.
1094	9403.1000	Metal Shelvings	Mobile Shelving and General Office Shelving etc.etc.	--	--	Gujrat Steel (Pvt) Ltd. 183 A.M,Shahrah-e-Iraq, Saddar, Karachi
1095	9403.7000	Plastic Furniture	Children's outdoor play areas, different varieties to chose from and made to order	--	--	Green Earth Recycling Pakistan 208/A Street # 5, Cavalry Grounds, Cantt. Lahore

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1096	9405.1090	Light Emitting Diodes (LED) Lighting Products (SMD, COB)	All types of LED Bulbs and Lamps (all types); LED Panel Lights (All sizes); LED 4 Channel, Linear and Tube Lights (all sizes); LED Down Lights; LED Street Lights; Flood and Spot Lights; Sports Stadium Lights; Canopy Lights, LED Strip and Rope Lights; LED Track Lights, LED X-Ray Illuminators (1U, 2U, 3U, 4U) etc. [AC / DC] (As per IEC standards)	--	--	National Institute of Electronics Ministry of Science & Technology H. No. 17, Sector H-9, P.O. Box 1406, Islamabad Creative Electronics & Automation Plot No. 142, Industrial Triangle Kahuta Road, Islamabad Micro Pak (Pvt) Ltd. Plot No. 218, St. No. 7, I-9/2, Islamabad Comcept Private Limited Plot No. 291, Street No. 03, Sector I-9/3, Islamabad
1097	9406.0010 9406.0020 9406.0030 9406.0040 9406.0090	Pre-fabricated Buildings	Built up with H.R. Sheets, G.I. Sheets, Zinacume Sheet, High Tensile Nuts & bolts and Fiber glass Mat Insulation. Beams & Columns = Yield Strength 34.5 kN/cm ³ Galvanized Steel = Yield Strength 34.0 kN/cm ³ Zinacume Steel = Yield Strength 34.5 kN/cm ³ High Strength Bolts = Tensile Strength 83.0 kN/cm ³	Beams & Columns = ASTM A 572 M Gr 345 type 1 Galvanized Steel = ASTM A 653 M SS GR 340 Class 1 Zinacume Steel = ASTM A 792 M Grade 345 B High Strength Bolts = ASTM A 325 M	--	Izhar Steel Izhar House, 35-Tipu Block, New Garden Town, Lahore Pakistan Insulations (Pvt.) Ltd. 107 Business Avenue PECHS BLock-6, Karachi
1098	9406.0040	Insulated Panels	Polyurethane Panels (PU), Polyisocyanurate Panels (PIR), Rock Wool Panels	25mm to 300mm, upto 16mtr length	--	Pakistan Insulations Pvt. Ltd. 107 Business Avenue PECHS BLock-6, Karachi Foster Refrigerators (Pvt) Ltd. 7-Main Industrial Area, Kot Lakhpat, Lahore Izhar Steel Izhar House, 35-Tipu Block, New Garden Town, Lahore
1099	9608.1000	Ball Point Pens	All Types	--	--	Shahsons (Pvt) Ltd. D-88, S.I.T.E., Manghopir Road, Karachi. Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700
1100	9608.2000	Pens, felt-tipped	Writing, colouring and marking pens, all types (felt tipped with and without metal / plastic jackets).	--	--	Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700
1101	9608.2000	Markers, felt-tipped	Markers all types (Permanent, Highlighters, White Boards, Refillable / Sealed)	--	--	Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700
1102	9608.3000	Pen, fountain	Fountain pens, all types	--	--	Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700

S. No.	PCT Head	Products	Specifications	Physical Properties	Chemical Properties	Company
1103	9609.1000	Pencils	All Types	--	--	Shahsons (Pvt) Ltd. D-88, S.I.T.E., Manghopir Road, Karachi.
1104	9609.9000	Crayon	Crayon	Candle like solid slugs of wax	Paraffin Wax Organic Pigments China clay	Indus Pencil Industries B-54, Manghopir Road SITE Karachi
1105	9612.2000	Ink-pads	Stamp Pads	--	--	Dollar Industries (Pvt) Ltd. D-85, SITE, Karachi – 75700
1106	9931.0000	Ambu Lifter	Upto 22ft working height from ground suitable for aircraft upto Boeing 777	--	--	Bilal Engineering Company G.T Road Opp. Rescue 1122 Office Pindi Bypass, Gujranwala

Note

- 1). The Annexures (I & II) mentioned against respective entries of M/s Peoples Steel Mills Ltd. form the integral Part of the CGO.
- 2). The above listed machinery/ equipment/ materials, etc. include their substitutes, the concessionary import of which would also not be allowed.
- 3). Import of Proprietary spares whose parent equipment is not manufactured locally shall be cleared as per terms of SRO 678(I)/2004 subject to the following:
 - i). Proof of concessionary import (Bill of entry or any other appropriate commercial document) of the parent equipment not manufactured locally.
 - ii). Undertaking by the importer that the imported items are proprietary spares of the equipment mentioned at (i) above and are certified as such either by the manufacturer (OEM) of integral sub-equipment of the parent equipment, as the case may be.
- 4). The HS/ PCT Code used in column 2 above are purely for reference purpose.

S.No.	Steel Grade	Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al	V	W	Co	Ti
		Upper	0.22	0.30	0.65											
48	BS-2858	Lower	0.10	0.03	0.49	0.04	0.03									
		Upper														
49	BW2	Lower	0.95	0.30	0.35	0.03	0.03	0.15	0.1	0.2	0.2		0.15			
		Upper	1.10										0.35			
50	C45K	Lower	0.42		0.50											
		Upper	0.50	0.40	0.80	0.045	0.05	0.4	0.1	0.4						
51	CFS-6	Lower	0.30	0.35	0.50	0.05	0.05									
		Upper	0.40		0.90											
52	EN43B	Lower	0.45	0.10	0.70	0.05	0.05									
		Upper	0.50	0.40	0.90											
53	EN8	Lower	0.36	0.10	0.60	0.01	0.03									
		Upper	0.44	0.40	1.00											
54	Ex-Low Carbon	Lower														
		Upper														
55	G-43A (BS 4360-1986)	Lower														
		Upper	0.25	0.50	1.60	0.05	0.05									
56	HAFFAZ 1010	Lower														
		Upper														
57	Haffaz-1020	Lower	0.17	0.10	0.40											
		Upper	0.24	0.25	0.65	0.025	0.03									
58	HMC-1030	Lower	0.28	0.05	0.50							0.03				
		Upper	0.37	0.17	0.80	0.04	0.05									
59	HR355	Lower														
		Upper	0.22	0.55	1.60	0.05	0.05									
60	HSAPH55	Lower	0.15	0.30	1.30	0.04	0.04									
		Upper	0.18	0.40	1.50											
61	NEAGA - Steel	Lower	0.40	0.10	0.60		0.20									
		Upper	0.50	0.35	0.90	0.06	0.25									
62	QST-52-3-Cu 3	Lower	0.20	0.55	1.60	0.04	0.04				0.25					
		Upper									0.35					
63	RSt-37-2 Cu3	Lower	0.17	0.30	1.40	0.05	0.05				0.25					
		Upper									0.4					
64	S15A	Lower	0.12	0.10	0.25	0.03	0.04			0.2	0.2	0.03				
		Upper	0.18		0.50							0.08				
65	S20A	Lower	0.16		0.25											
		Upper	0.22	0.10	0.50	0.03	0.04									
66	S43C	Lower	0.40	0.15	0.60											
		Upper	0.46	0.35	0.90	0.03	0.04	0.2		0.2	0.2					
67	S-45C	Lower	0.42	0.15	0.60	0.03	0.04	0.2		0.2	0.3					
		Upper	0.48	0.35	0.90											
68	S50C	Lower	0.47	0.15	0.60	0.03	0.04	0.2		0.2	0.3					
		Upper	0.53	0.35	0.90											
69	SAMZA GRADE 1	Lower	1.20	0.15	0.25	0.04	0.04									
		Upper	1.40	0.35	0.50											
70	SSA-21	Lower	0.45	0.10	0.70											
		Upper	0.55	0.35	1.10	0.05	0.05	0.3	0.15	0.5	0.3					
71	ST10	Lower	0.07	0.17	0.17							0.015				

S.No.	Steel Grade	Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al	V	W	Co	Ti
		Upper	0.14	0.37	0.37	0.035	0.04	0.15		0.3	0.2	0.035				
72	St12Cu3	Lower	0.10	0.10	0.20	0.05	0.05				0.25					
		Upper			0.45						0.35					
73	ST20	Lower	0.17	0.17	0.35	0.04	0.04	0.25		0.25						
		Upper	0.24	0.37	0.65											
74	St4	Lower										0.02				
		Upper	0.10	0.05	0.50	0.03	0.03	0.15	0.1	0.2	0.2	0.1				
75	SWRY-11	Lower			0.35											
		Upper	0.09	0.03	0.65	0.02	0.02				0.2					
76	T-1 PRS	Lower	0.03	0.15	0.80	0.06	0.06									
		Upper	0.42													
77	T12A	Lower	1.15	0.15	0.15			0.2								
		Upper	1.24	0.30	0.30	0.03	0.02			0.15	0.25					
78	Tech Lok C-3	Lower	0.14	0.12	0.40											
		Upper	0.22	0.30	0.65	0.045	0.06									
79	V930	Lower	0.27	0.15	1.20											
		Upper	0.34	0.40	1.50	0.035	0.04	0.3								
80	1.2060	Lower	1.00	0.20				1.2								
		Upper	1.10	0.40	0.20	0.03	0.03	1.5								
81	1.2714	Lower	0.50	0.10	0.65	0.03	0.03	1	0.45	1.5			0.07			
		Upper	0.60	0.40	0.95			1.2	0.55	1.8			0.12			
82	1.2767	Lower	0.40	0.10	0.15	0.03	0.03	1.2	0.15	3.8						
		Upper	0.50	0.40	0.45			1.5	0.35	4.3						
83	1.2842	Lower	0.85	0.10	1.90	0.03	0.03	0.2					0.05			
		Upper	0.95	0.40	2.10			0.5					0.15			
84	1.8159	Lower	0.47	0.40	0.70	0.04	0.04	0.9					0.1			
		Upper	0.55		1.10			1.2					0.25			
85	12Cr2NiMoV2	Lower	0.09	0.17	0.30			1.9	0.3	0.8			0.18			
		Upper	0.16	0.37	0.70	0.025	0.03	2.4	0.45	1.2			0.28			
86	13CrMo44 with Cr	Lower	0.08	0.35	0.40	0.03	0.03	0.7	0.4		0.3					
		Upper	0.18		1.00			1.15	0.6							
87	13CrMo44 with out Cr	Lower	0.08	0.35	0.40	0.03	0.03		0.4		0.3					
		Upper	0.18		1.00				0.6							
88	14NiCr14	Lower	0.10		0.40			0.6		3						
		Upper	0.18	0.40	0.70	0.035	0.04	0.9		3.5						
89	15CDV6	Lower	0.12	0.20	0.80	0.02	0.02	1.25					0.2			
		Upper	0.18		1.20			1.5					0.3			
90	16MnCr5	Lower	0.14		1.00			0.8								
		Upper	0.19	0.40	1.30	0.035	0.04	1.1								
91	19CN5	Lower	0.16		0.70			0.8		0.8						
		Upper	0.21	0.35	1.10	0.035	0.04	1.2	0.1	1.2						
92	20CrNi4VA	Lower	0.17	0.17	0.25			0.7		3.75			0.15			
		Upper	0.24	0.37	0.55	0.035	0.04	1.1		4.25	0.2		0.3			
93	20MnCr5	Lower	0.17	0.15	1.10			1								
		Upper	0.22	0.40	1.40	0.035	0.04	1.3								
94	25 CrSiNiWV2	Lower	0.22	0.17	0.30			0.7		0.8			0.18	0.5		
		Upper	0.27	0.37	0.70	0.035	0.04	1.1		1.2			0.28	1		

S.No.	Steel Grade	Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al	V	W	Co	Ti
		Upper	0.22	0.35	0.90	0.035	0.04	0.9								
117	5135	Lower	0.33	0.15	0.60			0.8								
		Upper	0.38	0.35	0.80	0.035	0.04	1.05								
118	5140	Lower	0.38	0.15	0.70			0.7								
		Upper	0.43	0.35	0.90	0.035	0.04	0.9								
119	5145	Lower	0.43	0.15	0.70			0.7								
		Upper	0.48	0.30	0.90	0.035	0.04	0.9								
120	5145H	Lower														
		Upper														
121	58SiMn	Lower	0.55	1.00	0.90											
		Upper	0.63	1.50	1.30	0.035	0.04	0.3		0.3	0.2					
122	5CrMo16	Lower	0.07	0.05	0.05	0.03	0.03	3.5	0.4							
		Upper		0.25	0.25			4.5	0.6							
123	6F3	Lower														
		Upper	0.55	0.85	0.60	0.025	0.03	1	0.75	1.8			1			
124	817M40	Lower	0.36	0.10	0.45	0.04	0.02	1	0.2	1.3						
		Upper	0.44	0.35	0.70		0.04	1.4	0.35	1.7						
125	826M40	Lower	0.36	0.10	0.45	0.04	0.02	0.5	0.45	2.3						
		Upper	0.44	0.35	0.70		0.04	0.8	0.65	2.8						
126	832M13	Lower	0.10	0.10	0.35	0.04	0.04	0.7	0.1	3						
		Upper	0.16	0.35	0.60			1	0.25	3.75						
127	8620	Lower	0.18	0.15	0.70			0.4	0.15	0.4	0.35					
		Upper	0.23	0.35	0.90	0.03	0.04	0.6	0.25	0.7						
128	8620H	Lower	0.17	0.15	0.60			0.35	0.15	0.35	0.35					
		Upper	0.23	0.35	0.95	0.04	0.03	0.65	0.25	0.75						
129	8622H	Lower	0.19	0.15	0.60			0.35	0.15	0.35	0.35					
		Upper	0.25	0.35	0.95	0.04	0.03	0.65	0.25	0.75						
130	8640	Lower	0.38	0.15	0.75			0.4	0.15	0.4						
		Upper	0.43	0.35	1.00	0.035	0.04	0.6	0.25	0.7						
131	9310	Lower	0.08	0.15	0.45			1	0.08	3						
		Upper	0.13	0.35	0.65	0.025	0.03	1.4	0.15	3.5						
132	A572	Lower	0.22	0.20	1.20	0.04	0.05						0.1			
		Upper	0.23	0.35	1.35								0.2			
133	A572 Grade 50	Lower			0.80								0.01			
		Upper	0.23	0.40	1.35	0.04	0.05						0.15			
134	AGS-180W6	Lower	1.60	0.30	0.35	0.03	0.03	0.25						5.7		
		Upper	2.00											6.2		
135	API Grade X-70	Lower														
		Upper	0.26	0.30	1.65	0.03										0.06
136	Armour Plate	Lower	0.26	0.20	1.00	0.03	0.03	1	0.1							
		Upper	0.32	0.50	1.40			1.4	0.4							
137	ARMOX 500T	Lower														
		Upper	0.30		1.20			1	0.7	1.3						
138	AWC-GRADE-1	Lower	0.42	0.15	0.60	0.03	0.03	0.35								
		Upper	0.48	0.35	0.90			0.5								
139	CLARM HBR	Lower	0.28	0.10	0.10			1.3	0.3	3.2			0.16			
		Upper	0.33	0.30	0.40	0.007	0.01	1.7	0.5	3.8	0.15	0.02	0.25			
140	D406A	Lower	0.27	1.40	0.70			1	0.4				0.08			
		Upper	0.33	1.70	1.00	0.013	0.01	1.3	0.55		0.25		0.15			

S.No.	Steel Grade	Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al	V	W	Co	Ti
141	E116	Lower														
		Upper														
142	E920	Lower														
		Upper														
143	EN16	Lower	0.32	0.10	1.30				0.22							
		Upper	0.40	0.40	1.70	0.035	0.04		0.32							
144	EN16C	Lower	0.35	0.10	1.30				0.22							
		Upper	0.40	0.35	1.70	0.035	0.04		0.32							
145	EN16C (Mod)	Lower	0.35	0.10	1.30				0.15							
		Upper	0.40	0.35	1.70	0.035	0.04		0.25							
146	EN18	Lower	0.36	0.10	0.60			0.9								
		Upper	0.44	0.35	0.90	0.035	0.04	1.2								
147	EN18B	Lower	0.30	0.10	0.65			0.85								
		Upper	0.35	0.35	0.80	0.05	0.05	1.15								
148	EN18C	Lower	0.34	0.10	0.60			0.9								
		Upper	0.39	0.35	0.80	0.035	0.04	1.2								
149	EN24	Lower	0.36	0.10	0.45	0.04	0.04	1	0.2	1.3						
		Upper	0.44	0.40	0.70			1.4	0.35	1.7						
150	EN28	Lower	0.25	0.10	0.70	0.02	0.02	0.75	0.2	3						
		Upper	0.40	0.35				1.5	0.65	4.5						
151	EN31	Lower	0.90	0.10	0.30	0.04	0.04	1.2		0.3	0.3					
		Upper	1.20	0.35	0.60			1.6								
152	F550	Lower	0.48	0.20	0.90			0.9					0.1			
		Upper	0.54	0.35	1.10	0.035	0.04	1.2			0.35		0.15			
153	G4335V	Lower	0.30	0.10	0.40			0.7	0.46	2			0.1			
		Upper	0.40	0.35	0.70	0.01	0.01	1.2	0.6	3.3	0.2	0.015	0.25			
154	HLES-80	Lower								4.07		0.02				
		Upper	0.15	0.25	0.50	0.015	0.01	0.5	0.4	4.8	0.25	0.03	0.09			
155	HMC-Grade-1	Lower	0.28	1.40	0.70	0.01	0.01	1	0.4	0.25			0.08			
		Upper	0.33	1.76	1.00			1.3	0.55				0.15			
156	HRA-PL-01	Lower	0.25	0.15	0.30			1.3	0.3							
		Upper	0.31	0.35	0.80			1.7	0.5							
157	Huffaz-1.5639	Lower		0.18	0.31					3.18						
		Upper	0.19	0.37	0.64	0.025	0.03			3.82						
158	Index-5044	Lower	0.42	0.15	0.60			0.35								
		Upper	0.48	0.35	0.90	0.035	0.04	0.5								
159	PSM-2	Lower	0.25	0.20	0.40			1.5	0.25							
		Upper	0.40	0.40	0.60	0.035	0.04	2	0.35							
160	PSM-3	Lower	0.27	0.20	0.30			0.7	0.3	2.8						
		Upper	0.33	0.40	0.60	0.02	0.02	1.1	0.5	3.5						
161	R100	Lower	0.95	0.25	0.25			1.4								
		Upper	1.05	0.35	0.40	0.025	0.02	1.65			0.3					
162	SA508 Class-3	Lower	0.16	0.15	1.20	0.02	0.02	0.2	0.45	0.6		0.04	0.02			
		Upper	0.22	0.37	1.50				0.6	1						
163	SCM415	Lower	0.13	0.15	0.60			0.9	0.15			0.02				
		Upper	0.18	0.35	0.85	0.03	0.03	1.2	0.3	0.25	0.3	0.03				
164	SCM-420	Lower	0.18	0.15	0.60	0.03	0.03	0.9	0.15	0.25	0.3					
		Upper	0.23	0.35	0.85			1.2	0.3							
165	SCM435	Lower	0.33	0.15	0.60			0.9	0.15							

S.No.	Steel Grade	Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al	V	W	Co	Ti
		Upper	0.38	0.35	0.85	0.03	0.03	1.2	0.3	0.25	0.3					
166	ST- 40XHM	Lower	0.37	0.17	0.50			0.6	0.15	0.7						
		Upper	0.44	0.37	0.80	0.025	0.03	0.9	0.25	1.1						
167	ST- 45X	Lower	0.41	0.17	0.50			0.8								
		Upper	0.49	0.37	0.80	0.025	0.03	1.1								
168	ST-52	Lower														
		Upper	0.22	0.55	1.60	0.05	0.05									
169	ST-52-3	Lower		0.15									0.04			
		Upper	0.20	0.40	1.50	0.03	0.04						0.08			
170	St52-3Cu3	Lower														
		Upper														
171	SUP10	Lower	0.47	0.15	0.65	0.04	0.04	0.8			0.3		0.15			
		Upper	0.55	0.35	0.95			1.1					0.25			
172	SUP6	Lower	0.56	1.50	0.70											
		Upper	0.64	1.80	1.00	0.035	0.04				0.3					
173	SUP7	Lower	0.56	1.80	0.70						0.3					
		Upper	0.64	2.20	1.00	0.035	0.04									
174	SUP9	Lower	0.52	0.15	0.65			0.65			0.3					
		Upper	0.60	0.35	0.95	0.035	0.04	0.95								
175	SUP9 (Toyota)	Lower	0.50	0.15	0.65	0.04	0.04	0.65								
		Upper	0.60	0.35	0.85			0.95								
176	SWRH-82B	Lower														
		Upper														
177	V121	Lower	0.31	0.20	0.50			0.8	0.3	2.8						
		Upper	0.37	0.35	0.80	0.01	0.02	1.1	0.4	3.1						
178	V500	Lower	0.38	0.20	0.60			0.9								
		Upper	0.44	0.35	0.80	0.025	0.03	1.2			0.35					
179	W500	Lower	0.50	0.10	0.65			1	0.45	1.5			0.07			
		Upper	0.60	0.40	0.95	0.03	0.03	1.2	0.55	1.8			0.12			
180	0Cr21Ni5Ti	Lower	0.08	0.80	0.80	0.03	0.03	20		4.8						0.3
		Upper						22		5.8						0.6
181	1.2344	Lower	0.37	0.90	0.30			4.8	1.2				0.9			
		Upper	0.43	1.20	0.50	0.03		5.5	1.5				1.1			
182	1.2367	Lower	0.35	0.30	0.30	0.04	0.04	4.7	2.7				0.4			
		Upper	0.40	0.50	0.60			5.2	3.3				0.7			
183	1.2436	Lower	2.00	0.10	0.15	0.03	0.03	11						0.6		
		Upper	2.25	0.40	0.45			12						0.8		
184	1.3202	Lower	1.30					3.8	0.7				3.5	11.5	4.5	
		Upper	1.45	0.45	0.40	0.03	0.03	4.5	1				4	12.5	5	
185	1.3255	Lower	0.75					3.8	0.5				1.4	17.5	4.5	
		Upper	0.83	0.45	0.40	0.03	0.03	4.5	0.8				1.7	18.5	5	
186	304	Lower					0.03	18		8						
		Upper	0.08	1.00	2.00	0.045	0.03	20		10.5						
187	304L	Lower						18		8						
		Upper	0.03	1.00	2.00	0.045	0.03	20		12	0.35					
188	316	Lower						16	2	10						
		Upper	0.08	1.00	2.00	0.045	0.03	18	3	14						
189	316L	Lower						16	2	10						
		Upper	0.03	1.00	2.00	0.045	0.03	18	3	14						

S.No.	Steel Grade	Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al	V	W	Co	Ti
		Upper	0.20	1.00	1.00	0.04	0.03	10		0.6						
215	SUS-410	Lower	0.15	1.00	1.00	0.04	0.03	11.5		0.6						
		Upper						13.5								
216	SUS-420-J1	Lower	0.16	1.00	1.00	0.04	0.03	12		0.6						
		Upper	0.25					14								
217	SUS-420-J2	Lower	0.26	1.00	1.00	0.04	0.03	12		0.6						
		Upper	0.40					14								
218	SUS430	Lower	0.12	0.75	1.00	0.04	0.03	16		0.6						
		Upper						18								
219	T4	Lower	0.70	0.20	0.20			3.75	0.7				0.8	17.25	4.25	
		Upper	0.80	0.40	0.40	0.03	0.03	4.5	1				1.2	18.75	5.75	
221	X17	Lower						16								
		Upper	0.12	0.80	0.70	0.035	0.03	18			0.3					
222	Gray Cast Iron	Lower	3.50	0.80	0.50	0.05	0.08									
		Upper	3.80	1.90	1.10	0.15										

Note: Total 222 steel grades

Chemical composition of some grades of Case Hardening steels

Annex-II

Steel grade \ Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al
20MnCr5	0.17 - 0.22	0.15 - 0.4	1.1 - 1.4	0.035 (Max)	0.035 (Max)	1 - 1.3				
AISI/ SAE-8620	0.18 - 0.23	0.15 - 0.35	0.7 - 0.9	0.03 (Max)	0.04 (Max)	0.4 - 0.6	0.15 - 0.25	0.4 - 0.7	0.35 (Max)	
AISI/ SAE-8622H	0.19 - 0.25	0.15 - 0.35	0.6 - 0.95	0.04 (Max)	0.03 (Max)	0.35 - 0.65	0.15 - 0.25	0.35 - 0.75	0.35	
JIS SCM-415	0.13 - 0.18	0.15 - 0.35	0.6 - 0.85	0.03 (Max)	0.03 (Max)	0.9 - 1.2	0.15 - 0.3	0.25 (Max)	0.3 (Max)	0.02 - 0.03
JIS SCM-420	0.18 - 0.23	0.15 - 0.35	0.6 - 0.85	0.03 (Max)	0.03 (Max)	0.9 - 1.2	0.15 - 0.3	0.25 (Max)	0.3 (Max)	
JIS SCM-435	0.33 - 0.38	0.15 - 0.35	0.6 - 0.85	0.03 (Max)	0.03 (Max)	0.9 - 1.2	0.15 - 0.3	0.75 (Max)	0.3 (Max)	

Chemical composition assortment to ascertain case hardening steels

Elements	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Al
Chemical composition assortment to ascertain case hardening steels	0.17 - 0.38	0.15 - 0.40	0.6 - 1.10	0.03 - 0.035	0.03 - 0.035	0.35 - 1.3	0.3 (Max)	0.25 (Max)	0.3 (Max)	0.03 (Max)

ATTACHMENT – V

LIST OF BANKS ALLOWED FOR BANK GUARANTEES

ATTACHMENT - V**OIL & GAS DEVELOPMENT COMPANY LIMITED**
LIST OF BANKS ALLOWED FOR BANK GUARANTEES

SR. NO.	BANK NAME
1	ALLIED BANK
2	ASKARI BANK
3	BANK AL HABIB
4	BANK ALFALAH LTD
5	DUBAI ISLAMIC BANK
6	FAYSAL BANK
7	HABIB BANK LTD
8	HABIB METROPOLITAN BANK
9	MEEZAN BANK LIMITED
10	MCB BANK
11	NATIONAL BANK OF PAKISTAN
12	STANDARD CHARTERED BANK
13	UNITED BANK LTD



Zishan Engineers (Pvt.) Ltd.

An ISO 9001-2015 certified company,

47/F, Block 6, PECHS, Karachi-Pakistan

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OIL & GAS DEVELOPMENT COMPANY LTD.

TENDER ENQUIRY NO.: PROC-FC/CB/PROJ/MELA-3368/2018

(SECTION – IV)

FORM & CONDITIONS OF CONTRACT

FOR

HIRING THE SERVICES OF PCC CONTRACTOR FOR
SUPPLY / INSTALLATION / CIVIL FOUNDATIONS FOR
MISCELLANEOUS EQUIPMENTS & PLANT BUILDING
WORKS FOR MELA DEVELOPMENT PROJECT (PCC)



0	06-06-2018	Issued for Tender	SP	MIAH	SH
Rev.	Date	Description	Prepared By	Checked By	Approved By

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ANNEXURES:

ANNEXURE-A : BOQs/BID PRICE SCHEDULE

ATTACHMENTS:

ATTACHMENT-I-A : TERMS AND CONDITIONS OF THE INLAND L/C FOR SUPPLY

ATTACHMENT-I-B : TERMS AND CONDITIONS OF THE INLAND L/C FOR SERVICES

ATTACHMENT-II : MECHANICAL ACCEPTANCE CERTIFICATE

ATTACHMENT-III : PROVISIONAL ACCEPTANCE CERTIFICATE

ATTACHMENT-IV : FINAL ACCEPTANCE CERTIFICATE

ATTACHMENT-V : CERTIFICATE OF COMPLETION

ATTACHMENT-VI : CERTIFICATE OF COMPLIANCE

ATTACHMENT-VII : UNDERTAKING

FORM OF CONTRACT

FORM OF CONTRACT

This Contract (hereinafter referred to as “Contract”) is made this ____ day of _____ 2018 between Oil & Gas Development Company Limited having its Head Office situated at OGDCL House, Jinnah Avenue, Islamabad (hereinafter referred to as “OGDCL”, which expression where the context admits shall include and mean its successors in interest and assigns) of the one Part and M/s. _____ having its registered office at _____ (hereinafter referred to as “PCC Contractor” which expression whereas the context admits shall include and mean its successors and assigns) of the other part.

WHEREAS OGDCL as Owner & Operator of various fields is constructing a Gas Processing Facility (hereinafter referred to as “Facility”) at Mela field. For this facility, various packages/equipment have been procured and are required to be procured. For procurement (Supply) of various packages, equipment/material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipment & packages OGDCL invited bids.

WHEREAS OGDCL invited Bids for procurement (Supply) of various packages, equipment & material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipment & packages for Mela Integrated Development Project (PCC).

AND WHEREAS the Contractor after reviewing the available documents/drawings, and understanding the complete details of the Work and requirements given in the OGDCL’s Tender Document No. _____ dated _____ 2018, submitted the Bid No. _____ dated _____ 2018 and has agreed to execute the Project as per terms, conditions and specifications mentioned hereinafter.

WHEREAS the Contractor represent and warrants to OGDCL that it is fully qualified, experienced and professionally competent and possess the necessary skills and resources and is able and willing to undertake the required Work, strictly so as to achieve the objective of the Contract.

WHEREAS OGDCL through letter no. _____ dated _____ communicated its intention to award the Contract for procurement (Supply) of various packages, equipments & material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipments & packages for Mela Development Project (PCC).

NOW THEREFORE IN CONSIDERATION OF THE ABOVE PREMISES AND THE MUTUAL COVENANTS HEREINAFTER STIPULATED THE PARTIES AGREE AS FOLLOWS:

1.0 **CONTRACT & ITS OBJECT**

In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the conditions of the Contract hereinafter referenced.

The following documents (hereinafter called “the Contract Documents”) comprise the entire Contract between the parties and supersede and replace any prior correspondence, agreement or understanding between the parties:

a)	This Contract	
b)	Conditions of Contract	: Appendix-A
c)	Scope of Supply and Work Specifications	: Appendix-B
d)	BOQ/Price Schedule of Supply & Works	: Appendix-C
e)	Detailed Project Schedule	: Appendix-D
f)	Notification of Intention to Award	: Appendix-E
g)	Bidder’s Bid Proposal (Technical & Financial)	: Appendix-F
h)	Tender Document (Including Technical Specifications & Drawings)	: Appendix-G
i)	Pre-Bid Meetings Clarifications	: Appendix-H
j)	OGDCL/Consultant & Bidders Communications/Clarifications	: Appendix-I
k)	Mobilization Advance Payment Guarantee Format	: Appendix-J
l)	Performance Bond (Bank Guarantee) Format	: Appendix-K
m)	The Measurement/Verification Mechanism of Progressive Payments	: Appendix-L

Notwithstanding anything contained in the documents:

- To the extent of any conflict between this Contract and Contract documents including Annexures, Appendices and Addendums, the Contract shall prevail.
- To the extent of any conflict between Specifications in the Tender Document and specification/drawings issued for construction, the later shall prevail.
- To the extent of any conflict between the Conditions of Contract and Technical Specifications, the later shall prevail; similarly drawings/data sheets shall have precedence over technical specifications.

The object of the Contract is the performance of procurement (Supply) of various packages, equipments & material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipments & packages to be supplied by the Contractor within agreed Time Frame for Completion, in strict accordance with all the requirements of the Contract and the Contractor acknowledges, agrees and undertakes that the performance of its obligations under the Contract would result in the achievement of the object of the Contract.

This Contract shall become effective upon the date after formal execution of the Contract by the duly authorized representatives of OGDCL and PCC Contractor provided that all of the following conditions have been fulfilled:

- a) The submission of the Performance Bond (Bank Guarantee) by the PCC Contractor to OGDCL.
- b) The payment of the Mobilization Advance by OGDCL to PCC Contractor, the same to be secured by the Advance Payment Bank Guarantee to be simultaneously furnished by Contractor to OGDCL pursuant to Article 20 & 21 of Conditions of Contract.
- c) The confirmation, by PCC Contractor to OGDCL, in form and substance satisfactory to OGDCL, that Contractor has put into force and effect such of the policies of insurance specified in Article 43 of Conditions of Contract.
- d) Eight (08) months project completion time line shall start from the supply L/C establishment date without any exception and irrespective of article b & c.

The PCC Contractor's complete scope of work is given in **Appendix-A**. The scope of work of PCC Contractor includes:

- Procurement (supply) of Equipment/Material Items & Packages at Mela Project Site.
- Construction (i.e. Civil works & buildings)
- Mechanical, Instrumentation and Electrical Works.
- Erection/Installation of the equipment/material supplied by OGDCL and equipment/material and packages supplied by PCC Contractor.
- Site Supervision, Project Management & Control including Progress Measurement Reporting and Quality Assurance & Control.
- Pre-commissioning & Commissioning & Start-up Assistance required for Mela Development Project.

In consideration of the due performance of obligations of PCC Contractor, OGDCL shall pay the PCC Contractor a Contract Price of PKR _____ on item-wise price/rate basis as per BOQ & Price Schedule of Supply and of Pak.Rs. _____ on item wise price/rate as per BOQ & Price Schedule of Works/Services given in **Annexure-A**.

The Contract shall be on item-wise price/unit rate basis. The total Contract price shall be an estimated amount in Pak Rupees subject to variation on account of changes in quantities of items given in BOQs and for additional work/deletion of work. The item-wise price/unit rate shall not be subject to escalation throughout the duration of the contract period regardless of any circumstance whatsoever even unforeseen at present.

The Contractor shall be paid on item-wise price/unit rate basis as per BOQs/Price Schedule and actual quantities verified by OGDCL / Consultant. Any wastage shall be on Contractor's account and no compensation shall be payable to the Contractor against any wastage.

PCC Contractor shall also be responsible for shipment clearance payment of custom duties taxes etc and transportation from Karachi Port to Project Site. The contractor shall also be responsible for shipment clearance payment of custom duties taxes etc and transportation from Karachi Port to Project Site.

The price for additional works (if any) carried out under the change order shall be paid to Contractor by based on BOQ/Price Schedule.

The PCC Contractor shall be responsible for transportation to site, loading and unloading at site

The withholding tax deductions shall be made as per prevailing laws/regulations.

The break-up of Contract price is as follows:

Description	Total Estimated Contract Price (In Million Pak Rs.) (FOR Basis)
• Supply of Equipment/Packages	
• Supply of Material	
– Mechanical / Piping	
– Electrical	
– Instrumentation	
• Installation & Erection Works	
– Mechanical / Piping Works	
– Civil & Structural Works	
– Electrical Works	
– Instrumentation Works	
• Port Clearance of imported material equipment (including custom duty & taxes)	
• Transportation, Loading and Unloading at Mela Project Site	
• Pre-Commissioning, Commissioning & Start-up assistance	
• Third Party Inspection of imported equipment & material in PCC Contractor's Scope of Supply (Optional)	
GST Tax on Supply	
Provincial Sales Tax on Services	
Grand Total Inclusive of all taxes	

The timely completion of the Supply and Works by the PCC Contractor shall be the essence of the Contract, as OGDCL has to meet its obligations for completion of Mela Development Project. Accordingly, the PCC Contractor is required to complete the Project given in Section-III of this tender document within eight (08) months from the effective date of the Contract between OGDCL and the PCC Contractor. The detailed Project schedule is given in **Appendix-B**.

After conditions specified above have been fulfilled and OGDCL gives written advice to PCC Contractor to proceed ahead with the Project, the PCC Contractor shall diligently commence supply of required equipment and material items and execution of the Work forthwith and shall proceed with the same with due expedition and without delay in accordance with the terms of this Contract.

The PCC Contractor and OGDCL agrees that this Contract, including all the documents incorporated by reference earlier express all of the covenants and agreements of the parties and that this Contract integrates, combines and supersedes all earlier negotiations and “Understanding” whether written or verbal. It is also understood that no modification or alteration of this Contract shall be valid or binding on either party, unless agreed in writing by both the parties.

In WITNESS whereof the parties hereto have caused their respective Common Seals to be hereunto affixed (or have hereunto set their respective hands and seals) the day and year first above written.

SIGNED, SEALED AND DELIVERED

By the said (Signature & Stamp)

By the said (Signature & Stamp)

Name: _____

Name: _____

For and on behalf of the Oil & Gas
Development Company Limited (OGDCL)
in the presence of:

For and on behalf of the PCC Contractor
in the presence of:

Name: _____

Name: _____

Address: _____

Address: _____

CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

1.0 GENERAL

These Conditions of Contract, together with the other parts of the Contract Documents shall apply to the Contract entered for procurement (Supply) of various packages, equipments & material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipments & packages for Mela Development Project (PCC). This Contract shall be drawn between Oil and Gas Development Company Limited (OGDCL) and the successful Bidder/Contractor.

These “Conditions” of the Contract shall supersede any conditions made by the Contractor, in his proposal unless such conditions have been specifically included in the Contract.

2.0 DEFINITIONS

In the Contract the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires:

- a) “Tender Documents” means the document no: PROC-FC/CB/PROJ/MELA-3368/2018 issued by OGDCL for inviting Bids, which constitute the basis for bid proposals and the Contract.
- b) “Contract” means the finally executed Contract between OGDCL and PCC Contractor (i.e. successful Bidder).
- c) “Contract Documents” means the documents forming the contract and shall include:
 - This Contract
 - Conditions of Contract : Appendix-A
 - Scope of Supply/ work and specifications : Appendix-B
 - BOQ/Price Schedule of Supply and Works : Appendix-C
 - Detailed Project Schedule : Appendix-D
 - Notification of Intention to Award : Appendix-E
 - Bidders Bid Proposal (Technical & Financial) : Appendix-F
 - Tender Document (Including Technical Specifications & Drawings) : Appendix-G
 - Pre-Bid Meeting Clarifications : Appendix-H
 - OGDCL Consultant & Bidders Communication/ Clarifications : Appendix-I

- Mobilization Advance Payment Guarantee Format : Appendix-J
 - Performance Bond (Bank Guarantee) Format : Appendix-K
 - The Measurement/Verification Mechanism of Progressive Payments : Appendix-L
- d) The “Consultant” referred to herein means Zishan Engineers Private Limited (ZEL) appointed by OGDCL for providing design engineering and project management services including procurement assistance.
- e) “Goods” and “Material” means equipment and material items and packages to be procured (supplied) under the Contract by PCC Contractor.
- f) “Manufacturer”, “Supplier” means the person or party who has manufactured and supplied the equipment/material to the PCC Contractor.
- g) “Project Site” means the area of the Facility located at Mela Field
- h) “Mechanical Acceptance Certificate” means the Certificate issued by OGDCL/Consultant that all Works are completed and ready for commissioning and start-up
- i) “OGDCL/Owner/Company” means OIL & GAS DEVELOPMENT COMPANY LIMITED.
- j) “Person” means firm, company, corporation or consortium.
- k) “Facility” means Mela Gas Processing Facility.
- l) “Project” means “Construction, Erection/Installation of Mechanical, Instrumentation, Electrical, Commissioning/Start-Up Assistance”
- m) “Provisional Acceptance Certificate” means the Certificate to be issued by OGDCL confirming that required equipment/material items and packages for Mela Development Project have been successfully commissioned.
- n) “Final Acceptance Certificate” means the Certificate to be issued by OGDCL confirming that the PCC Contractor has fulfilled all his obligations under the Contract to be issued after twelve (12) months from date of issuance of provincial acceptance certificate.
- o) “Permanent Works” means and includes all Works which will be incorporated and form part of the facility.

- p) “Specification” or “Specified” shall mean the requirements of the documents.
- q) “Sub-Contractor” means the person or party to whom any part of the work has or will be sublet by the PCC Contractor with the written approval of OGDCL and includes his heirs, executors, administrators, representatives, successors, or assignees as approved by OGDCL/ Consultant.
- r) “Temporary Works” means all temporary works (if any) of every kind required for execution and completion of the Project.
- s) “Vendor” means any person or company who has supplied the equipment/material and packages to OGDCL.
- t) “Warranties” means all the warranties to be furnished or cause to be furnished by the PCC Contractor in favor of OGDCL under the Contract.
- u) “Works/Work” means and includes all the works to be performed and all the services to be provided by the PCC Contractor under the Contract.

3.0 **SINGULAR AND PLURAL**

Words imparting the singular only also include the plural and vice versa where the context requires.

4.0 **COMPLIANCE WITH BIDDING DOCUMENTS**

The procurement (Supply) of various packages, equipment & material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipment & packages for the facility shall be completed in all respects and in strict accordance with the Contract Documents.

These “Conditions” of the Contract shall supersede any conditions made by the PCC Contractor, in his proposal unless such conditions have been specifically included in the Contract.

5.0 **USE OF CONTRACT DOCUMENTS AND INFORMATION**

- 5.1 The PCC Contractor shall not, without OGDCL's prior written consent, disclose the contents of Contract Documents, or any provision thereof, or any specification plan, drawing, pattern, sample or information furnished by or on behalf of the OGDCL in connection therewith, to any person other than a person employed by the PCC Contractor in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The PCC Contractor shall not, without OGDCL's prior written consent, make use of any document or information enumerated in Article 5.1 except for purposes of performing the Contract.
- 5.3 Any documents, other than the Contract itself, enumerated in Article 5.1 shall remain the property of OGDCL and shall be returned (all copies) to OGDCL on completion of PCC Contractor's performance under the Contract, if so required by OGDCL.

6.0 **SUFFICIENCY OF TENDER**

The PCC Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Project and that the prices stated in the BOQ/ Prices schedule of supply/works cover all his payment obligations and under the throughout term of the Contract and all matters and things necessary for the proper execution of the Project as per requirement of the Project

7.0 **INTERPRETATION**

- 7.1 Decision by the Consultant shall be conclusive as to the true intent and meaning of Consultant's drawings and technical specifications. Any discrepancy which may exist between drawings and the technical specifications shall be referred to the Consultant, whose decision as to the true meaning shall be final and binding for the PCC Contractor.
- 7.2 The PCC Contractor shall study and review the drawings, technical specifications and other information given to him by OGDCL/Consultant. During this review, if it comes across any discrepancies, inconsistencies the same shall be reported in writing to the OGDCL/Consultant.
- 7.3 All drawings and technical specifications, being instruments of services, are the property of OGDCL and shall be returned when the Work is completed.

- 7.4 Verbal instructions or information received from the OGDCL/Consultant's office will not be recognized by him unless confirmed in writing.
- 7.5 The drawings and technical specifications are intended to be complementary to each other so that any items set-forth in either shall be recognized as if duly set-forth in both.

8.0 **ASSIGNMENT**

The PCC Contractor shall not assign the Contract or any part thereof, or any benefit or interest therein or there under without the prior written consent of OGDCL.

9.0 **STANDARDS**

The materials to be supplied, installation and construction work to be performed by the PCC Contractor under this Contract shall conform to the standards specified in the Technical Specifications and Drawings given in Volume-2 of Tender Document, unless specified/agreed between OGDCL and the PCC Contractor.

10.0 **PCC CONTRACTOR'S OBLIGATIONS**

10.1 **General Obligations**

The PCC Contractor shall supply, execute and complete the Works in accordance with the Contract, and shall remedy any defects in works. When completed, the works shall be fit for the purposes for which the Works are intended as defined in the Contract.

The PCC Contractor shall provide the documents specified in the Contract, and all construction plant, PCC Contractor's personnel, goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for completion of Work in all respects.

The Works shall include any work, which is necessary to satisfy OGDCL/Consultant's requirements, or is implied by the Contract, and all works, which (although not mentioned in the Contract) are necessary for the completion, or safe and proper operation, of the Work.

The PCC Contractor shall, whenever required by OGDCL/Consultant, submit details of the arrangements and method, which the PCC Contractor proposed to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously intimated and approved by OGDCL/Consultant.

The PCC Contractor shall comply and meet all the requirements of Pakistan Engineering Council (PEC) Act 1976, its bye-laws and amendments with respect to registration as contractor C-2 and above category and provide OGDCL/Consultant the registration certificate & other documents to this effect.

10.2 **Contractor's Representative**

The PCC Contractor shall appoint the PCC Contractor's Representative and shall give him all authority necessary to act on the PCC Contractor's behalf under the Contract.

The PCC Contractor shall obtain OGDCL/Consultant consent of Contractor's representative, if not named in the contract. For obtaining the consent, the particulars of the persons, his qualification experience, is required to be submitted.

The PCC Contractor shall not, without the prior consent of OGDCL/Consultant, revoke the appointment of the PCC Contractor's Representative or appoint a replacement.

The PCC Contractor's Representative may delegate any powers, functions and authority to any competent person and may at any time revoke the delegation. Any delegation or revocation shall not take effect until OGDCL/ Consultant has received prior notice signed by the PCC Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

10.3 **Sub-Contractors**

The PCC Contractor shall not subcontract the whole of the Works.

The PCC Contractor shall be responsible for the acts or defaults of any subcontractor, his agents or employees, as if they were the acts or defaults or the PCC Contractor. Unless otherwise agreed by OGDCL/Consultant, the PCC Contractor shall give OGDCL/ Consultant not less than two (02) weeks' notice of:

- a) The intended appointment of a subcontractor for a part of the Works, with detailed particulars, which shall include the relevant experience of the subcontractor whom the PCC Contractor intends to appoint.
- b) Qualification and experience of the sub-contractor's staff as may be asked by OGDCL/ Consultant.

- c) The sub-contractor appointed by PCC Contractor shall comply and meet all the requirements of Pakistan Engineering Council (PEC) Act 1976, its by-laws and amendments with respect to registration as contractor C-2 and above category and provide OGDCL/Consultant the registration certificate & other documents to this effect.
- d) Details of manpower and other resources available with the sub-contractor.
- e) The intended commencement of sub-contractor's work at Project Site.

OGDCL/Consultant after reviewing the above information shall give his approval for the intended sub contracting arrangement.

The approved sub-contractor shall not be allowed to further sub contract the Works under his scope.

Approval of a sub-contractor by OGDCL/Consultant shall not release the PCC Contractor of any of its obligation and responsibilities under the Contract nor OGDCL/Consultant shall have any obligation with regard to the sub contracting arrangement between the PCC Contractor and the sub-contractor.

Approved sub-contractor shall be responsible for carrying out the Work in accordance with the requirement of the Contract Documents, and all conditions of the Contract shall be applicable to him. Any dispute (Financial or Otherwise) between Contractor & its approved Sub-Contractor will not affect the project work at site while OGDCL/ Consultant shall be indemnified to resolve such disputes.

10.4 **Cooperation**

The PCC Contractor shall, as specified in the Contract or as instructed by OGDCL/ Consultant, responsible free access at all times for carrying out inspection or work to:

- a) OGDCL's personnel,
- b) The Consultant's personnel,
- c) any other PCC Contractors employed by OGDCL, and
- d) the personnel of any legally constituted public authorities,

who may be employed in the execution on or near the Project Site of any Work not included in the Contract.

The PCC Contractor shall be responsible for execution of works at Project Site, and shall co-ordinate his own activities with OGDCL and other contractors.

10.5 **Safety Procedures**

During the execution of the Work, the PCC Contractor shall strictly follow OGDCL safety requirements. The PCC Contractor shall also exercise due care for facilities of other parties. In any event the PCC Contractor shall be liable for any damages and/or losses incurred including third party losses.

The PCC Contractor shall:

- a) comply with all applicable safety regulations (and including work permit requirements of the Facility)
- b) take care for the safety of all persons entitled to be on the site,
- c) use reasonable efforts to keep the Project Site and Work clear from unnecessary obstruction so as to avoid danger to these persons,
- d) provide fencing, lighting, guarding and watching of the Work until completion, and
- e) provide any temporary work (including roadway, footways, guards and fences) which may be necessary, because of the execution of the Work, for the use and protection of the public and of Owners and occupiers of adjacent lands.

10.6 **OGDCL/ Consultant Not Liable for Information/Data**

The PCC Contractor shall bear sole responsibility for obtaining all information required by it to perform the Work in strict compliance with this Contract and shall rely on the same at its own exclusive responsibility and risk. OGDCL/Consultant shall provide to the PCC Contractor information and design engineering data of equipment and packages required by the PCC Contractor in order to ensure performance of the Work in strict accordance with the requirements of this Contract. The PCC Contractor shall consider and check information and design engineering data received from OGDCL/ Consultant at its own cost.

10.7 **Quality Assurance**

The PCC Contractor shall institute a quality assurance and document control system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. OGDCL/Consultant shall be entitled to audit any aspect of the system.

Details of all procedures and compliance documents shall be submitted to OGDCL/Consultant Representative for information before each execution stage is commenced. When any document of a technical nature is issued to OGDCL/Consultant, evidence of the prior review, check and approval by the PCC Contractor himself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the PCC Contractor of any of his duties, obligations, or responsibilities under the Contract.

10.8 **Unforeseeable Difficulties**

The PCC Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances including the variation in price of material of construction, cost of living, labor cost, etc. which may influence or affect the Work. By signing the Contract, the PCC Contractor accepts responsibility for having foreseen all difficulties and cost for successfully completing the Work. The Contract Price shall not be adjusted to take account of any unforeseen difficulties or cost, except as otherwise stated in the Contract.

10.9 **Security**

a) **Operational Area:**

Contractor will be responsible for their operational area Security in the Plant and will ensure following:

- i. Contractor will fence the operational area with razor coil above the fence.
- ii. Contractor will place the gate.
- iii. Operation area shall be installed with CCTV cameras with at-least 15 days back-up recording.
- iv. Operational area approximate (130x90 meters) shall have guards for safety of contractor employees and to avoid any theft incident. At-least 01 supervisor and 03 guards shall be employed by the Contractor.

- b) **Employees Camp/ Movement:**
- i. Contractor employees shall not stay in OGDCL camp and their stay shall be independent. They shall preferably camp near to the Mela Field to reduce Security hazards during their movement.
 - ii. Contractor shall provide escort / at-least two armed guards during the movement of his employees from camp area to Mela Field.
 - iii. Armed guards shall be deployed at camp area.
- c) The PCC Contractor shall be responsible for keeping unauthorized persons off the Project Site, and
- d) Authorized persons shall be limited to the PCC Contractor's Personnel, sub-Contractor and OGDCL's/Consultant's Personnel and other personnel notified to the PCC Contractor, by (or on behalf of) OGDCL/ Consultant, as authorized personnel of OGDCL's/ Consultant's other Contractors. The PCC Contractor shall be solely responsible for the safety and security of the Project Site area until its handover to OGDCL on Completion of the Project. In case of any security issues, the Contractor shall keep OGDCL/Engineering. Consultant informed through OGDCL Security Incharge at all times. The Contractor shall be solely responsible for the security of during movement its Employees & at site while OGDCL will only facilitate in case any assistance required Contractor is responsible to provide list of their employees to OGDCL to get Entry cards from OGDCL Security Incharge of the location, to facilitate their entry.

10.10 **PCC Contractor's Operations on Site**

The PCC Contractor shall confine his operations to the Project Site, and to any additional areas, which may be obtained by the Contractor and agreed by OGDCL as working areas.

During the execution of the Work, the PCC Contractor shall keep the assigned site area free from all unnecessary obstruction, and shall store or dispose off any PCC Contractor's Equipment or surplus materials. The PCC Contractor shall clear away and remove from the assigned site area any wreckage, rubbish and Temporary Work at PCC Contractor's own cost, which are no longer required. Removal of construction equipment from the assigned site area shall, however, be with prior permission of OGDCL.

During installation/erection, pre-commissioning, commissioning testing and startup a permit to work system shall be required. Details of the system shall be available with OGDCL/Consultant and shall involve issuance of formal work permit by an OGDCL's nominated representative to carryout a specific item(s) of work and a statement of conditions under which the Work must be carried out. NO WORK shall be allowed without proper authorization from OGDCL's HSE Personnel and OGDCL may stop the work if proper safety precautions / procedure are not being followed by PCC Contractor personnel. In the event if work permit cannot be issued due to operational reasons, the work shall be rescheduled and PCC Contractor will according undertake the required Work without any impact on project schedule.

Upon completion of the Works, the PCC Contractor shall clear away and remove all PCC Contractor's equipment, surplus material, wreckage, rubbish etc. All surplus and packing materials shall be handed over to OGDCL and shifted by the PCC Contractor, at place(s) designated by OGDCL. The PCC Contractor shall leave the assigned Project Site Area and the Works in a clean and safe condition. Except that the PCC Contractor may retain at assigned site area, such Goods as are required for the Contractor to fulfill obligations under the Contract.

11.0 **CONSULTANT'S RESPONSIBILITIES**

11.1 The Consultant shall provide engineering and project management services including issue of technical documents/drawings, decisions, certificates and orders as specified in its Contract with OGDCL. The Consultant responsibility shall include inspection of equipment and materials, review documents, monitor and supervise Contractor's Work and to test and examine any materials to be used or workmanship employed in connection with the Work being performed by the Contractor.

11.2 The review, checking, inspection, supervision and approval by Consultant shall in no way relieve the Contractor from his responsibilities of performance of work as per Contract, proper superintendence and making corrections or redoing of the work to remove defects noticed during Contract performance.

12.0 **OGDCL'S RESPONSIBILITIES**

OGDCL shall be responsible for providing PCC Contractor following:

- a) Provide equipment/material items and packages as Free Issue
- b) Information, engineering data/documents as stipulated in the Contract Document.

- c) Providing facilitation letters only for permits and approvals which Contractor may require for the execution of the Project Works but it is the sole responsibility of the contractor to obtain timely permits and approvals any delay in this regard shall be on contractor's account. However, the Contractor shall timely submit the list of required permits/approvals.
- e) Ensure timely review and approvals of documents submitted by the PCC Contractor and his payments.
 - a. Access to Project Site
 - b. Land/Area for Temporary Works i.e. workshops testing facilities (if required). OGDCL may charge to the PCC contractor.

13.0 **PROJECT COMPLETION PERIOD**

The timely completion of the work by the PCC Contractor shall be the essence of the Contract, as OGDCL has to meet its obligations. Accordingly, the PCC Contractor (successful Bidder) is required to complete the Project in eight (08) months from the date of establishment of supply LC. The Detailed Project Schedule is given in **Appendix-D** of the Contract.

14.0 **MOBILIZATION/COMMENCEMENT OF WORK**

The PCC Contractor shall mobilize at Project Site to commence the work within **15 days** upon mutually agreed time schedule after issuance of a written mobilization notice

15.0 **PROGRESS REPORTING**

- 15.1 At fifteen (15) days intervals during the performance and duration of the Contract the PCC Contractor shall submit progress report (six copies) to OGDCL/Consultant. The reports shall show clearly and accurately the position of all activities associated with the supply of required equipment/material items & packages and installation/erection, construction, commissioning/start-up assistance for Mela Development Project. The progress reports shall be set out in a format approved by OGDCL/ Consultant.
- 15.2 The progress report shall indicate each item of progress of Work giving the percentage completion and expected completion date vis-à-vis agreed project execution schedule.

- 15.3 A delay due to any reason which may affect the completion and commissioning of any item of Work shall be reported by the PCC Contractor to OGDCL/Consultant giving specific reasons for such delay therein. The report shall state the action being taken to overcome such delay and to ensure adherence to the agreed project schedule.
- 15.4 The PCC Contractor's shall prepare and submit to OGDCL/Consultant three (3) copies of Weekly Activity Report summarizing the main activities undertaken and completed each week such as welding, piping, hydrostatic tests, etc.

16.0 **RATE OF PROGRESS**

If for any reason, the rate of progress of the Works or any section is at any time, in the opinion of OGDCL/Consultant, too slow to ensure completion by the prescribed time or extended time for completion, OGDCL/Consultant shall so notify the Contractor in writing and the Contractor shall thereupon take such steps as are necessary to expedite progress so as to complete the Project or such section by the prescribed time or extended time, if agreed to by OGDCL/Consultant.

17.0 **OGDCL/ CONSULTANT ACCESS TO THE WORK**

- 17.1 OGDCL's/ Consultant's representatives and any person(s) so authorized by them shall at all times have access to the Work and to the Site where work is being performed.
- 17.2 No Work shall be covered up or put out of view without prior approval of OGDCL's/ Consultant's representatives and the PCC Contractor shall afford full opportunity for OGDCL's/Consultant's representatives to examine, measure and test any work, which is going to be covered up or put out of view. The Contractor shall give notice to OGDCL/Consultant, which shall be reasonably in advance and OGDCL/Consultant without unreasonable delay examine, measure and inspect such Work.
- 17.3 The PCC Contractor to arrange proper and safe access for the OGDCL/Consultant staff, in a manner that all Work can be inspected at any time until permission for its cover up backfill has been given by the concerned OGDCL/ Consultant.

18.0 **DETAILED PROJECT EXECUTION/SCHEDULE**

- 18.1 The PCC Contractor shall, within fifteen (15) days of the notification with the intent to award the Contract, submit to OGDCL/ Consultant for their approval Detailed Supply/Work Programme /Schedule showing the sequence/order of activities procedures and methods in which he proposes to fulfill his obligations under the Contract within the stipulated completion time. The Execution/Schedule shall be comprehensive and shall show break-up of principal elements and major items of Supply/Works, the date upon which procurement (supply) equipment/materials & packages, installation and commissioning including performance testing is scheduled to begin and complete. Full particulars of the organization staff by which the PCC Contractor proposes to direct and administer for due and faithful performance of the Contract shall also be furnished along with the Detailed Project Execution /Schedule.
- 18.2 The PCC Contractor shall whenever required by OGDCL/Consultant or their representatives, also provide in writing approach, methods plans, which the Contractor proposes to adopt for execution of various components of Work.
- 18.3 If at any time it should appear to OGDCL/Consultant that the actual progress of the Works does not conform to the approved Project Execution/schedule, the PCC Contractor shall produce, at the request of OGDCL/Consultant, the PCC Contractor shall apprise OGDCL/Consultant for such non conformance of the approved Project Execution/schedule and if agreed by OGDCL/Consultant, the PCC Contractor shall provide a revised Project Execution /schedule showing the modifications to the approved Project Execution / schedule necessary to ensure completion of the Project within the stipulated completion time.
- 18.4 The submission to and approval by OGDCL/Consultant of such schedules or the furnishing of such particulars shall not relieve the PCC Contractor of any of his duties or responsibilities under the Contract.

19.0 **COMPLIANCE WITH STATUTES, REGULATIONS, ETC.**

- 19.1 The PCC Contractor shall conform in all respects with the provisions of any and all applicable laws, regulations, by-laws, rulings and orders which may be applicable to the Work and with such rules and regulations of public bodies and companies as aforesaid and shall keep the OGDCL indemnified against all penalties and liabilities of every kind for breach of any such Statute, Ordinance or Law, regulation or by-law.

- 19.2 The PCC Contractor shall pay particular attention to all legal, technical and safety requirements in force concerning Works to be performed in the Project.
- 19.3 OGDCL/Consultant shall assist the PCC Contractor by advising PCC Contractor on such laws, regulations and bye-laws from time to time in force which are in OGDCL's/Consultant's knowledge and possession.
- 19.4 The PCC Contractor shall at all time be liable to comply with the provisions of labor legislations. The OGDCL shall have the right but not the obligation to carry out periodic checks to ensure the PCC Contractor's compliance with the said labor legislations, should the PCC Contractor however be in default of these obligations the OGDCL may serve a notice of such default on the PCC Contractor. The PCC Contractor shall be obligated to rectify the default within fifteen (15) days of the notice.

20.0 **PERFORMANCE BOND (BANK GUARANTEE)**

- 20.1 Within fifteen (15) days of the receipt of notification of intent to award the Contract from OGDCL, the PCC Contractor shall furnish a Performance Bond in the Form of Bank Guarantee for an amount of ten percent (10%) of the Contract Price as a guarantee for the due and faithful performance of the Contract. The said Performance Bond shall only be issued by banks listed in appendix-K and acceptable to OGDCL, and be valid upto twelve (12) months from the date of the Provisional Acceptance Certificate.
- 20.2 The said Guarantee and the terms of the said security shall be in accordance with format given in **Appendix-K** of the Contract. The cost of such Guarantee shall be at the expense of the PCC Contractor.
- 20.3 The proceeds of the Performance Bond (Bank) Guarantee shall be payable to OGDCL as compensation for any loss resulting from the PCC Contractor's failure to fulfill its obligations under the Contract (including guarantee/warranty).
- 20.4 The Performance Bond (Bank) Guarantee shall be released to the PCC Contractor after twelve (12) months from the date of the Provincial Acceptance Certificate, provided that the PCC Contractor has performed and fulfilled guarantee/warranty obligations in pursuance of the Conditions of Contract. If PCC Contractor is unable to meet its obligations the Performance Bond will be extended or encashed as per OGDCL's discretion.

21.0 CONTRACT PRICE

This Contract is for Supply of equipment/material and packages, Construction, Installation of Mechanical, Electrical and Instrumentation Equipment/Material & packages works required for Mela Development Project as per requirements stipulated in the Contract Documents and meeting the technical specifications, applicable standards and OGDCL's objectives and requirements. The Contract is on item-wise price/unit rate basis.

In consideration of the due performance of obligations of PCC Contractor, OGDCL shall pay the PCC Contractor as Contract Price of PKR _____ on item-wise price/rate basis as per BOQ & Price Schedule of Supply and of Pak.Rs. _____ on item wise price/rate as per BOQ & Price Schedule of Works/Services given in Annexure-A.

The Contract shall be on item-wise price/unit rate basis. The total Contract price shall be an estimated amount in Pak Rupees subject to variation on account of changes in quantities of items given in BOQs and for additional work/deletion of work. The item-wise price/unit rate shall not be subject to escalation throughout the duration of the contract period regardless of any circumstance whatsoever even unforeseen at present.

PCC Contractor shall be paid on item-wise price/unit rate basis as per BOQs/Price Schedule and actual quantities verified by OGDCL / Consultant. Any wastage shall be on Contractor's account and no compensation shall be payable to the Contractor against any wastage.

PCC Contractor shall also be responsible for shipment clearance payment of custom duties taxes etc and transportation from Karachi Port to Project Site. The contractor shall also be responsible for shipment clearance payment of custom duties taxes etc and transportation from Karachi Port to Project Site. However, the bidder shall take into account the provisions of relevant SROs applicable to OGDCL. For reference the SRO 678 is enclosed as Annexure-XV. The SRO 678 specifies the custom duty as applicable on imports of equipments and packages by E & P companies. OGDCL shall assist the contractor in obtaining required duty concessions from relevant Government Departments.

The price for additional works (if any) carried out under the change order shall be paid to Contractor by based on BOQ/Price Schedule.

The PCC Contractor shall be responsible for transportation to site, loading and unloading at site.

The withholding tax deductions shall be made as per prevailing laws/regulations.

The break-up of Contract price is as follows:

	Total Estimated Contract Price (In Million Pak Rs.) (FOR Basis)
• Supply of Equipment/Packages	
• Supply of Material	
– Mechanical / Piping	
– Electrical	
– Instrumentation	
• Installation & Erection Works	
– Mechanical / Piping Works	
– Civil & Structural Works	
– Electrical Works	
– Instrumentation Works	
• Port Clearance of imported material equipment (including custom duty & taxes)	
• Transportation, Loading and Unloading at Mela Project Site	
• Pre-Commissioning, Commissioning & Start-up assistance	
• Third Party Inspection of imported equipment & material in PCC Contractor's Scope of Supply (Optional)	
GST Tax on Supply	
Provincial Sales Tax on Services	
Grand Total Inclusive of all taxes	

The pre-shipment inspection charges of equipment & packages to be supplied by the Contractor. OGDCL approved third party inspection agencies include SGS, , Velosi, TUV Austria, TUV Rheinland & Bureau Veritas The scope of Pre-shipment inspection is given below:

- Review the complete list of equipment, spare parts, commissioning and start-up spares, systems/ auxiliaries etc. being supplied and compare it with the relevant purchase document. Presence of all items shall be verified.
- Dimensional Inspection.
- Review the available inspection and testing reports.
- Verification of name plate sizing rating model numbers, port numbers, tag numbers.

- Packing and marking check.
- Check that all manuals, instructions, guidelines and procedures are included.
- Verification of number of packing cases and marking against contractual specifications.
- Checking for appropriate handling during loading.
- Checking the stowing, fastening and wedging on the means of transport.
- Compilation & submission of Pre-Shipment inspection report to OGDCL

If quote of third party inspector is not acceptable to OGDCL, it will appoint its own inspector.

Supply Payment Terms

The payment for supply of equipment & material items under Inland L/C as per attached format (**Attachment-I-A**) shall be made by OGDCL to the PCC Contractor as per following schedule:

- Twenty percent (20%) shall be paid on placement of equipment & packages order(s) by Contractor evidenced by unpriced copy of purchase order duly acknowledged by the Supplier and Contractor's invoice duly verified by OGDCL/Consultant.
- Sixty percent (60%) shall be paid on delivery/Inspection of equipment & packages at project site on submission of Acceptance Certificate by OGDCL and verified Contractor's invoice.

The payment under the L/C shall be effected upon submission of following documents upon each shipment of equipment/material:

- Clean Truck Receipt/Carrier Receipt showing freight paid & indicating Contract / Inland LC details.
- Original detailed invoice showing material description, quantity unit price and total price strictly in line with the Contract and verified by OGDCL
- Copy of applicable GST Invoice
- Copy of NTN Certificate
- Packing list

- Certificate and list of measurements and weight gross/net.
- Mill Inspection/Quality Certificates.
- Third Party Inspection Certificate (if required)
- Duly signed and stamped delivery note
- Warranty Certificate
- Certificate of origin
- Certificate issued by OGDCL that ordered equipment/material has been received at delivery location and inspected and accepted.
- Twenty percent (20%) shall be paid by OGDCL to PCC Contractor within thirty (30) days of issuance of Provisional Acceptance Certificate by OGDCL after successful commissioning of Mela Project.

Services Payment

The payments for services under Inland LC (**Attachment-I-B**) shall be made through inland issued in favor of the PCC Contractor.

Ten Percent (10%) of the total Contract Price shall be paid by OGDCL to PCC Contractor as advance for Services. The Mobilization Advance shall be paid to the Contractor on submission of Advance Payment Guarantee from any bank listed in appendix-K of equivalent amount issued as per format given in **Attachment-III** . No advance shall be paid before the submission of Performance Bond / Mobilization Advance Bank Guarantee required as per relevant clause of Conditions of Contract. The amount of advance payment shall be deducted proportionately from PC Contractor's each invoice.

- **Works (Covering Construction, Installation & Erection**

OGDCL shall make progressive payments to Contractor on monthly basis against Contractor's invoices giving details of that specific work and its completion status. The payment shall be made considering the Bid Price Schedule and verified percentage completion of work. The measurement/verification mechanism for progressive payments is detailed in **Annexure-XIII**. The measurement/verification of work will be made by OGDCL/Consultant based on progress reports submitted by the Consultant and actual at site.

The progressive payment shall be made after deducting ten (10) percent amount for adjustment on account of advance till the total amount of advance is recovered and ten (10) percent for retention money. The retention money shall be released by OGDCL to the Contractor within thirty (30) days of issuance of Provisional Acceptance Certificate by OGDCL.

- **Transportation Loading & Un-loading Services**

Transportation, loading and un-loading charges shall be paid by OGDCL to the Contractor on submission of invoice duly verified by OGDCL/Consultant and accompanied with certificate that the equipment/material and packages have been delivered at Project Site and duly inspected/accepted by OGDCL/Consultant

Invoicing Procedure

For progressive payment of works on a day in each month, to be agreed between the OGDCL's representative and the PC Contractor's representative the Contractor shall in respect of all amounts owing to him submit an invoice with relevant supporting documents, in three copies, to the OGDCL's Representative with a Work progress report for OGDCL's approval and signature. OGDCL's Representative shall authorize in writing payment to the Contractor as ascertained in accordance with the above clause.

Timing for Payment

The Payment of undisputed invoices shall be made in full within estimated thirty (30) days after OGDCL has authorized such payment in writing, provided OGDCL/Consultant representative has first certified such invoice and Contractor has fulfilled all requirements for the release of payment, OGDCL shall pay the amount due less applicable taxes and any amounts which may be due to OGDCL.

Disputed Invoices

If any invoice or an amount of invoice is disputed, OGDCL shall within ten (10) days of receipt of invoice inform the Contractor the grounds on which payment of the invoice or an amount is disputed. Efforts shall be made by both parties to resolve the dispute within a period of thirty (30) days.

22.0 INSPECTION OF SITE

- 22.1 The PCC Contractor shall also be deemed to have inspected and examined the Project Site and its surrounding areas and information available in connection therewith and to have satisfied himself, before submitting his Tender, as to the form and nature thereof, the extent and nature of work and materials necessary for the completion of the work, the means of access to the Site and in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender.
- 22.2 Any neglect or failure on the part of the PCC Contractor in obtaining the necessary information mentioned in Sub-Article of this Article hereinabove or any other matter affecting the Contract, shall not relieve the PCC Contractor from any risks or liabilities or from the responsibility for the completion of the Project in strict accordance with the Contract Documents. In no case will OGDCL/Consultant assume responsibility nor any liability of any kind what so ever for lack of any such information as is mentioned in Sub-Article of this hereof.

23.0 PCC CONTRACTOR'S SUPERINTENDENCE

- 23.1 The PCC Contractor shall give or provide all necessary superintendence during engineering, procurement, construction, pre-commissioning, commissioning, performance testing and startup works and as long thereafter as OGDCL may consider necessary for the proper fulfilling of the PCC Contractor's obligation under the Contract.
- 23.2 The PCC Contractor shall fully comply to Quality Assurance, Quality Control & Safety Procedures, stipulated in the Contract Document and Safety Policy/Procedures of OGDCL.
- 23.3 The PCC Contractor authorized representative, approved of in writing by OGDCL shall be constantly on the Project and shall give his whole time to the superintendence of the same.
- 23.4 Such authorized representative shall receive on behalf of the PCC Contractor, directions and instructions from OGDCL/Consultant.

24.0 **TAXES**

- 24.1 All taxes on the income or payments to the contractor arising, accruing or resulting under the contract, whether present or future, assessed or payable inside or outside Pakistan shall be the exclusive responsibility of the contractor or its sub-contractor(s). Company, in order to discharge its responsibilities as withholding agent shall withhold income tax from the payments to the contractor within the contract value at the rates applicable at the time of payments.
- 24.2 Sales tax on goods as well as services is applicable in Pakistan under federal/provincial sales tax laws. The contractor being registered with respective federal/provincial revenue authority of Pakistan is entitled to charge applicable sales tax over and above its bid price and will be responsible for the payment of such sales tax to the respective revenue authority as per the prevailing federal/provincial sales tax laws. OGDCL being the withholding agent shall withhold sales tax from the contractor (whether registered or unregistered), as per respective sales tax withholding rules.
- 24.3 Any indirect tax including value added tax, sales tax etc. present or future, applicable outside Pakistan shall be exclusive responsibility of the Contractor.
- 24.4 The Contractor shall be responsible for income tax and all other taxes levied on the Contractor's and its sub-contractor's expatriate personnel, their social security obligations and contributions regardless of whether such contributions are levied on employer or employee or both in Pakistan or outside Pakistan
- 24.5 The Contractor shall keep OGDCL informed of the steps taken by it to discharge the tax obligations under the Contract and provide supporting documents whenever required by the OGDCL.
- 24.6 The Contractor shall indemnify OGDCL against any claim which might occur due to non-compliance by Contractor of any legal obligation regarding taxes, duties, fees, levies, or other charges, including taxes on income and sales tax in Pakistan and any other payments due to the Federal or Provincial Governments, their agencies or any other relevant authority.
- 24.7 All clearing and brokerage charges incurred shall be to the account of CONTRACTOR.
- 24.8 CONTRACTOR agrees not to sell, transfer or dispose any of its machinery, equipment, spare parts or material imported under this contract within the country without prior written approval from COMPANY and without payment of taxes (including custom duties etc) due to the Government.
- 24.9 CONTRACTOR is responsible to settle all COMPANY obligations or guarantees with the customs authorities and to clear COMPANY of all such responsibilities.

24.10 CONTRACTOR is responsible to obtain all customs approvals and other documentations. COMPANY will endeavor to assist CONTRACTOR in obtaining such approvals and documentation.

24.11 The above clauses relating to payment of taxes would prevail notwithstanding a contrary expression reflected in any other clause of the contract.

25.0 **LIQUIDATED DAMAGES**

- a. If the Contractor fails to complete the procurement (Supply) of various packages, equipment/material and construction (i.e. Civil works & buildings) installation and pre-commissioning, commissioning of various equipment & packages of Mela Development Project within the time period of Eight (08) months, then Company shall, without prejudice to other remedies under the contract, deduct from the contract price / Bank Guarantee as liquidated damages, a sum not more than 0.5% of the contract price per week or part thereof for first four weeks, 1.00% per week for next four weeks and 1.5% per week exceeding four weeks up to maximum extent of 10 % of the contract value.
- b. In case the Company is satisfied that the delayed / defective shipment/ works was due to some mistake or circumstances beyond the control of the contractor and the contractor has not intentionally or negligently contributed in the delay, the Company may impose Liquidated Damages for not more than a sum equivalent to 0.5% of the delayed or defective shipment/ services per week or part thereof for first two weeks, 1.00 % per week for next three weeks and 1.5% per week exceeding five weeks but not exceeding 10% of the contract value of the delayed/ defective shipment/ services provided that the contractor takes immediate remedial measures for the-replacement of defective shipment and takes prompt steps to mitigate the delay. The Company may however, impose Liquidated Damages as per (a) above if the delayed or defective shipment/ services has affected the project completion schedule or has resulted in production losses.
- c. Even after imposition of LDs, if the Contractor fails to materialize the delivery (material and or services); the Company reserves the right to cancel Purchase order/Contract/LC and to forfeit the Guarantee (if applicable) after intimating the supplier for such cancellation / forfeiture.

26.0 **CHANGE ORDERS**

Subject to the provisions of Article 27.0 hereof OGDCL shall have the power to order the PCC Contractor at any time when necessary, prior to the completion of the Project to make variations to the Work as outlined below:

- Require supply of additional equipment/material, items or carryout /additional/extra work or deletion (where required i.e supply or services), which may be required for the Project.
- Change the character or quality or kind of equipment/material, item or Work,
or
- Omit any equipment/material, item or work, or

No such variation shall in any way validate or invalidate the Contract but the value (if any) of all such variations shall be taken into account in ascertaining the amount of the Contract Price and shall be calculated and paid to or deducted from the PCC Contractor as per the prices given in Price Schedule, Schedule of Prices/Rates for additional supply/work or on cost plus handling/services charges @ 05% of the value of item/work.

Any such request by OGDCL for variations, changes or additions to the Scope of Work shall be submitted to Contractor in writing, signed by OGDCL's Representative in the form of a written change request.

When PCC Contractor has received any written change request from OGDCL, which may involve a change in the Contract Price, Contractor shall, as soon as possible and before proceeding with the changes, advise OGDCL in writing to that effect, and obtain OGDCL approval. The price and program effects, if any occasioned by any such changes, shall be added to or deducted from the Contract Compensation as the case may be. The amount of such difference shall be determined in accordance with the prices/rates given in Price Schedule, Schedule of Prices/Rates for additional supply/work or on cost plus handling/service charges @ 05%. In case of cost plus basis all the required details shall be provided to OGDCL/Consultant so that the price reasonableness can be determined.

In all cases PCC Contractor shall furnish a breakdown in sufficient details to permit an analysis of all equipment/materials, labor, equipment, subcontracts and the estimated project time schedule overruns and under-runs covering all elements resulting in a change in the Contract Price or Project Execution Schedule.

Any changes or alterations ordered by OGDCL shall not in any way vitiate or invalidate the obligations of PCC Contractor under the Contract, unless expressly stated in the Change Orders.

After OGDCL has accepted all the consequences resulting from a change request, a Change Order shall be signed by both OGDCL & Contractor.

PCC Contractor shall make no additions, changes, alterations, omissions, perform no additional/extra work nor supply additional/extra equipment/materials of any kind, except when a prior approval of OGDCL in form of a Change Order has been obtained.

All additional payments for supply of equipment/material, required work or services under the provisions of this Article shall be embodied in a Change Order upon conditions specified therein which shall be signed by OGDCL and PCC Contractor, and such Change Orders shall be deemed to form part of the Contract and subject to all terms and conditions therein, unless otherwise clearly exempted in Change Order.

PCC Contractor shall proceed with additional/extra supply or work or changes after a Change Order has been signed. Until that time PCC Contractor shall proceed with the original work unless instructed by OGDCL/ Consultant to stop such work, which may be affected by the change request.

Change requests may also be initiated by PCC Contractor in which case it shall follow the same procedure as mentioned above after having been approved by OGDCL.

Notwithstanding the content of any Change Order by OGDCL the PCC Contractor shall use his best endeavors to complete the Project by the Completion date provided that if the PCC Contractor should by reason of such Change Order be unable to complete the Project by the Completion date he shall give notice in writing to OGDCL/Consultant.

27.0 **CONTRACT AMENDMENTS**

Change Orders may be carried out by the Contractor without an amendment to the Contract provided that the cumulative value of all Change Orders made hereof do not exceed 10% of the Contract Price. Before any work shall be performed under a Change Order the effect of which is that the cumulative value of all Change Orders made hereof would exceed 10% of the Contract Price OGDCL and the PCC Contractor shall sign an amendment to the Contract. Subsequently, if the value of change orders exceeds 10% of the contract price, OGDCL and the PCC Contractor shall sign a further amendment to the Contract.

28.0 **DISCLOSURE**

PCC Contractor hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GOP) through any corrupt business practices.

Without limiting the generality of the foregoing, PCC Contractor represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GOP, except that which has been expressly declared pursuant hereto.

PCC Contractor certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GOP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

PCC Contractor accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GOP under any law, contract or other instrument, be voidable at the option of GOP.

Notwithstanding any rights and remedies exercised by GOP in this regard, PCC Contractor agrees to indemnify GOP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GOP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by PCC Contractor as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GOP.

29.0 WORKS TO BE MEASURED

OGDCL/Consultant shall, except as otherwise stated, ascertain and determine by measurement the value in terms of the Contract of work done in accordance with the Contract. OGDCL/Consultant shall, when OGDCL/Consultant requires any part or parts of the works to be measured, give notice to the PCC Contractor's authorized representative, who shall forthwith attend or send a qualified agent to assist OGDCL/Consultant or their representatives in making such measurement, and shall furnish all particulars required by either of them. Should the PCC Contractor not attend, or neglect or omit to send such agent, then the measurement made by OGDCL/Consultant or approved by them shall be taken to be the correct measurement of the work. For the purpose of measuring such permanent work as is to be measured by records and drawings Consultant representatives shall prepare and update records and drawings on monthly basis of such work and the PCC Contractor, as and when called upon to do so in writing, shall, within fourteen days, attend to examine and agree such records and drawings with OGDCL/Consultant representatives and shall sign the same when so agreed.

30.0 STORAGE AND HANDLING FACILITIES

- a. The PCC Contractor shall be responsible for handling and storage of all equipment and material at Project Site at his own risk and cost. The PCC Contractor shall also be responsible for maintaining a proper warehouse at Project Site by employing a storekeeper to keep up to date record of the equipment/material issued & consumed. The PCC Contractor will have to submit a complete material balance/audit report after completion of the job.
- b. The PCC Contractor shall protect all equipment/materials against corrosion, mechanical damage or deterioration during storage and erection at the Site. The protection shall be to the approval of OGDCL/Consultant.
- c. Motors, valves, instruments, etc., shall be stored indoors in a Warehouse provided by PCC Contractor. Motor windings shall be kept dry by either the use of external heat, or energizing of the strip heaters in the motors.
- d. Bearings and other machined wearing surfaces of machinery shall be protected against corrosion, and shall be kept clean.
- e. Structural steel, miscellaneous steel, grating walkways, plate-work, cable trays, etc., shall be kept painted throughout the storage and erection period to prohibit rusting unless such items are galvanized or have other corrosion proof finish.
- f. Thermal insulation if used for the project shall be stored indoors, or otherwise protected against getting wet.

- g. The PCC Contractor shall always exercise due care and pre-caution and follow acceptable practices/procedures approved by Consultant during loading/un-loading, handling, transportation/ shifting and installation of equipment and material.

31.0 **UTILITIES FOR CONSTRUCTION**

The Utilities i.e. electric power, water, air etc. necessary for execution of Works will be arranged by the PCC Contractor. All expenditure and costs thereof shall be to the PCC Contractor's account.

32.0 **PAYMENT OF FEES**

The PCC Contractor shall obtain and pay for all permits, licenses or other privileges necessary in relation to the execution of the Work and abide by the rules and regulations of all public/government bodies and companies whose property or rights are affected or may be affected in any way by the Work. Certificates of which shall be delivered to OGDCL and will become the property of OGDCL.

33.0 **CARE OF FINISHED WORKS**

- a. The PCC Contractor shall at all times during the performance of the works be fully responsible for the care of the Work and of all Temporary Work.
- b. The PCC Contractor shall effectively protect his work from action of weather and from injury or defacement, and shall cover finished parts where required for their thorough protection. Finished work shall be left perfectly clean and free from defects.
- c. The PCC Contractor and/or his Sub-Contractors who are installing equipment, material, etc., shall be responsible for protecting work. Heavy planking shall be used when moving any cable and other buried structures. Metal rollers shall not be permitted.
- d. In the event of Phased Completion, the PCC Contractor shall be responsible for the due care of those parts of the Works not completed and shall where required provide fencing, security, separate access, additional lighting, so that the parts of the works completed may be used for the purposes for which they were designed without inconvenience to that use and the performance of the remaining works may be completed without undue interference.

34.0 **WITNESS TESTING & INSPECTION**

- a. OGDCL/ Consultant authorized representatives shall at all times have access to project site and all workshops facilities and places where project work is being carried out for purposes of expediting and inspection and the PCC Contractor shall afford every facility for and every assistance in or in obtaining the right to such access.
- b. OGDCL/ Consultant reserves the right to inspect performance of the work of the Contractor at project site and workshop faculties and places where project works is being carried out to ensure conformity with the Contract Documents. The PCC Contractor shall promptly rectify all such deficiencies or defects that are brought to the PCC Contractor's knowledge by Notice of OGDCL/ Consultant. OGDCL's/Consultant's inspection herein shall not relieve the PCC Contractor of any of its obligations under the Contract.
- c. The PCC Contractor shall regularly keep OGDCL/ Consultant fully informed of the progress of construction and the supply of equipment & materials by furnishing to OGDCL/ Consultant Bi-Monthly Schedules so as to permit OGDCL's/Consultant's inspection to be carried out in such manner as to minimize interference with the progress of the Work.

35.0 **EXAMINATION OF WORK BEFORE COVERING-UP**

No work shall be covered-up or put out of view without the approval of OGDCL/Consultant or their representatives and the PCC Contractor shall afford full opportunity for OGDCL's/ Consultant's representative to examine and measure any work which is about to be covered-up or put out of view. The PCC Contractor shall give due notice to OGDCL's/Consultant's representative whenever any such work is or are ready or about to be ready for examination and OGDCL's/Consultant's representative shall, without unreasonable delay, unless he considers it unnecessary and advises the PCC Contractor accordingly, attend for the purpose of examining and measuring such work or of examining such work.

36.0 **WORK AT SITE**

The PCC Contractor shall submit to OGDCL/ Consultant in due time for approval and discussion his proposals and plans as to the method and procedure to be adopted for the installation of the equipment and particulars of constructional equipment and temporary works involved.

The submitting of these suggestions and arrangements, and the approval thereof by OGDCL/ Consultant representatives shall not relieve the PCC Contractor of his responsibilities and duties under the Contract.

The PCC Contractor's representative on the site or his nominated deputy is to be given full responsibility to enter into negotiations regarding points arising from erection.

The carrying out of all work included in the Contract is to be supervised by a sufficient number of qualified representatives of the PCC Contractor and full facilities and assistance are to be afforded by the PCC Contractor for the Consultant or his representative to check the execution of the Work.

OGDCL/ Consultant reserves the right to inspect all parts of equipment in the works and/or site, but may at his discretion waive inspection on certain items, but he shall, in no way, absolve the PCC Contractor from his responsibilities. This particularly applies to the checking of materials, the accurate setting out of foundations, the plumbing of all stanchions and columns and to the leveling, setting and aligning of the various parts, and to the fitting and adjusting of bearings and other parts.

The PCC Contractor may be required to work on weekly & gazetted holidays without any extra compensation. The PCC Contractor may also be required to work on overtime or in two shifts depending on the workload without any extra compensation or obligation to OGDCL.

No claim by the PCC Contractor in terms of extra cost or compensation would be entertained due to temporary stoppages in the flow of work and subsequent idle labor & machine hours caused by observance of safety & security regulations.

In the event of night working, the PCC Contractor shall provide sufficient lighting and shall supply the necessary labor for the continuation of the work after normal hours.

The PCC Contractor, witnessed by OGDCL/ Consultant or it's representative, shall check the civil works and the electrical and mechanical connections to all equipment before such equipment is brought in to commission and shall be responsible for the correctness of such connections in accordance with Consultant's drawings and the Specifications.

37.0 **QUALITY OF MATERIALS & WORKMANSHIP AND TESTS**

All equipment/materials and workmanship shall be of the respective kinds described in the Contract and in accordance with OGDCL's/ Consultant's instructions and shall be subject from time to time to such tests as OGDCL/Consultant may direct at the place of manufacture or fabrication, or at Project Site or at such other place or places as may be specified in the Contract, or at all or any of such places.

The PCC Contractor shall provide inspection and testing equipment, instruments, machines, labor and material as are normally required for examining, measuring and testing any Works and for execution of various quality control tasks, mechanical, destructive, non-destructive tests, etc., as may be required by OGDCL/Consultant. The quality control tasks shall be performed by the PCC Contractor's competent personnel in accordance with a site testing and quality control programme to be established by the PCC Contractor and approved by OGDCL/Consultant or their representatives.

The PCC Contractor shall keep a complete record of all quality tests performed on site.

All quality controls and tests shall be carried out in accordance with applicable industry's standards and codes.

The cost of all tests provided in the Contract shall be borne by the PCC Contractor.

38.0 **WARRANTIES**

PCC Contractor warrants that the installation, erection and other Works shall be of good quality, free from faults or defects and shall perform so as to comply with the specifications contained in the contract documents or with any revisions thereof pursuant to any changes. PCC Contractor further warrants that all work performed under the Contract shall be in accordance with industry's recognized codes and standards.

The PCC Contractor further warrants that the required equipment/material supplied under the Contract shall be:

- a) Brand new, of good quality, free from all defects and having good title and for the use intended
- b) Conforms in all respect with the specifications and requirements given in the Contract.

The foregoing warranties shall remain valid for a period of twelve (12) months from the date of Provisional Acceptance Certificate.

If the supplied equipment & material installation/erection and related works fail to meet the warranty conditions set. OGDCL shall promptly notify the PCC Contractor in writing about the defects and claims under the warranty. Upon receipt of such notice the PCC Contractor shall within the time specified by OGDCL/Consultant repair/replace the defective equipment, material and or portion of works, with no cost or expense to OGDCL. The repaired or replaced equipment, material or works shall be warranted by PCC Contractor for twelve (12) months from the date of repair(s) or replacement(s).

If the PCC Contractor having been notified, fails to remedy the defect(s) within the specified time, OGDCL shall proceed to take remedial actions as may be necessary, at the PCC Contractor's risk and cost. All costs thereof shall be charged to the PCC Contractor or recovered from retention money/performance bond. The PCC Contractor shall have no objection to the above and he hereby acknowledges the rights of OGDCL to recover such sums as a debt due to OGDCL from defaulting PCC Contractor. It is understood that in this case the PCC Contractor shall not be relieved from the provided warranties and contractual obligations.

39.0 **DELAYS IN THE PCC CONTRACTOR'S PERFORMANCE**

Completion of required installation, pre-commissioning, commissioning, assistance shall be made by the PCC Contractor in accordance with the stipulated completion time specified in the Contract.

An unexcused delay by the PCC Contractor in performance of the Contract including delivery of equipment/material being supplied and timely completion of the Project shall render the PCC Contractor liable to any or all of the following sanctions:

- Forfeiture of its performance bond (bank guarantee)
- Imposition of liquidated damages
- Termination of contract for default
- Any other remedies available and action to be taken by OGDCL as per the terms of this Contract and applicable law.

40.0 **DEFAULT OF PCC CONTRACTOR IN COMPLIANCE**

In case of default on the part of the PCC Contractor in carrying out such order, OGDCL shall be entitled to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental thereto shall be recoverable from the PCC Contractor by OGDCL, or may be deducted by OGDCL from any payment due or which may become due to the PCC Contractor or by en-cashing performance bond.

41.0 **DAMAGE TO PERSONS AND PROPERTY**

The PCC Contractor shall, indemnify OGDCL against all losses and claims in respect of injuries or damage to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution of the Work under the Contract and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto.

The PCC Contractor shall indemnify OGDCL against all losses, claims and demand made by any third party/persons arising out in performance of its obligations under this Contract whether such claims, demands and actions are made while this Contract is in force or at any time after its execution or termination.

The PCC Contractor shall be responsible for similar indemnify for any sub contractors performing work under this directions.

42.0 **ACCIDENT OR INJURY TO WORKMEN**

The PCC Contractor shall indemnify and nor OGDCL shall be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other person in the employment of the PCC Contractor or any Sub-Contractor. The PCC Contractor shall indemnify and keep indemnified OGDCL against all such damages and compensation, and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

43.0 **INSURANCE & LIABILITIES**

After execution of contract, the PCC contractor will procure following insurance policies from **National Insurance Company Limited (NICL)** as soon as possible preferably before execution of work or supply of material. Such time for procurement of policies should however not exceed thirty (30) days from the date of execution of the contract.

- Construction All Risk Physical Damage Policy
- Third Part Liability Policy, AND
- Workmen Compensation Policy

Such insurances shall be evidenced by standard insurance policies in form and substance satisfactory to OGDCL and shall be issued by such insurance companies in respect of which consent of OGDCL has been obtained. A copy of each of the policies will be endorsed to OGDCL by the insurer.

Each policy shall name OGDCL as the insured. The PCC Contractor shall cause all such insurances to be maintained in full force and effect till commissioning and handover of the Project to OGDCL.

- **Construction All Risk Policy**

The PCC Contractor shall procure and maintain a construction (erection) all risk policy including sabotage and terrorism for sum assured value of not less than contract value. The policy will cover all physical loss or damage caused or done to permanent completed or in progress, construction, commissioning and performance testing phases of work with extended coverage for equipment/material stored at the Site and OGDCL's existing facilities (if any).

- **Third Party Liability Policy**

The PCC Contractor shall procure and maintain Third Party Liability Insurance for sum insured to cover any claim(s) arisen on account of death, injury and /or disease to persons (other than employees of the PCC Contractor), or loss or damage to any other party/ property out of/ in connection with/in the course of performance of the Contract.

- **Workmen Compensation Policy**

The PCC Contractor for itself and for its Sub-Contractors shall obtain insurance covering damages or compensation payable in respect of, or in consequence of any accident or injury resulting to any workman, or any other person, in the employment of the PCC Contractor or any of its Sub-Contractors, with an insurer approved, by OGDCL.

44.0 **ENGAGEMENT OF LABOR**

The PCC Contractor shall make his own arrangements for the engagement of all labor, transport, meals, etc., and payment thereof.

45.0 **FESTIVALS & RELIGIOUS CUSTOMS**

The PCC Contractor shall in all dealings with labor in his employment have due regard to all recognized festivals, days of rest and religious or other customs.

46.0 **DISORDERLY CONDUCT, ETC.**

The PCC Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his employees and for the preservation of peace and protection of persons and property in the neighborhood of the Work against the same.

47.0 SPARE PARTS

The PCC Contractor shall submit in the Bid OEM recommended list of spare parts on OEM Letterhead along with manufacturer's address required during two years of operation for the equipment/material supplied by it. In the event of termination of production of spare parts an advance notification should be given to OGDCL giving sufficient time enabling it to procure the required spare parts and following such termination, furnishing at no cost to OGDCL, the blue prints, drawings and specifications of the spare parts.

48.0 PCC CONTRACTOR TO KEEP SITE CLEAR

During the progress of the Work the PCC Contractor shall keep the Site reasonably free from all unnecessary obstruction and shall store or dispose of any Constructional Material and other materials and clear away and remove from the Site any wreckage, rubbish or Temporary Work no longer required.

49.0 REMOVAL OF IMPROPER WORK & MATERIALS

OGDCL/Consultant shall during the progress of the Work have power to order in writing from time to time:

- a) the removal from the Project Site, within such time or times as may be specified in the order, of any materials which, in the opinion of OGDCL/Consultant, are not in accordance with the Contract
- b) the substitution of proper and suitable materials and
- c) the removal and proper re-execution of any work which in respect of materials or workmanship is not, in the opinion of OGDCL/Consultant, in accordance with the Contract.

50.0 REMOVAL OF CONSTRUCTIONAL EQUIPMENT, ETC.

Upon completion of the Works the PCC Contractor shall remove from the Site all the said Constructional Plant and Temporary Work remaining thereon and any unused materials provided by the Contractor.

OGDCL shall not at any time liable for the loss or damage to any of the said construction plant and temporary works or materials.

51.0 **CLEARANCE OF SITE ON COMPLETION**

On the completion of the Project the PCC Contractor shall clear away and remove from the Site all Constructional Plant, surplus materials, rubbish and Temporary Work of every kind, and leave the whole of the Site and Work clean and in a workmen like condition at its own cost.

52.0 **MECHANICAL COMPLETION, INSPECTION & TESTING**

- a. All equipment and material installed under this Contract shall be subject to test or inspection in accordance with relevant clauses of the Specifications. For the vendor supplied equipment required arrangements for checking, testing and commissioning will be made by OGDCL/Consultant.
- b. After completion/ installation of, and before being put into operation, the piping and the equipment shall be thoroughly cleaned and then inspected under the supervision of OGDCL/Consultant for correctness and completeness of installation and acceptability for placing in operation.
- c. The time consumed in the inspection and checking of the units shall be considered as a part of the erection and installation period.
- d. The PCC Contractor shall arrange for necessary inspection and testing of the works performed by the PCC Contractor upon its installation thereof in accordance with the Tender Documents.
- e. The PCC Contractor shall maintain adequate record of all tests carried out and their results thereof and make the same available to OGDCL/Consultant. The PCC Contractor shall remedy promptly any defects or deficiencies, which appear as a result of such inspection and tests, on his supply and workmanship entirely at his own cost and responsibility.
- f. PCC Contractor shall prepare the piping and allied facilities for operation which will include but not limited to the following tests:
 - Cleaning of all lines and equipment of loose material by flushing or blowing and performing any other cleaning as may be required.
 - Clean-out and boxing-up of all pressure vessels including installation of internals such as filter elements, etc.

- Hydrostatic, pneumatic and other field testing (weld radiography, coat and wrap, quality, etc.) of the pipelines and equipment as required.
- Alignment, lubrication and running tests of pumps/drives and operational tests of all types of valves.

53.0 **MECHANICAL ACCEPTANCE**

PCC Contractor shall prepare project for operation, which will include but not be limited to the following:

- a) Hydrostatic, testing of piping, equipment, etc. as required in the Contract Documents.
- b) Running tests of drivers, blowers, pumps and operational tests of all types of valves, etc.
- d) Radiography of all piping.
- e) Stress relieving of all piping where applicable/required as per API Code.
- f) Short duration operations with air on all compressors in accordance with Vendor's instructions.
- g) Pump operation with water circulation.
- h) After hot operation, rechecking the alignment and, if necessary, re-aligning all rotaries (with drivers) and hot checking the drivers related to pumps and compressors.
- i) Cleaning all lines of loose materials by flushing or blowing and performance of any other special cleaning as may be required in these specifications.
- j) Placement of all blinds in position for operation.
- k) Installation of orifice plates after hydrostatic tests.
- l) Installation of relief valves
- m) Thermo-couple connection and checking out.
- n) Cleaning out and boxing-up of all exchangers and pressure vessels.
- o) Preparation to meet safety requirements.

The PCC Contractor shall also be required to complete and thoroughly clean-up the operating facilities which shall include all painting, removal of all temporary works and general site clean-up in accordance with the Contract.

Pursuant to the mechanical completion of the work, the PCC Contractor shall, in the presence of OGDCL's/Consultant's representatives, provide services to successfully complete the operability tests to establish that the equipment and packages is in proper operating conditions and free from leaks, defects and deficiencies.

54.0 **COMMISSIONING**

The PCC Contractor shall be responsible for carrying out commissioning and testing of work.

55.0 **ACCEPTANCE CERTIFICATES**

a. **Mechanical Acceptance Certificate**

When whole of the Work have been completed mechanically & have satisfactorily passed the mechanical completion, inspection & testing and mechanical acceptance as that prescribed in relevant of the conditions of the contract, the PCC Contractor may request OGDCL/Consultant to issue mechanical acceptance certificate. The format of Mechanical Acceptance Certificate is enclosed in **Attachment-II**.

b. **Provisional Acceptance Certificate**

When all the equipment and packages has been commissioned and construction equipment (if any) have been removed as per Article of the Conditions of Contract and performance test have been performed successfully, the PCC Contractor may request OGDCL/Consultant to issue Provisional Acceptance Certificate. The format of Provisional Acceptance Certificate is enclosed in **Attachment-III**.

c. **Final Acceptance Certificate**

When the equipment and packages has remained in operation for twelve (12) months from the date of Provisional Acceptance Certificate the PCC Contractor may request OGDCL/Consultant to issue Final Acceptance Certificate. The format of Final Acceptance Certificate is enclosed in **Attachment-IV**.

56.0 **COMPLIANCE & COMPLETION CERTIFICATES**

The Project/Contract shall not be considered as completed until final acceptance certificate, compliance and completion certificate has been issued by OGDCL to the Contractor **Attachment-V & VI**.

57.0 FINAL PAYMENT DOCUMENTS

The Contractor shall execute and deliver to OGDCL the following documents before release of performance bank guarantee:

- a) Final acceptance Certificate
- b) Certificate of Completion
- c) Certificate of Compliance
- d) Undertaking

Blank Forms of these are given in **Attachment-IV, V, VI and VII** respectively.

58.0 TITLE

Title of equipment and facilities furnished by PCC Contractor or its Sub-Contractors under the Contract shall pass to OGDCL on the date the project is completed.

59.0 WITHHOLDING PAYMENT

- a. OGDCL may withhold the whole or part of any payment claimed by the PCC Contractor, which in the opinion of OGDCL is necessary to protect himself from loss on account of:
 - 1) Defective equipment and material not replaced/repaired or remedied.
 - 2) Warranties/Guarantees not met.
 - 3) Claims filed against PCC Contractor.
 - 4) Failure of PCC Contractor to make payments due for materials or labour employed by him.
 - 5) Damages to other PCC Contractor (if any).
 - 6) PCC Contractor's non-compliance with the provisions of the Contract.
- b. When the conditions for withholding the payment are removed, payments of the amount due to the PCC Contractor will be made by OGDCL without delay.

60.0 LIENS

The PCC Contractor for himself and for any persons directly or indirectly responsible to him, and for his or their material equipment and employees, and for all other persons performing any labor or furnishing any labor or materials for any of the work covered by his contracts, will be required to release or waive, to the full extent permitted by law, all liens, for or on account of the work done or equipment and materials furnished hereunder, and the improvement or structures wherein some may be incorporated, and the land to which they are appurtenant shall at all times and clear of all such liens.

61.0 SUSPENSION OF WORK

PCC Contractor shall, on the written order of OGDCL, suspend the progress of the engineering, procurement (supply), construction and commissioning works or any part thereof for such time or times and in such manner as OGDCL may consider necessary and shall during such suspension properly protect and secure the Works, so far as is necessary in the opinion of OGDCL.

PCC Contractor shall not be entitled for any extra cost for such suspension up to a maximum period of forty five (45) days. This period may be in one or more suspensions.

In case the suspension period exceeds forty five (45) days, then the PCC Contractor may claim, if he gives notice in writing of his intention to OGDCL within seven (7) days of expiry of forty five (45) days suspension period. The PCC Contractor can claim the cost of his permanent employees and hired equipment only employed on the Project Site. Charges for daily paid workers and PCC Contractors own equipment will not be paid. OGDCL will verify the claims for payments to be made to the PCC Contractor in this respect.

62.0 TERMINATION OF DEFAULT

OGDCL shall have the right to terminate the Contract if the PCC Contractor.

- a) Does not mobilize and/or commence execution of the Contract/Order within the agreed date(s).
- b) Stops work during the execution of the Contract/Order.
- c) Fails to supply sufficient and/or adequate construction equipment, temporary works, labor, materials or satisfactory performance and delays in the progress of work.
- d) Becomes bankrupt or insolvent.

- e) Has judiciary liquidation filled by/or against him, and the PCC Contractor does not have the right to continue his industrial activities.
- f) Fails to fulfill any of his obligations as defined in the Contract Documents.

OGDCL shall have the right to notify deadline to be met by the PCC Contractor. Should the PCC Contractor not reply within 7 days to the above notification, or in case that the reply is not found satisfactory, OGDCL would be entitled to terminate this Contract. OGDCL shall then give notice of termination, and thereupon, OGDCL shall have the right to take over the performance of the Works, take possession of the engineering drawings and data and all materials and stocks located at the Site, and to complete the Works in any manner OGDCL deems fit, and to use of cause to be used for that purpose the temporary works and equipment of PCC Contractor located at the Project Site.

In the event of such termination, after all works, services, deliveries, etc., effected by PCC Contractor under this Contract have been stated and recorded, OGDCL will be entitled to withhold any further payments due to PCC Contractor under this Contract. At the time of termination, OGDCL and PCC Contractor shall determine by mutual agreement the amount, if any, of damages suffered by OGDCL, and the amount to which PCC Contractor is entitled for his performance of the work upto the date of such termination.

Termination of the Contract shall not relieve PCC Contractor of any of its obligations to make repairs and replacements with respect to any workmanship, material, equipment, part or item incorporated in the Works prior to such termination, nor shall termination relieve PCC Contractor of any its obligations under any other provision of the Contract with respect to the Works performed by PCC Contractor prior to such termination.

The defaulting PCC Contractor shall also be liable for all costs and expenses incurred, including those of cleaning the site and removal of PCC Contractor's equipment and material if required by OGDCL, because of the default and, the PCC Contractor shall fully indemnify OGDCL.

63.0 **TERMINATION FOR CONVENIENCE**

- a. OGDCL may, by written notice to the PCC Contractor, terminate the Contract, in whole or in part, at any time at its convenience. The action of termination shall specify that the termination is for the convenience of OGDCL, the extent to which performance of Works under the Contract is terminated, and the date upon which such termination becomes effective.

- b. The Works and equipment/material that are complete and ready for delivery within 15days after receipt of notice of termination by the PCC Contractor, shall be accepted by OGDCL, at the Contract terms and prices. For the remaining works/equipment & material OGDCL may elect:
 - i) to have any portion completed or delivered at the Contract terms and prices and/or
 - ii) to cancel the remainder and pay to the PCC Contractor an agreed amount for partially completed works and for materials previously procured by the PCC Contractor, which will become property of OGDCL.

64.0 **FORCE MAJEURE**

- a. In the event of either party hereto being rendered unable, wholly or in part, by Force Majeure Circumstances to carry out its obligations under the Contract Documents, then on such party giving notice and full particulars and other satisfactory evidence of such Force Majeure circumstance(s) relied upon the obligations of the party giving such notice so far as they are affected by such Force Majeure shall be suspended for the period during which the party, is rendered unable as aforesaid, but for no longer period, and such cause(s) shall, as far as possible, be remedied and obviated with all reasonable dispatch. The term 'Force Majeure' as employed therein, shall mean Acts of God or public enemy, civil insurrection, fires, floods earthquakes or other physical disasters, order or request of Government, blockade or embargo, acts of terrorism and mobs attacks etc. It is, however, clarified that strikes, lockouts, shortage or non availability of raw materials, rains disturbances, other labour disputes or congestion ports on the PCC Contractors side shall not be included in the term 'Force Majeure'. During the period of established Force Majeure as contained herein above, neither PCC Contractors would be entitled for payment nor OGDCL/ Consultant would impose penalty as required under this Contract.
- b. In case the Force Majeure contingencies last continuously for more than fifteen days, both parties will agree on the necessary arrangements for the further implementation of the Contract. In case further implementation is unforeseeable and impossible, both parties shall arrange for the termination of the Contract, but without prejudice to their rights and obligations prior to such termination it being understood that each party shall fulfill their contractual obligations so far as they have fallen due before the operation of Force Majeure.
- c. In case of Force Majeure no idle time claim will be paid by OGDCL to the PCC Contractor for what so ever reason.

65.0 ARBITRATION

- a. If any dispute or difference of any kind whatsoever shall arise between OGDCL and the PCC Contractor in connection with, or arising out of the Contract, or the execution of the works, whether during the progress of the works or after their completion and whether before or after the termination, abandonment or breach of the Contract, it shall, in the first place, be referred to and settled by OGDCL who shall, give written notice of his decision to the PCC Contractor. Subject to arbitration, as hereinafter provided, such decision in respect of every matter so referred shall be final and binding upon the PCC Contractor and shall forthwith be given effect to by the PCC Contractor, who shall proceed with the execution of the Works with all due diligence whether he requires arbitration, as hereinafter provided, or not. If OGDCL has given written notice of his decision to the PCC Contractor and no claim to arbitration has been communicated to him by the PCC Contractor within a period of thirty days from receipt of such notice, the said decision shall remain final and binding upon the PCC Contractor. If OGDCL fails to give notice of his decision, as aforesaid, within a period of thirty days after being requested as aforesaid, or if the PCC Contractor be dissatisfied with any such decision, then and in any such case or within thirty days after the expiration of the first-named period of thirty days, as the case may be require that the matter or matters in dispute be referred to arbitration as hereinafter provided.
- b. All disputes or differences in respect of which the decision, if any, of OGDCL has not become final and binding as aforesaid shall be finally referred to two Arbitrators, one to be appointed by each party or in the event of the Arbitrators not agreeing to an umpire to be appointed by Arbitrators before entering upon the reference, who shall proceed to arbitrate in accordance with the provisions of the Pakistan Arbitration Act 1940 and rules hereunder any statutory amendment in that behalf for the time being in force and the award made by the Arbitrators or the umpire as the case be, shall be final and binding on both the parties Arbitration proceeding shall be conducted in the English Language.
- c. PCC Contractor shall continue to execute his work with full speed during the pending of the Arbitration proceedings. However, OGDCL shall have the power to order the PCC Contractor in writing to stop the work in full or in part if considered necessary.

66.0 JURISDICTION

The venue of Arbitration proceedings shall be Islamabad, Arbitration shall be governed under Arbitration Act. 1940. Expenses of Arbitration shall be borne equally by the parties.

The Agreement and any interpretation and construction thereof including Arbitration proceedings shall be subject to and governed by the laws of Pakistan.

67.0 SERVICE OF NOTICES TO PCC CONTRACTOR

All certificates, notices or written orders to be given by OGDCL or by Consultant to the PCC Contractor under the terms of the Contract shall be served by sending by post to or delivering the same to the PCC Contractor's principal place of business, or such other address as the PCC Contractor shall nominate for this purpose.

The Address and contact details of PCC Contractor are;

68.0 SERVICE OF NOTICES TO OGDCL/CONSULTANT

All notices to be given to OGDCL or to the Consultant under the terms of the Contract shall be served by sending by post or delivering the same to the respective addresses nominated for that purpose.

The Address and contact details of OGDCL are;

69.0 EFFECTIVE DATE OF CONTRACT

This Contract shall become effective upon the date after formal execution of the Contract by the duly authorized representatives of OGDCL and PCC Contractor provided that all of the following conditions have been fulfilled:

- a) The submission of the Performance Bond by the PCC Contractor to OGDCL.
- b) The payment of the Mobilization Advance by OGDCL to PCC Contractor, the same to be secured by the Mobilization Advance Payment Guarantee(s) to be simultaneously furnished by PCC Contractor to OGDCL pursuant to Article 21 of Conditions of Contract.

- c) The confirmation, by PCC Contractor to OGDCL, in form and substance satisfactory to OGDCL, that PCC Contractor has put into force and effect such of the policies of insurance specified in Article 43.0 of Conditions of Contract.
- d) Effective time of Project Eight (08) months project completion time line shall start from the supply L/C establishment date without any exception and irrespective of article b & c.

After conditions specified in Article 69.1 have been fulfilled and OGDCL gives written advice to PCC Contractor to proceed ahead with the Work the PCC Contractor shall diligently commence execution of the Work forthwith and shall proceed with the same with due expedition and without delay in accordance with the terms of this Contract.

70.0 **APPLICABLE LAW**

- a. This Contract or any amendment thereto shall be construed, interpreted and governed by the Laws of Islamic Republic of Pakistan.
- b. Applicable laws mean all laws, treaties, regulations, standards, decrees, rules, decisions, judgments, order, injunction, authorizations, directives, permits, licenses or authorizations applicable to the performance of the Works in accordance with the Contract and issued by or adopted by an Governmental Authority having jurisdiction over the matter in question and which are in effect at the time in question and, for the avoidance of doubt, includes compliance with the requirements of the Environmental Impact Assessment, environmental laws, regulations, codes, standards etc and policies of the Federal Government, Provincial Governments and Local Bodies of Pakistan.

ANNEXURE – A

BOQs/BID PRICE SCHEDULE

OIL & GAS DEVELOPMENT COMPANY LTD.
BID PRICE SCHEDULE SUMMARY FOR PCC CONTRACTOR

S.NO.	DESCRIPTION	QTY.	UNIT	SUPPLY		SERVICES		Total Price (In Pak. Rs.)
				Unit Price (Pak.Rs.)	Total Price (Pak.Rs.)	Unit Price (Pak.Rs.)	Total Price (Pak.Rs.)	
					A		B		C= A+B
1.0	MECHANICAL / FIRE FIGHTING EQUIPMENT / COMPANY SUPPLIED EQUIPMENT AND PACKAGES WORKS							
	Refer to Attachment - 1							
2.0	PIPING WORKS							
	Refer to Attachment - 2							
3.0	ELECTRICAL WORKS							
	Refer to Attachment - 3							
4.0	INSTRUMENTATION WORKS							
	Refer to Attachment - 4							
5.0	CIVIL & STRUCTURAL WORKS			-	-			
	Refer to Attachment - 5							
	GRAND TOTAL							

NOTES:

- (1) Copy of the SRO 678 (1)/2007 is given in **Annexure-XIX**
- (2) The charges shall be supported by verified quotation of Inspection Agency.

PREAMBLE TO BILL OF QUANTITIES

PREAMBLE TO BILL OF QUANTITIES

1. The items mentioned in the Bill of Quantities consist of furnishing all plant, labour, equipment, machinery, consumables and materials for completing the entire work scope. The work shall be done, complete in all respects in accordance with Specifications and Drawings within the stipulated time frame.
2. The Contractor shall be responsible for carrying out all work, complete in all respects, in accordance with the drawings, specifications and other conditions of contract without extra cost to the Owner. Any item of work required for completion but not expressly indicated in the Bill of Quantities shall be deemed to have been included in the unit rates quoted by the Contractor.
3. The Quantities contained in the Bill of Quantities for each work are estimated and liable to change (increase, decrease or omitted) when the work is actually executed. The Owner does not expressly or by implication guarantee that actual quantities of work to be performed will correspond to BOQ quantities. The payment to be made to the Contractor shall be based on the actual quantity of work performed.
4. The prices and rates to be quoted in the Bill of Quantities are to be full inclusive value of the Works described under specified items including all costs and expenses which may be required in and for the construction of the Works described, together with all risks, liabilities and obligations set forth and implied in all the documents referred to on which the tender is based. Rates and prices quoted by bidder shall be firm for the duration of the Contract. No extra payments on account of escalation in prices due to any reason, whatsoever, shall be admissible, unless specified elsewhere.
5. Unit rate is to be entered against each item in the Bill of Quantities where quantities are non entered. Items against which no price or rate is quoted in the BOQ shall be deemed to have been covered by rates or prices quoted in other BOQ items.
6. The BOQ shall be read in conjunction with conditions of contract, technical specification and the drawings.
7. The nomenclature used in BOQ is for identification of work only and is not intended to describe the complete work under that item which should be developed from Drawings, Specifications, Scope of Work and Conditions of Contract.
8. The contractor shall be responsible for arranging electricity and potable water for construction purposes at his own cost, inclusive of safety and security of the manpower, site Material, Transportation, handling and storage etc.
9. The works are to be carried out on a fast track basis therefore it is essential that the contractor shall be prepared to execute the work round the clock including Sundays and Holidays.
10. Any surplus or scrap materials remaining after the execution of work shall be reconciled and handed over to the Owner.

ATTACHMENT - 1



Zishan Engineers (Pvt.) Ltd.

An ISO 9001-2015 certified company,
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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES



Rev.	Date	Description	Prepared By	Checked By	Approved By
0	6/4/2018	Issued for Tender	MAS	MIAH	SH

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	INSTRUMENT AIR PACKAGE														
1.1	SUPPLY OF MATERIAL, FABRICATION, INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF INSTRUMENT AIR RECEIVER VESSEL (3000-V330B) AS PER REFERENCE DOCUMENTS AND APPLICABLE STANDARDS COMPLETE IN ALL RESPECT. REFERENCE DOCUMENTS : 165-2-DSM-114 165-2-MPV-101	1	NOS.												WEIGHTS GIVEN ARE APPROXIMATE AND FOR BIDDING PURPOSE ONLY. FINAL WEIGHTS WILL BE PROVIDED WITH "ISSUED FOR CONSTRUCTION" DRAWINGS TO THE SUCCESSFUL BIDDER
1.2	INSTALLATION, TESTING, CLEANING AND COMMISSIONING OF INSTRUMENT AIR PACKAGE IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS, RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECT. REFERENCE DOCUMENTS : 165-2-PID-107 SEE VENDOR'S DATA FOR INSTRUMENT AIR SYSTEM IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.	1	L.S												INSTRUMENT AIR SYSTEM IS FREE ISSUED ITEM EXCEPT 3000-V330B INSTRUMENT AIR RECEIVER VESSEL WHICH IS IN CONTRACTOR'S SCOPE AND INSTALLATION OF COMPLETE INSTRUMENT AIR PACKAGE IS CONTRACTOR'S RESPONSIBILITY.
2.0	GAS ENGINE DRIVEN RECIPROCATING COMPRESSOR PACKAGE														
2.1	INSTALLATION, TESTING AND COMMISSIONING ASSISTANCE OF COMPRESSORS AS PER THE DOCUMENTS REFERENCE DOCUMENTS : SEE VENDOR'S DATA FOR GAS ENGINE DRIVEN RECIPROCATING COMPRESSOR PACKAGE IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.	3	NOS.												
3.0	TANKAGE														
3.1	FIRE WATER TANK T-3501 SUPPLY OF MATERIAL, FABRICATION, WELDING, INSTALLATION, TESTING, CLEANING, BOX-UP AND COMMISSIONING OF 1 NO. 12.190 m DIA. X 13.000 m Height FIRE WATER TANK (T-3501), IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS, RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECT. THE WORKS INCLUDE THE FOLLOWING: REFERENCE DOCUMENTS : 165-2-PID-109 (SHEET 2 OF 4) 165-2-MST-3501 165-2-DSM-110														THE RATES OF ITEM B (ALL PARTS), F (ALL PARTS) & D IN S.NO. 1.1.1 SHALL BE INCLUSIVE OF SURFACE PREPARATION & PAINTING AS PER PAINTING SPECIFICATION. WEIGHTS GIVEN ARE APPROXIMATE AND FOR BIDDING PURPOSE ONLY. FINAL WEIGHTS WILL BE PROVIDED WITH "ISSUED FOR CONSTRUCTION" DRAWINGS TO THE SUCCESSFUL BIDDER
a)	ROOF PLATES	6,731	KG.												
b)	ROOF STRUCTURE	4,271	KG.												
c)	SHELL PLATES	27,823	KG.												
d)	CURB ANGLE	349	KG.												
e)	BOTTOM PLATES	10,327	KG.												
f)	TANK NOZZLES AND APPURTENANCES INCLUDING THE FOLLOWING:	3,207	KG.												
i)	SHELL AND ROOF MANHOLES														
ii)	SHELL AND ROOF NOZZLES														
iii)	PRODUCT DRAW-OFF WITH INTERNAL PIPES & NAME PLATE														
g)	SPIRAL STAIRCASE AND HAND RAIL	1,692	KG.												
	SUB TOTAL FOR T-3501	54,400	KG												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
3.2	DIESEL DAY TANK (T-4001) SUPPLY OF MATERIAL, FABRICATION, WELDING, INSTALLATION, TESTING, CLEANING, BOX-UP AND COMMISSIONING OF 1 NO. 2.788 m LENGTH x 1.738 m WIDTH x 1.834 m HEIGHT DIESEL DAY TANK (T-4001), IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS, RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECT. THE WORKS INCLUDE THE FOLLOWING: REFERENCE DOCUMENTS : 165-2-PID-108 165-2-MST-4001 165-2-DSM-113														THE RATES OF ITEMS STIFFENER, LADDER PLATFORM MATERIAL, NOZZLES & APPURTENANCES (all parts) , CURB ANGLE SHALL BE INCLUSIVE OF SURFACE PREPARATION & PAINTING AS PER PAINTING SPECIFICATION. WEIGHTS GIVEN ARE APPROXIMATE AND FOR BIDDING PURPOSE ONLY. FINAL WEIGHTS WILL BE PROVIDED WITH "ISSUED FOR CONSTRUCTION" DRAWINGS TO THE SUCCESSFUL BIDDER
a)	ROOF PLATES	484	KG.												
b)	SHELL PLATES	1,574	KG.												
c)	CURB ANGLE	102	KG.												
d)	BOTTOM PLATES	533	KG.												
e)	STIFFENER ANGLE	409	KG.												
f)	SUPPORTED BEAM	195	KG.												
g)	TANK NOZZLES AND APPURTENANCES INCLUDING THE FOLLOWING:	279	KG.												
i)	SHELL AND ROOF MANHOLES														
ii)	SHELL AND ROOF NOZZLES														
iii)	PRODUCT DRAW-OFF WITH INTERNAL PIPES														
iv)	NAME PLATE														
h)	LADDER, PLATFORM AND HAND RAIL	74	KG.												
	SUB TOTAL FOR T-4001	3,650	KG												
3.3	SUPPLY OF ALL MATERIALS, INSTALLATION AND TESTING OF FLOAT TYPE LEVEL INDICATOR FOR FOLLOWING TANKS, COMPLETE IN ALL RESPECTS AS PER RELEVANT DOCUMENT: REFERENCE DOCUMENTS : 165-2-DSI-005														
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												
3.4	VACUUM BOX TESTING OF BOTTOM FOR THE FOLLOWING TANKS:														
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												
3.5	HYDROSTATIC TESTING OF FOLLOWING TANKS:														
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

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BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
3.6	CALIBRATION OF FOLLOWING TANKS : (USING OPTICAL LINE METHOD). (WITH APPROVAL FROM PWD)														CONTRACTOR TO SUBMIT PROCEDURE FOR APPROVAL FROM THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR GETTING NECESSARY APPROVALS FROM PWD AND RELEVANT DEPARTMENTS. CALIBRATION SHALL BE PERFORMED BY REPUTABLE THIRD PARTY AGENCY PREFERABLY SGS. ANY OTHER AGENCY NOMINATED FOR CALLIBRATION SHALL FIRST BE APPROVED FROM OWNER. CHARGES OF THIRD PARTY AGENCY SHALL BE AT CONTRACTOR'S EXPENSE
a)	12.190 m DIA. x 13.000 m HEIGHT	1	NOS.												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT	1	NOS.												
3.7	SUPPLY OF ALL MATERIALS, SURFACE PREPARATION BY SAND BLASTING TO S.A. 2 1/2 AND PAINTING OF TANKS WHICH INCLUDES 2 COATS OF RED OXIDE (LEAD FREE) PRIMER (40-45 MICRONS EACH) FOLLOWED BY TWO COATS OF ALKYD ENAMEL (20-25 MICRONS EACH) GIVING A TOTAL DRY FILM THICKNESS (DFT) OF 125 MICRONS MINIMUM ON EXTERNAL SURFACES (INCLUDING ALL NOZZLES ETC.) OF THE FOLLOWING TANK ACCORDING TO SPECIFICATIONS AND TO THE ENTIRE SATISFACTION OF THE OWNER'S REPRESENTATIVE.														FOR DETAIL SEE SPECIFICATION 165-2-SPM-013
a)	12.190 m DIA. x 13.000 m HEIGHT (1 NO.S)	650	SQ.M												
b)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT (1 Nos.)	32	SQ.M												
3.8	SUPPLY OF ALL MATERIALS, SURFACE PREPARATION BY SAND BLASTING TO S.A. 2 1/2 AND APPLICATION OF 3 COATS OF COALTAR EPOXY (125 MICRONS EACH) GIVING A TOTAL DRY FILM THICKNESS OF 375 MICRONS. ON UNDER SIDE OF BOTTOM PLATES AND INTERNAL PAINTING ON INSIDE OF TANK SHELL HEIGHT FOR THE FIRE WATER TANK.														FOR DETAIL SEE SPECIFICATION 165-2-SPM-013
a)	12.190 m DIA. x 13.000 m HEIGHT (1 NO.S)	175	SQ.M												
3.9	SUPPLY OF ALL MATERIALS, SURFACE PREPARATION BY SAND BLASTING TO S.A. 2 1/2 AND APPLICATION OF 3 COATS OF EPOXY ULTRABUILD LINER (125 MICRONS EACH) GIVING A TOTAL DRY FILM THICKNESS OF 375 MICRONS. ON UNDER SIDE OF BOTTOM PLATES AND INTERNAL PAINTING ON 1 METER OF SHELL HEIGHT FOR THE FOLLOWING TANK														ONLY FOR RATES
a)	2.788 M LENGTH X 1.738 M WIDTH x 1.834 M HEIGHT (1 Nos.)	25	SQ.M												
3.10	DESIGN, SUPPLY OF ALL MATERIALS, INSTALLATION, TESTING AND COMMISSIONING OF CATHODIC PROTECTION SYSTEM , AS PER RELEVANT CODES AND SPECIFICATIONS. (REF. SPEC. NO. 165-2-SPE-026)	-	NOS.												
4.0	<u>FIREWATER & FIREFIGHTING SYSTEM</u> THE SUPPLIED FIRE WATER EQUIPMENT SHALL COMPLY WITH THE FOLLOWING DOCUMENTS ATTACHED. ANY DEVIATION SHALL BE CLEARLY HIGHLIGHTED & JUSTIFIED BY THE SUPPLIER. REFERENCE DRAWING NO.S: 165-2-PID-109 (FIRE WATER SYSTEM) 165-2-MPD-001 (TYPICAL DETAILS OF FIRE HYDRANT AND MONITOR) REFERENCE DATA SHEETS & SPECIFICATIONS 165-2-SPM-035 (SPECIFICATION FOR FIRE FIGHTING SYSTEM). 165-2-SPM-040 (SPECIFICATION FOR FIRE TRUCK). 165-2-SPM-041 (SPECIFICATION FOR MOBILE FOAM UNITS). 165-2-DSM-111 (DATA SHEET FOR FIRE HYDRANTS). 165-2-DSM-112 (DATA SHEET FOR FIRE MONITORS).														

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
4.1	FIRE WATER HYDRANTS: SUPPLY & INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF FIREWATER HYDRANTS AS PER DATA SHEET NO. 165-2-DSM-111.	12	NOS.												
4.2	FIRE FOAM MONITORS: SUPPLY & INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF FIRE FOAM MONITORS AS PER DATA SHEET NO. 165-2-DSM-112.	13	NOS.												
4.3	MOBILE FOAM UNITS: SUPPLY & INSTALLATION, ERECTION, TESTING, PLACEMENT AND COMMISSIONING OF TROLLEY MOUNTED MOBILE FOAM UNITS AS PER SPECIFICATION 165-2-SPM-041.	8	NOS.												
4.4	FIXED FOAM UNITS FOR STORAGE TANKS: SUPPLY & INSTALLATION OF SKID BASED FIXED FOAM UNITS WITH BLADDER TANK, PROPORTIONATER, PIPING, INSTRUMENTATION ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												
4.5	FOAM POURER / CHAMBER FOR TANKS: SUPPLY & INSTALLATION OF 4" 150#, RF FOAM POURER ASSEMBLY AND NOZZLE AND PIPING CLEATS AND ALL REQUIRED TESTING AS PER API-653 FOR FOLLOWING TANKS, IN ACCORDANCE WITH RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECTS AS PER SITE CONDITION REFERENCE DOCUMENT: 165-2-DSM-115 165-2-MST-003 165-2-MST-004														
a)	13.716 m DIA. x 9.010 m HEIGHT	6	NOS.												
b)	18.288 m DIA x 12.192 m HEIGHT	2	NOS.												
4.6	COOLING WATER SPRAY SYSTEM FOR TANKS: SUPPLY & INSTALLATION OF COOLING WATER SPRAY SYSTEM & ALL REQUIRED TESTING AS PER API-653 FOR FOLLOWING TANKS, IN ACCORDANCE WITH RELEVANT STANDARDS AND AS DIRECTED BY OWNER'S REPRESENTATIVE, COMPLETE IN ALL RESPECTS AS PER SITE CONDITION REFERENCE DOCUMENT: 165-2-MST-001 165-2-MST-002														
a)	13.716 m DIA. x 9.010 m HEIGHT	6	NOS.												
b)	18.288 m DIA x 12.192 m HEIGHT	2	NOS.												
4.7	HOSE CABINET: SUPPLY & INSTALLATION OF FIRE HOSE CABINETS, FLOOR STANDING TYPE, MIN. 4' x 4' x 10' , FABRICATED FROM 16 SWG SHEET, CAPABLE OF HOLDING: a) 2 NOS. HOSE REELS 2-1/2" ND x 30M LONG. b) 1NO. FOAM MAKING BRANCH WITH PICK-UP TUBE c) 1NO. TRIPLE PURPOSE NOZZLE.	8	NOS.												
4.8	HOSE REEL: SUPPLY & INSTALLATION OF FIRE HOSE REELS OF 2-1/2" ND x 30 M LONG, WITH EXPANSION RING TYPE COUPLING MALE AND FEMALE TYPE ON EACH END RESPECTIVELY. HOSE TO BE NEOPRENE LINED AND COVERED WITH AN OIL ABRASIVE RESISTANT NEOPRANE OR PLASTIC COATING, HOSE SHALL BE SUITABLE FOR 200 PSIG PRESSURE.	16	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
4.9	BRANCH PIPE: SUPPLY & INSTALLATION, PLACEMENT OF SELF INDUCTING FOAM MAKING BRANCH PIPE RATED AT 50GPM AT 7 BARG HYDRANT PRESSURE WITH A THROW OF 40M SUITABLE FOR CONNECTION WITH 2-1/2" DIA. QUICK/INSTANEOUS TYPE COUPLING.	8	NOS.												
4.10	TRIPLE PURPOSE NOZZLE: SUPPLY & INSTALLATION OF TRIPLE PURPOSE NOZZLE FOR JET SPRAY AND FOG, RATED AT 80M3/HR. AT 7 BARG AND THROW OF 40M, SUITABLE FOR 2-1/2" DIA. QUICK/INSTANEOUS TYPE COUPLING.	8	NOS.												
4.11	FIRE EXTINGUISHERS														
4.11.1	SUPPLY & INSTALLATION AND PLACEMENT OF PORTABLE FIRE EXTINGUISHERS ABC, DRY CHEMICAL, NIPPON PAN-20 SD OR EQUIVALENT, POWDER TYPE COMPLETE WITH ALL ACCESSORIES & INITIAL CHARGE IN FOLLOWING CAPACITIES: 6 Kg.	5	NOS.												
4.11.2	SUPPLY & NSTALLATION AND PLACEMENT OF PORTABLE FIRE EXTINGUISHERS, CO2, NIPPON NC-7 OR EQUIVALENT, COMPLETE WITH ALL ACCESSORIES AND INITIAL CHARGE IN FOLLOWING CAPACITIES: 5 Kg.	5	NOS.												
4.11.3	SUPPLY & INSTALLATION AND PLACEMENT OF TROLLEY MOUNTED FIRE EXTINGUISHERS, DRY CHEMICAL POWDER TYPE COMPLETE WITH ALL ACCESSORIES & INITIAL CHARGE IN FOLLOWING CAPACITIES: 50 Kg.	2	NOS.												
5.0	SUPPLY & INSTALLATION AND PLACEMENT OF FIRE BLANKETS	10	NOS.												
6.0	SUPPLY & INSTALLATION AND PLACEMENT OF SAND BUCKETS (SAND FILLED) WITH STANDS AND SHOVELS.	8	NOS.												
7.0	SUPPLY OF FIRE TRUCK AS PER SPECIFICATION 165-2-SPM-040	1	NOS.												
8.0	AFFF FOAM CONCENTRATE 200 LITRE DRUM FOR WATER/FOAM MONITORS.	4	NOS.												
9.0	SUPPLY AND INSTALLATION OF SPRINKLERS FOR 8 X EXISTING CONDENSATE STORAGE TANKS AS PER DATASHEETS 165-2-DSM-117 (SPRINKLER DATASHEET).	1	LS												
10.0	PUMPS														
10.1	DIESEL ENGINE DRIVEN FW PUMP (P-3501 A/B & 3502) INSTALLATION, ERECTION, TESTING & COMMISSIONING OF FIRE WATER PUMP, DIESEL ENGINE DRIVEN, MOUNTED ON A COMMON BASE FRAME COMPLETE WITH COUPLING, CONTROL PANEL AND ACCESSORIES AS PER THE FOLLOWING DOCUMENTS / DRAWINGS ATTACHED: REFERENCE DOCUMENTS: 165-2-PID-109 (SHEET 2 OF 4) SEE VENDOR'S DATA FOR PUMPS IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.														
a)	1500 GPM	1	NOS.												
b)	750 GPM	2	NOS.												
10.2	FIRE JOCKEY PUMP (P-3503 A/B) INSTALLATION, ERECTION, TESTING & COMMISSIONING OF CENTRIFUGAL PUMP, ELECTRIC MOTOR DRIVEN, MOUNTED ON A COMMON BASE FRAME COMPLETE WITH COUPLING AND ACCESSORIES AS PER THE FOLLOWING DOCUMENTS / DRAWINGS ATTACHED: REFERENCE DOCUMENTS: 165-2-PID-109 (SHEET 2 OF 4) SEE VENDOR'S DATA FOR PUMPS IN SUPPLEMENTARY TECHNICAL DOCS OF SECTION-V OF TENDER DOCS.	2	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES

ITEM	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
10.3	ELECTRIC MOTOR DRIVEN FIRE WATER TANK FILLING PUMP (P-3505 A/B) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF FOLLOWING CENTRIFUGAL PUMPS COMPLETE WITH MOTOR ASSEMBLIES AND CONTROL PANEL (MOUNTED ON COMMON BASE PLATE) ON RCC FOUNDATIONS. JOB INCLUDES SHIFTING, PLACING IN POSITION, LEVELING, GROUTING, ALIGNMENT, TESTING AND COMMISSIONING OF THE PUMP FOR TROUBLE FREE WORKING INCLUDING COLD & HOT ALIGNMENT CHECKS & WITH FOLLOWING SPECIFICATION FLOWRATE : 425 GPM DIFFERENTIAL HEAD : 35 PSIG REFERENCE DOCUMENT : 165-2-DSM-116 165-2-PID-109 (SHEET 1 OF 4)	2	NOS.												
11.0	RADIOGRAPHIC INSPECTION OF WELDS:														
a)	15 INCH. FILM	-	NOS.												ONLY FOR RATES
b)	10 INCH. FILM	-	NOS.												ONLY FOR RATES
11.1	ELECTRIC MOTOR DRIVEN DIESEL TRANSFER PUMPS (P-4001 A/B) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF FOLLOWING CENTRIFUGAL PUMPS COMPLETE WITH MOTOR ASSEMBLIES AND CONTROL PANEL (MOUNTED ON COMMON BASE PLATE) ON RCC FOUNDATIONS. JOB INCLUDES SHIFTING, PLACING IN POSITION, LEVELING, GROUTING, ALIGNMENT, TESTING AND COMMISSIONING OF THE PUMP FOR TROUBLE FREE WORKING INCLUDING COLD & HOT ALIGNMENT CHECKS & WITH FOLLOWING SPECIFICATION FLOWRATE : 10 GPM DIFFERENTIAL HEAD : 40 PSIG REFERENCE DOCUMENT : 165-2-DSM-108 165-2-PID-108	2	NOS.												
12.0	FIXED SKID MOUNTED SCRAPER LAUNCHER materials, manufacture, fabrication, assembly, inspection, non-destructive examination, testing and painting.SUPPLY, MANUFACTURE / FABRICATION, INSTALLATION, ASSEMBLY, INSPECTION, TESTING, PAINTING & COMMISSIONING OF SKID MOUNTED 8' x 10' FIXED SCRAPER LAUNCHER SKID ALONGWITH ITS COMPLETE PIPING AND INSTRUMENTATION. REFERENCE DOCUMENT: 165-2-SPM-042 165-2-MPV-001	1	NOS.												
13.0	MISCELLANEOUS FOLLOWING ITEMS ARE REQUIRED WITH THE ABOVE ITEMS:														
a)	PRE-SHIPMENT INSPECTION (1)	1	L.S												
b)	START-UP AND COMMISSIONING SPARES (UNIT/SYSTEM WISE LIST WITH ITEM-WISE PRICES TO BE ATTACHED)	1	L.S												
c)	SUPPLY OIF TWO (02) YEARS RECOMMENDED SPARE PARTS.	1	L.S												
d)	TRAINING TO OGCL STAFF AT SITE FOR TWO (02) WEEKS	1	L.S												OPTIONAL
e)	SUPPLY OF OPERATIONAL CONSUMABLE (DETAILS WITH ITEM-WISE PRICES TO BE ATTACHED)	1	L.S												OPTIONAL

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BOQ/BID PRICE SCHEDULE FOR SUPPLY & INSTALLATION OF MECHANICAL / FIRE FIGHTING / COMPANY SUPPLIED EQUIPMENT & PACKAGES**

ITEM	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)			
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
f)	OCEAN FRIEGHT AND INSURANCE ON IMPORTED EQUIPMENT AND MATERIAL	1	L.S													
g)	IMPORTATION EXPENSES (i.e. CLEARING AND FORWARDING etc.)	1	L.S													
h)	CUSTOM DUTIES AND TAXES LEVIED ON IMPORTED EQUIPMENT AND MATERIAL TO BE INCORPORAED IN THE PROJECT AS PER SRO 678(1)/2007 (2)	1	L.S													
i)	INLAND TRANSPORTATION AND INSURANCE EXPENSES	1	L.S													
TOTAL (Rs.)																

Note:

- (1) All taxes shall be payable by contractor.
- (2) The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- (3) Copy of the SRO 678 (1)/2007 is given in **Annexure-XV** and CGO List given in **Attachment-IV** of ITB.
- (4) Vendor to fill the price in unprotected cells, unprotection of BOQ by bidder lead to disqualification.
- (5) Test certificates and MTC's of all items (where applicable) shall be provided.
- (6) The charges shall be supported by verified quotation of Inspection Agency.

ATTACHMENT - 2



Zishan Engineers (Pvt.) Ltd.

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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS



0	04-06-2018	Issued for Tender	MAS	MIAH	SH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
	THE FOLLOWING WORK SHALL INCLUDE , BUT NOT LIMITED TO SUPPLY, INSTALLATION, SHIFTING, PLACEMENT, FABRICATION, WELDING, NDT, HYDROSTATIC TESTING, SURFACE PREPARATION, PAINTING, TESTING, BOLTING, THREADING, PRECOMMISSIONING, COMMISSIONING OF PIPING WORKS COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE.														
	SPEC. NO. 165-2-SPM-021 SPEC. NO. 165-2-SPM-022														
1.0	CARBON STEEL PIPES														
a)	SEAMLESS CARBON STEEL PIPES CONFORMING TO ASTM A-106, Gr.B or API 5L Gr. B. DIMENSIONS ACCORDING TO ASME B36.10, IN DOUBLE RANDOM (12 METER) STD. LENGTHS.														
	PIPE DIA 2" AND ABOVE TO BE SUPPLIED WITH BEVEL ENDS ACCORDING TO ASME B16.25. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1/2" NPS. SCH. 80 SMLS	12	RM												
ii)	1/2" NPS. SCH. 160 SMLS	6	RM												
iii)	3/4" NPS. SCH. 80 SMLS	6	RM												
iv)	3/4" NPS. SCH. 160 SMLS	12	RM												
v)	1" NPS. SCH. 80 SMLS	24	RM												
vi)	1" NPS. SCH. 160 SMLS	6	RM												
vii)	1 1/2" NPS. SCH. 80 SMLS	12	RM												
viii)	1 1/2" NPS. SCH. 160 SMLS	12	RM												
ix)	2" NPS. SCH. 40 SMLS	20	RM												
x)	2" NPS. SCH. 80 SMLS	846	RM												
xi)	2" NPS. SCH. 160 SMLS	60	RM												
xii)	2 1/2" NPS. SCH. 80 SMLS	60	RM												
xiii)	3" NPS. SCH. 40 SMLS	246	RM												
xiv)	3" NPS. SCH. 80 SMLS	270	RM												
xv)	3" NPS. SCH. 160 SMLS	60	RM												
xvi)	4" NPS. SCH. 40 SMLS	372	RM												
xvii)	4" NPS. SCH. 80 SMLS	72	RM												
xviii)	4" NPS. SCH. 160 SMLS	72	RM												
xix)	6" NPS. SCH. 40 SMLS	1458	RM												
xx)	6" NPS. SCH.80, SMLS	162	RM												
xxi)	6" NPS. SCH.160, SMLS	24	RM												
xxii)	8" NPS. SCH. 40 SMLS	174	RM												
xxiii)	8" NPS. SCH. 80 SMLS	72	RM												
xxiv)	10" NPS. SCH. 40 SMLS	2574	RM												
xxv)	10" NPS. SCH. 80 SMLS	100	RM												
xxvi)	10" NPS. SCH. 120 SMLS	100	RM												
xxvii)	12" NPS. SCH. 40, SMLS	60	RM												
xxviii)	12" NPS. SCH. 80, SMLS	60	RM												
xxix)	12" NPS. SCH. STD, SMLS	42	RM												
xxx)	14" NPS. SCH. 80, SMLS	12	RM												
xxxi)	14" NPS. SCH. STD, SMLS	12	RM												

OIL & GAS DEVELOPMENT COMPANY LTD.**BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
2.0	<u>POLYETHYLENE TAPE WRAP COATING</u> SUPPLY OF ALL MATERIALS, COATING & WRAPPING AND TESTING OF IN PLANT BURIED PIPING AS PER SPECIFICATION, DRAWINGS AND INSTRUCTIONS OF OWNER'S REPRESENTATIVE, IN THE FOLLOWING SIZES: REFERENCE DOCUMENT: 165-2-SPM-023														
i)	1/2" NPS. SCH. 160 SMLS	6	RM												
ii)	3/4" NPS. SCH. 160 SMLS	6	RM												
iii)	1" NPS. SCH. 160 SMLS	6	RM												
iv)	2" NPS. SCH. 80 SMLS	6	RM												
v)	3" NPS. SCH. 80 SMLS	234	RM												
vi)	3" NPS. SCH. 40 SMLS	138	RM												
vii)	4" NPS. SCH. 40 SMLS	294	RM												
viii)	6" NPS. SCH. 40 SMLS	1428	RM												
ix)	8" NPS. SCH. 40 SMLS	174	RM												
x)	10" NPS. SCH. 40 SMLS	2562	RM												
xi)	12" NPS. SCH. STD. SMLS	42	RM												
TOTAL (Pak. Rs.)															

NOTES:

- 1) ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- 2) THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- 3) TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- 4) VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	<p>THE FOLLOWING WORK SHALL INCLUDE , BUT NOT LIMITED TO SUPPLY, INSTALLATION, SHIFTING, PLACEMENT, FABRICATION, WELDING, NDT, HYDROSTATIC TESTING, SURFACE PREPARATION, PAINTING, TESTING, BOLTING, THREADING, PRECOMMISSIONING, COMMISSIONING OF CARBON STEEL FITTINGS COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE.</p> <p>CARBON STEEL FITTINGS</p> <p>SUPPLY OF CARBON STEEL FITTINGS COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE.</p> <p>SPEC. NO. 165-2-SPM-016 SPEC. NO. 165-2-SPM-022</p>														
1.1	<p>BUTT WELD 90° ELBOWS:</p> <p>a) ELBOW 90°, LONG RADIUS, B.W. ENDS, ASTM A-234, GR.WPB AS PER ANSI/ASME B 16.9.IN THE FOLLOWING SIZES:</p>														
	i) 1/2" NPS, SCH. 80	4	NOS.												
	ii) 1/2" NPS, SCH. 160	6	NOS.												
	iii) 3/4" NPS, SCH. 80	8	NOS.												
	iv) 3/4" NPS, SCH. 160	4	NOS.												
	v) 1" NPS, SCH. 80	5	NOS.												
	vi) 1" NPS, SCH. 160	4	NOS.												
	vii) 1 1/2" NPS, SCH. 80	2	NOS.												
	viii) 1 1/2" NPS, SCH. 160	2	NOS.												
	ix) 2" NPS, SCH. 40	3	NOS.												
	x) 2" NPS, SCH. 80	54	NOS.												
	xi) 2" NPS, SCH. 160	6	NOS.												
	xii) 2 1/2" NPS, SCH. 80	4	NOS.												
	xiii) 3" NPS, SCH. 40	5	NOS.												
	xiv) 3" NPS, SCH. 80	12	NOS.												
	xv) 3" NPS, SCH. 160	5	NOS.												
	xvi) 4" NPS, SCH. 40	56	NOS.												
	xvii) 4" NPS, SCH. 80	5	NOS.												
	xviii) 4" NPS, SCH. 160	4	NOS.												
	xix) 6" NPS, SCH. 40	62	NOS.												
	xx) 6" NPS, SCH. 80	12	NOS.												
	xxi) 6" NPS, SCH. 160	4	NOS.												
	xxii) 8" NPS, SCH. 40	20	NOS.												
	xxiii) 8" NPS, SCH. 80	8	NOS.												
	xxiv) 10" NPS, SCH. 40	101	NOS.												
	xxv) 10" NPS, SCH. 80	5	NOS.												
	xxvi) 10" NPS, SCH. 120	6	NOS.												
	xxvii) 12" NPS, SCH. 40	7	NOS.												
	xxviii) 12" NPS, SCH. 80	7	NOS.												
	xxix) 12" NPS, SCH. STD	7	NOS.												
	xxx) 14" NPS, SCH. 80	2	NOS.												
	xxxi) 14" NPS, SCH. STD	4	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.2	BUTT WELD 45° ELBOWS:														
a)	ELBOW 45°, LONG RADIUS, B.W. ENDS, ASTM A-234, GR.WPB AS PER ANSI/ASME B 16.9. IN THE FOLLOWING SIZES:														
i)	2" NPS, SCH. 80	6	NOS.												
ii)	3" NPS, SCH. 80	4	NOS.												
iii)	6" NPS, SCH. 40	16	NOS.												
iv)	8" NPS, SCH. 40	6	NOS.												
v)	10" NPS, SCH. 40	23	NOS.												
vi)	10" NPS, SCH. 80	5	NOS.												
vii)	10" NPS, SCH. 120	6	NOS.												
viii)	12" NPS, SCH. 40	7	NOS.												
ix)	12" NPS, SCH. 80	7	NOS.												
x)	12" NPS, SCH. STD	7	NOS.												
xi)	14" NPS, SCH. 80	2	NOS.												
xii)	14" NPS, SCH. STD	4	NOS.												
1.3	SOCKET WELD 90° ELBOWS:														
a)	ELBOW 90°, LONG RADIUS, S.W. ENDS, CLASS 3000 #, ASTM A-105, AS PER ANSI/ASME B 16.11 IN THE FOLLOWING SIZES:														
i)	1/2" NPS, SCH. 80	6	NOS.												
ii)	1/2" NPS, SCH. 160	8	NOS.												
iii)	3/4" NPS, SCH. 80	8	NOS.												
iv)	3/4" NPS, SCH. 160	4	NOS.												
v)	1" NPS, SCH. 80	9	NOS.												
vi)	1" NPS, SCH. 160	4	NOS.												
vii)	1 1/2" NPS, SCH. 80	2	NOS.												
viii)	1 1/2" NPS, SCH. 160	2	NOS.												
1.4	REDUCING TEES:														
a)	REDUCING TEE, B.W ENDS, ASTM A-234 GR. WPB AS PER ANSI B16.9. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	4"x2", SCH. 160	4	NOS.												
ii)	4"x3", SCH. 40	4	NOS.												
iii)	4"x3", SCH. 160	4	NOS.												
iv)	6"x2", SCH. 80 x SCH. 80	3	NOS.												
v)	6"x3", SCH. 160	3	NOS.												
vi)	6"x4", SCH. 40	4	NOS.												
vii)	6"x4", SCH. 40 x SCH. 80	8	NOS.												
viii)	6"x4", SCH. 160	8	NOS.												
ix)	8"x4", SCH. 80 x SCH. 80	3	NOS.												
x)	8"x6", SCH. 40 x SCH. 40	5	NOS.												
xi)	10"x4", SCH. 40 x SCH. 80	3	NOS.												
xii)	10"x6", SCH. 40	35	NOS.												
xiii)	10"x8", SCH. 40	5	NOS.												
xiv)	12" x 6" , SCH.80. x SCH. 160.	4	NOS.												
xv)	12" x 8" , SCH.STD. x SCH. 40.	4	NOS.												
xvi)	14" x 12" , SCH.STD. x SCH. 80.	4	NOS.												

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
b)	REDUCING TEE, S.W CLASS 3000# ASTM A-105 AS PER ANSI B16.11. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1" x 3/4" SCH. 160	24	NOS.												
ii)	2" x 3/4" SCH. 80	46	NOS.												
1.5	EQUAL TEES:														
a)	EQUAL TEES, BUTT WELDING ENDS DIMENSIONS ACCORDING TO ASME B16.9, MATERIAL ASTM A-234 GR. WPB IN THE FOLLOWING SIZES AND QUANTITIES:														
i)	1" NPS, SCH. 80	5	NOS.												
ii)	1" NPS, SCH. 160	4	NOS.												
iii)	1 1/2" NPS, SCH. 80	2	NOS.												
iv)	1 1/2" NPS, SCH. 160	2	NOS.												
v)	2" NPS, SCH. 40	3	NOS.												
vi)	2" NPS, SCH. 80	20	NOS.												
vii)	2" NPS, SCH. 160	3	NOS.												
viii)	2 1/2" NPS, SCH. 80	3	NOS.												
ix)	3" NPS, SCH. 40	3	NOS.												
x)	3" NPS, SCH. 80	3	NOS.												
xi)	3" NPS, SCH. 160	3	NOS.												
xii)	4" NPS, SCH. 40	6	NOS.												
xiii)	4" NPS, SCH. 80	6	NOS.												
xiv)	4" NPS, SCH. 160	6	NOS.												
xv)	6" NPS, SCH. 40	31	NOS.												
xvi)	6" NPS, SCH. 80	4	NOS.												
xvii)	6" NPS, SCH. 160	5	NOS.												
xviii)	8" NPS, SCH. 40	10	NOS.												
xix)	8" NPS, SCH. 80	4	NOS.												
xx)	10" NPS, SCH. 40	28	NOS.												
xxi)	10" NPS, SCH. 80	2	NOS.												
xxii)	10" NPS, SCH. 120	3	NOS.												
xxiii)	12" NPS, SCH. 40	3	NOS.												
xxiv)	12" NPS, SCH. 80	3	NOS.												
xxv)	12" NPS, SCH. STD.	3	NOS.												
xxvi)	14" NPS, SCH. 80	3	NOS.												
xxvii)	14" NPS, SCH. STD	4	NOS.												
1.6	BRANCH FITTINGS														
a)	MATERIAL ASTM A-105, DIMENSION ACCORDING TO ASME B 16.9/16.11/16.25/ ANSI B 1.20.1. IN THE FOLLOWING SIZES AND QUANTITY (W.T. match to pipe):														
i)	3/4" DIA. SOCKOLET CLASS 3000 # ON 3" PIPE	29	NOS.												
ii)	3/4" DIA. SOCKOLET CLASS 3000 # ON 4" PIPE	60	NOS.												
iii)	3/4" DIA. SOCKOLET CLASS 3000 # ON 6" PIPE	87	NOS.												
iv)	3/4" DIA. SOCKOLET CLASS 3000 # ON 8" PIPE	87	NOS.												
v)	3/4" DIA. SOCKOLET CLASS 3000 # ON 10" PIPE	60	NOS.												
vi)	3/4" DIA. SOCKOLET CLASS 3000 # ON 12" PIPE	6	NOS.												

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
vii)	1/2" DIA. SOCKOLET CLASS 3000 # ON 3" PIPE	18	NOS.												
viii)	1/2" DIA. SOCKOLET CLASS 3000 # ON 10" PIPE	8	NOS.												
ix)	1/2" DIA. SOCKOLET CLASS 3000 # ON 4" PIPE	24	NOS.												
x)	1/2" DIA. SOCKOLET CLASS 3000 # ON 6" PIPE	18	NOS.												
xi)	1/2" DIA. SOCKOLET CLASS 3000 # ON 8" PIPE	15	NOS.												
xii)	1/2" DIA SOCKOLET CLASS 3000 # ON 12" PIPE	8	NOS.												
xiii)	1" DIA. SOCKOLET CLASS 3000 # ON 4" PIPE	8	NOS.												
xiv)	1" DIA. SOCKOLET CLASS 3000 # ON 6" PIPE	5	NOS.												
xv)	3" DIA. WELDOLET, SCH. 80 ON 10" PIPE	3	NOS.												
xvi)	4" DIA. WELDOLET, SCH. 40 ON 12" PIPE	3	NOS.												
1.7	SWAGES & PIPE NIPPLES														
a)	CONCENTRIC SWAGE NIPPLE, SOCKET WELDED, CLASS 3000#, DIMENSIONS ACCORDING TO ASME B16.11, MATERIAL: ASTM A 106 Gr. B / A-105 IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1" x 3/4" NPS, SCH. 80 PLE-PSE	5	NOS.												
ii)	2" x 1" NPS, SCH. 80 PLE-PSE	14	NOS.												
b)	PIPE NIPPLE, SOCKET WELDED, DIMENSIONS ACCORDING TO ASME B36.10, MATERIAL: ASTM A 106 Gr. B IN THE FOLLOWING SIZES AND QUANTITY:														
i)	1/2" NPS, SCH. 80, BOE - POE x 75 mm long	5	NOS.												
ii)	1/2" NPS, SCH. 80, PBE x 75 mm long	4	NOS.												
iii)	1/2" NPS, SCH. 160, PBE x 75 mm long	4	NOS.												
iv)	1/2" NPS, SCH. 160, POE-TOE x 75 mm long	42	NOS.												
v)	1/2" NPS, SCH. 160, PBE x 150 mm long	48	NOS.												
vi)	3/4" NPS, SCH 160, PBE, x 100mm long	3	NOS.												
vii)	1" NPS, SCH 80, BOE - POE, x 100mm long	4	NOS.												
viii)	1" NPS, SCH 80, PBE, x 100mm long	4	NOS.												
ix)	1" NPS, SCH 160, PBE, x 75mm long	22	NOS.												
x)	1" NPS, SCH 160, POE-TOE, x 75mm long	4	NOS.												
xi)	1 1/2" NPS, SCH 160, PBE, x 75mm long	2	NOS.												
xii)	1 1/2" NPS, SCH 160, BOE-POE, x 100mm long	3	NOS.												
xiii)	2" NPS, SCH 80, PBE, x 150mm long	2	NOS.												
xiv)	2 1/2" NPS, SCH 160, BOE-POE, x 150mm long	3	NOS.												
1.8	REDUCERS:														
1.8.1	CONCENTRIC REDUCERS:														
a)	CONCENTRIC REDUCER, B.W ENDS, ASTM A-234 Gr. WPB AS PER ANSI B16.9. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	3"x1 1/4", SCH. 80	3	NOS.												
ii)	4"x3", SCH. 80	3	NOS.												
iii)	6"x3", SCH. 40	10	NOS.												
iv)	6"x3", SCH. 40 x SCH. 80	20	NOS.												
v)	6"x4", SCH. 40	33	NOS.												
vi)	8" x 6", SCH. 80 x SCH 160	10	NOS.												
vii)	8" x 4", SCH. 40	10	NOS.												
viii)	8" x 5", SCH. 40	3	NOS.												

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
ix)	10" x 4", SCH. 120 x SCH 160	3	NOS.												
x)	10" x 6", SCH. 40	3	NOS.												
xi)	10" x 8", SCH. 40	2	NOS.												
xii)	12" x 8", SCH. 80	2	NOS.												
xiii)	12" x 10", SCH. 40	2	NOS.												
xiv)	14" x 10", SCH. 80 x SCH 120	2	NOS.												
xv)	14" x 12", SCH. 80	2	NOS.												
1.8.2	<u>ECCENTRIC REDUCERS</u>														
a)	ECCENTRIC REDUCER, B.W ENDS, ASTM A-234 Gr. WPB AS PER ANSI B16.9. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	4" x 2 1/2", SCH. 40 x SCH. 80	3	NOS.												
ii)	8" x 6", SCH. 80 x SCH. 80	3	NOS.												
iii)	12" x 6", SCH. 40 x SCH 160	2	NOS.												
iv)	12" x 8", SCH. 40	2	NOS.												
v)	12" x 10", SCH. 80 x SCH 120	2	NOS.												
1.9	<u>PLUGS:</u>														
a)	PLUG, SQUARE HEAD, CLASS 3000#, ASTM A-105 AS ASME B16.11 IN THE FOLLOWING SIZES & QUANTITY:														
i)	1/2" NPS	7	NOS.												
ii)	3/4" NPS	327	NOS.												
iii)	1" NPS	16	NOS.												
1.10	<u>CAPS</u>														
a)	CAP, WELDED, MATERIAL A 234 GR. WPB , DIMENSIONS ACCORDING TO ASME B 16.9 IN THE FOLLOWING SIZES AND QUANTITY:														
i)	3" NPS, SCH 40.	10	NOS.												
ii)	3" NPS, SCH 80.	20	NOS.												
iii)	4" NPS, SCH 40.	10	NOS.												
iv)	6" NPS, SCH 40.	5	NOS.												
TOTAL (Pak. Rs.)															

NOTES:

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
1.2	SOCKET WELD FLANGES														
a)	SOCKET WELD FLANGES, CLASS 150#, RF, ASTM A-105 AS PER ANSI B-16.5. IN THE FOLLOWING SIZES AND QUANTITY:														
i)	3/4" NPS, SCH .80	2	NOS.												
ii)	1 1/4" NPS, SCH .80	3	NOS.												
iii)	1" NPS, SCH .80	10	NOS.												
iv)	1 1/2" NPS, SCH .160	10	NOS.												
1.3	BLIND FLANGES														
a)	BLIND FLANGES CLASS 150#, RAISED FACE, ASTM A-105 AS PER ASME B-16.5 (for sizes upto 24") . IN THE FOLLOWING SIZES AND QUANTITY:														
i)	2" NPS.	4	NOS.												
ii)	4" NPS.	3	NOS.												
iii)	8" NPS.	3	NOS.												
iv)	10" NPS.	4	NOS.												
v)	12" NPS	2	NOS.												
vi)	14" NPS	2	NOS.												
2.0	GASKETS														
a)	CLASS 150#, 1/8" THK. FLEXIBLE GRAPHITE W/ 304 or 316 SS CORRUGATED INSERT, ASME B16.20														
i)	3/4" NPS	5	NOS.												
ii)	1 1/4" NPS	6	NOS.												
iii)	1" NPS	12	NOS.												
iv)	1 1/2" NPS	12	NOS.												
v)	2" NPS	85	NOS.												
vi)	2 1/2" NPS	10	NOS.												
vii)	3" NPS	25	NOS.												
viii)	4" NPS	90	NOS.												
ix)	5" NPS	5	NOS.												
x)	6" NPS	55	NOS.												
xi)	8" NPS	34	NOS.												
xii)	10" NPS	80	NOS.												
xiii)	12" NPS.	14	NOS.												
xiv)	14" NPS.	18	NOS.												
b)	CLASS 600#, 1/8" THK. FLEXIBLE GRAPHITE W/ 304 or 316 SS CORRUGATED INSERT, ASME B16.20														
i)	10" NPS	2	NOS.												
ii)	8" NPS	2	NOS.												
iii)	6" NPS	10	NOS.												
iv)	4" NPS	4	NOS.												
v)	3" NPS	2	NOS.												
vi)	2" NPS	2	NOS.												

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
3.0	STUD BOLTS & NUTS STUD BOLTS WITH TWO HEXAGONAL NUTS & TWO WASHERS EACH, MATERIALS ARE AS FOLLOWS: STUD BOLTS: ASTM A-193 GR. B7, CADMIUM PLATED HEX. NUTS: ASTM A-194 GR. 2H HEAVY HEXAGONAL , CADMIUM PLATED WITH WASHERS AS PER ASME B 18.2.1/18.2.2. REQUIRED NOMINAL SIZES AND LENGTHS ARE AS UNDER:														
	i) 1 1/4" x 215 mm	32	NOS.												
	ii) 1 1/4" x 195 mm	32	NOS.												
	iii) 1" x 180 mm	120	NOS.												
	iv) 1" x 145 mm	32	NOS.												
	v) 1" x 130 mm	192	NOS.												
	vi) 1" x 120 mm	1104	NOS.												
	vii) 3/4" x 125 mm	296	NOS.												
	viii) 3/4" x 110 mm	720	NOS.												
	ix) 5/8" x 110 mm	24	NOS.												
	x) 5/8" x 100 mm	884	NOS.												
	xi) 5/8" x 90 mm	1024	NOS.												
	xii) 5/8" x 85 mm	328	NOS.												
	xiii) 7/8" x 140 mm	734	NOS.												
	xiv) 7/8" x 120 mm	216	NOS.												
	xv) 1/2" x 70 mm	52	NOS.												
	xvi) 1/2" x 65 mm	48	NOS.												
TOTAL (Pak. Rs.)															

NOTES:

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- 2) THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- 3) TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- 4) VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
	THE FOLLOWING WORK SHALL INCLUDE , BUT NOT LIMITED TO SUPPLY, INSTALLATION, SHIFTING, PLACEMENT, FABRICATION, WELDING, NDT, HYDROSTATIC TESTING, SURFACE PREPARATION, PAINTING, TESTING, BOLTING, THREADING, PRECOMMISSIONING, COMMISSIONING OF CARBON STEEL VALVES COMPLETE IN ALL RESPECTS, AS PER FOLLOWING SPECIFICATIONS, AND TO THE ENTIRE SATISFACTION OF OWNER'S REPRESENTATIVE. SPEC. NO. 165-2-SPM-022 SPEC. NO. 165-2-SPM-018														
1.0	BALL VALVES														
1.1	CAST STEEL BALL VALVES														
a)	BALL VALVES, RF ENDS, 150#, REGULAR PORT ASTM 216 Gr. WCB AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	2" NPS, VB-201	10	NOS.												
ii)	2" NPS, VB-202	4	NOS.												
iii)	3" NPS, VB-202	4	NOS.												
iv)	4" NPS, VB-202	3	NOS.												
v)	6" NPS, VB-202	2	NOS.												
vi)	8" NPS, VB-202	2	NOS.												
vii)	10" NPS, VB-202	2	NOS.												
viii)	12" NPS, VB-202	2	NOS.												
b)	BALL VALVES, RF ENDS, 600#, REGULAR PORT ASTM 216 Gr. WCB AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	6" NPS, VB-222	6	NOS.												
1.2	FORGED STEEL BALL VALVES														
a)	BALL VALVES, SW ENDS, 800#, REG. PORT, ASTM A-105 AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022)														
i)	1/2" NPS, VB-101	30	NOS.												
ii)	3/4" NPS, VB-101	327	NOS.												
iii)	1" NPS, VB-101	9	NOS.												
iv)	1 1/2" NPS, VB-101	5	NOS.												
2.0	CHECK VALVES														
2.1	CAST STEEL CHECK VALVES														
a)	FLANGED CHECK VALVE SWING TYPE CLASS 150#, RF, ASTM 216 Gr. WCB AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	2" NPS, VC-201	4	NOS.												
ii)	3" NPS, VC-202	3	NOS.												
iii)	4" NPS, VC-201	3	NOS.												
iv)	6" NPS, VC-201	3	NOS.												
v)	8" NPS, VC-202	2	NOS.												
vi)	10" NPS, VC-202	2	NOS.												
vii)	12" NPS, VC-202	2	NOS.												

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					A	B	C = A+B	D	E = C+D		F	G			H = F+G
3.0	GLOBE VALVES														
3.1	CAST STEEL GLOBE VALVES														
a)	GLOBE VALVE, ASME CLASS 150#, RF ENDS, ASTM 216 Gr.WCB DIMENSION, AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	2" NPS, VGL-201	2	NOS												
ii)	4" NPS, VGL-201	3	NOS												
iii)	6" NPS, VGL-201	3	NOS												
iv)	8" NPS, VGL-202	2	NOS												
v)	10" NPS, VGL-202	2	NOS												
vi)	12" NPS, VGL-202	2	NOS												
4.0	GATE VALVES														
4.1	CAST STEEL GATE VALVES														
a)	GATE VALVE, ASME CLASS 150#, RF BODY ASTM 216 Gr.WCB DIMENSION, AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022)														
i)	2" NPS, VG-201	6	NOS.												
ii)	3" NPS, VG-201	4	NOS.												
iii)	3" NPS, VG-202	3	NOS.												
iv)	4" NPS, VG-201	2	NOS.												
v)	4" NPS, VG-202	8	NOS.												
vi)	6" NPS, VG-201	3	NOS.												
vii)	6" NPS, VG-202	16	NOS.												
viii)	8" NPS, VG-202	7	NOS.												
ix)	10" NPS, VG-202	32	NOS.												
x)	12" NPS, VG-202	3	NOS.												
4.2	FORGED STEEL GATE VALVES														
a)	GATE VALVE, SW ENDS, CLASS 800#, REG. PORT, FORGED STEEL ASTM A-105 AS PER SPECIFICATION OF PIPING MATERIAL (165-2-SPM-022).														
i)	1/2" NPS, VG-101	16	NOS.												
ii)	3/4" NPS, VG-101	4	NOS.												
iii)	1" NPS, VG-101	14	NOS.												
iv)	1 1/2" NPS, VG-101	4	NOS.												
5.0	BASKET-TYPE STRAINER														
	BODY MATERIAL CARBON STEEL ASTM 106 Gr.B														
i)	BASKET-TYPE STRAINER Dia 8" 150# RF	3	NOS.												
ii)	BASKET-TYPE STRAINER Dia 12" 150# RF	3	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

BILL OF QUANTITIES FOR PROCESS & FIRE FIGHTING PIPING WORKS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
6.0	Y-TYPE STRAINER BODY MATERIAL CARBON STEEL ASTM 106 Gr.B														
i)	Y-TYPE STRAINER Dia 2" 150# RF	3	NOS.												
ii)	Y-TYPE STRAINER Dia 4" 150# RF	3	NOS.												
iii)	Y-TYPE STRAINER Dia 6" 150# RF	8	NOS.												
iv)	Y-TYPE STRAINER Dia 8" 150# RF	3	NOS.												
7.0	DIESEL OIL FILTER														
i)	DIESEL OIL FILTER F-4001 A/B REFERENCE DOCUMENT: 165-2-DSM-106 165-2-PID-108	2	NOS.												
TOTAL (Pak. Rs.)															

NOTES:

- 1) ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- 2) THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- 3) TEST CERTIFICATES AND MTC'S OF ALL ITEMS SHALL BE PROVIDED.
- 4) VENDOR TO FILL THE PRICE IN UNPROTECTED CELLS, UNPROTECTION OF BOQ BY BIDDER LEAD TO DISQUALIFICATION.

ATTACHMENT – 3



Zishan Engineers (Pvt.) Ltd.

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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR ELECTRICAL CABLES



0	04-06-2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR ELECTRICAL CABLES OF GAS PROCESSING PLANT

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	SUPPLY & INSTALLATION OF ELECTRICAL CABLE SUPPLY, LAYING, DRESSING, TAGGING, TERMINATION, TESTING AND COMMISSIONING OF FOLLOWING ELECTRICAL POWER, CONTROL AND LIGHTING CABLE (AS PER REFERRED CABLE SCHEDULES, SPECIFICATIONS AND TYPICAL INSTALLATION DRAWINGS) ON CABLE LADDER / RACKS/ M.S CHANNEL, CONDUITS, TRENCHES COMPLETE IN ALL RESPECTS INCLUDING INSTALLATION OF CABLE LUGS, TERMINATION OF ARMOUR (IF AVAILABLE) THROUGH GLAND / PLATE UPTO THE EARTH TERMINAL OF EQUIPMENT, TAGGING WITH ALPHA NUMERIC PLASTIC FERRULES, ETC. COMPLETE IN ALL RESPECT														
1.1	SINGLE CORE ARMoured LOW VOLTAGE CABLES (FOR POWER APPLICATIONS). SINGLE CORE LOW VOLTAGE POWER CABLES, STRANDED COPPER CONDUCTOR AS PER IEC-60502, CROSS LINKED POLY ETHYLENE INSULATED 600/1000 VOLT GRADE, NON-HYGROSCOPIC FILLERS, EXTRUDED POLYVINYL CHLORIDE BEDDED AND SINGLE ALUMINIUM WIRE ARMoured POLYVINYL CHLORIDE SHEATHED OVERALL.														
1.1.1	1C - 240 SQMM (CU/XLPE/PVC/AWA/PVC)	3300	RMTRS.												
1.1.2	1C - 300 SQMM (CU/XLPE/PVC/AWA/PVC)	1260	RMTRS.												
1.2	MULTI CORE ARMoured LOW VOLTAGE CABLES (FOR POWER APPLICATIONS). MULTI CORE LOW VOLTAGE POWER CABLES, STRANDED COPPER CONDUCTOR AS PER IEC-60502, CROSS LINKED POLY ETHYLENE INSULATED 600/1000 VOLT GRADE, NON-HYGROSCOPIC FILLERS, EXTRUDED POLYVINYL CHLORIDE BEDDED, SINGLE STEEL WIRE ARMoured AND POLYVINYL CHLORIDE SHEATHED OVERALL.														
1.2.1	2C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	2,170	RMTRS.												
1.2.2	2C - 4 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.3	2C - 6 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.4	2C - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.5	2C+PE - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	3,570	RMTRS.												
1.2.6	2C+PE - 4 SQMM (CU/XLPE/PVC/SWA/PVC)	860	RMTRS.												
1.2.7	2C+PE - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	1,032	RMTRS.												
1.2.8	2C+PE - 25 SQMM (CU/XLPE/PVC/SWA/PVC)	195	RMTRS.												
1.2.9	2C+PE - 35 SQMM (CU/XLPE/PVC/SWA/PVC)	165	RMTRS.												
1.2.10	3C - 4.0 SQMM (CU/XLPE/PVC/SWA/PVC)	1,166	RMTRS.												
1.2.11	3C - 6.0 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.12	3C - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.13	3C - 16 SQMM (CU/XLPE/PVC/SWA/PVC)	180	RMTRS.												
1.2.14	3C - 25 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.15	3C - 35 SQMM (CU/XLPE/PVC/SWA/PVC)	940	RMTRS.												
1.2.16	3C - 50 SQMM (CU/XLPE/PVC/SWA/PVC)	988	RMTRS.												
1.2.17	3C - 70 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR ELECTRICAL CABLES OF GAS PROCESSING PLANT

S.NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.2.18	4C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.19	4C - 4 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.20	4C - 6 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.21	4C - 10 SQMM (CU/XLPE/PVC/SWA/PVC)	1,747	RMTRS.												
1.2.22	4C - 16 SQMM (CU/XLPE/PVC/SWA/PVC)	190	RMTRS.												
1.2.23	4C - 25 SQMM (CU/XLPE/PVC/SWA/PVC)	35	RMTRS.												
1.2.24	4C - 35 SQMM (CU/XLPE/PVC/SWA/PVC)	1,030	RMTRS.												
1.2.25	4C - 50 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.26	4C - 70 SQMM (CU/XLPE/PVC/SWA/PVC)	30	RMTRS.												
1.2.27	4C - 95 SQMM (CU/XLPE/PVC/SWA/PVC)	495	RMTRS.												
1.2.28	4C - 120 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.29	4C - 240 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.2.30	4C - 300 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
	NOTE: THE COLOR CODING FOR THE ABOVE MULTI CORE CABLES SHALL BE AS FOLLOWS:														
	FOR 1C CABLES - RED OR YELLOW OR BLUE OR BLACK AS PER CABLE SCHEDULE														
	FOR 2C CABLES - RED AND BLACK														
	FOR 3C CABLES - RED , YELLOW & BLUE														
	FOR 4C CABLES - RED , YELLOW, BLUE & BLACK														
	FOR 2C+PE CABLES - IT SHOULD BE 3C CABLE WITH OVERALL ARMORING AND SHEATH, RED FOR PHASE, BLACK FOR NEUTRAL & GREEN FOR EARTH														
1.3	ARMoured LOW VOLTAGE CABLES (FOR CONTROL APPLICATIONS).														
	LOW VOLTAGE CONTROL CABLES, STRANDED COPPER CONDUCTOR, CROSS LINKED POLY ETHYLENE INSULATED, 600/1000 VOLT GRADE, POLYVINYL CHLORIDE BEDDED, SINGLE STEEL WIRE ARMoured AND POLYVINYL CHLORIDE SHEATHED OVERALL. (TO BS 6346 / IEC60502)														
1.3.1	7C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	840	RMTRS.												
1.3.2	10C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	840	RMTRS.												
1.3.3	12C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.4	14C - 1.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.5	7C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.6	10C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	50	RMTRS.												
1.3.7	12C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	900	RMTRS.												
1.3.8	14C - 2.5 SQMM (CU/XLPE/PVC/SWA/PVC)	1,270	RMTRS.												

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES FOR ELECTRICAL CABLES OF GAS PROCESSING PLANT**

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
1.4	CABLE GLANDS (FOR HAZARDOUS AREA) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF BRASS CABLE GLANDS OF FOLLOWING SIZES CONFORMING TO BS 6121 AND SUITABLE FOR CU/XLPE/PVC/SWA/PVC LOW VOLTAGE CABLES. GLANDS TO BE SUPPLIED COMPLETE WITH PCP SHROUD AND SHALL BE, E1FW, DUAL CERTIFIED (EX'E' / EX'D') SUITABLE FOR CLASS I, ZONE 1 & 2, IP 66 APPLICATIONS. COMPLETE IN ALL RESPECT AND AS PER REFERRED CABLE SCHEDULE														
1.4.1	E1FW 20	52	NOS.												
1.4.2	E1FW 25	45	NOS.												
1.4.3	E1FW 32	6	NOS.												
1.4.4	E1FW 40	3	NOS.												
1.4.5	E1FW 50	3	NOS.												
1.4.6	E1FW 50S	3	NOS.												
1.4.7	E1FW 63	3	NOS.												
1.5	CABLE GLANDS (FOR NON HAZARDOUS AREA) SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF BRASS CABLE GLANDS OF FOLLOWING SIZES CONFORMING TO BS 6121 AND SUITABLE FOR LOW VOLTAGE CABLES. GLANDS TO BE SUPPLIED COMPLETE WITH PCP SHROUD AND SHALL BE E1W, WEATHERPROOF, SUITABLE FOR IP 66 APPLICATIONS. . COMPLETE IN ALL RESPECT AND AS PER REFERRED CABLE SCHEDULE														
1.5.1	E1W 20	99	NOS.												
1.5.2	E1W 20S	10	NOS.												
1.5.3	E1W 25	21	NOS.												
1.5.4	E1W 32	34	NOS.												
1.5.5	E1W 50	114	NOS.												
1.5.6	E1W 50S	3	NOS.												
1.5.7	E1W 63	3	NOS.												
1.5.8	E1W 63S	3	NOS.												
TOTAL PRICE (1.1 - 1.5)															

NOTES:

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- TEST CERTIFICATES AND MTC'S OF ALL ITEMS (WHERE APPLICABLE) SHALL BE PROVIDED.
- THE CHARGES SHALL BE SUPPORTED BY VERIFIED QUOTATION OF INSPECTION AGENCY.
- COPY OF THE SRO 678 (1)/2007 IS GIVEN IN ANNEXURE-XVIII
- THE BRASS REDUCERS AND ADOPTERS HAZARDOUS AND NON HAZARDOUS TYPE SHALL BE CONSIDERD BUILT IN FOR SECTION 1.4 AND 1.5 AS PER SITE REQUIREMENT AND ARE INCLUDED IN THE SCOPE OF CONTRACTOR



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR LIGHTING, SOCKET OUTLETS, JBs & LOCAL CONTROL STATIONS



0	04-06-2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

S NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
1.0	FLUORESCENT LAMPS (For Hazardous Area)														
1.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF, 2X36W, 230V 50HZ FLUORESCENT LIGHT FIXTURE SUITABLE FOR PROTECTION TYPE EEXD' II-C T4, IP-65, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE PROTECTED WITH HIGH IMPACT ACRYLIC POLYCARBONATE DIFFUSER COMPLETE WITH ELECTRONIC BALLAST CONTROL GEAR, 2X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES OF M20 (FOR FIXTURE TO FIXTURE CABLING). COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
1.1.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS AND AS PER REFERRED INSTALLTION DETAILS.	3	NOS.												
1.1.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS AND AS PER REFERRED INSTALLATION DETAILS.	1	NOS.												
1.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX PROOF, 1X36W, 230V 50HZ FLUORESCENT EMERGENCY LIGHT FIXTURE , NON-MAINTAINED (WITH SELF-TEST FEATURE), NIMH BATTERY BACKUP FOR 1 HOUR, PROTECTION TYPE EEX'D' II-C T4, IP-65, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE PROTECTED WITH HIGH IMPACT ACRYLIC POLYCARBONATE DIFFUSER COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, 1X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES OF M20 (FOR FIXTURE TO FIXTURE CABLING). COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
1.2.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS.	1	NOS.												
1.2.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												
2.0	FLUORESCENT LIGHTS (FOR NON-HAZARDOUS AREA)														
2.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF, 2X36W, 230V, 50HZ, FLUORESCENT LIGHT FIXTURE, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE, IP 65, WITH POLYCARBONATE / ACRYLIC DIFFUSER, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, 2X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES M20 (FOR FIXTURE TO FIXTURE CABLING).COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
2.1.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS.	3	NOS.												
2.1.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
2.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF, 1X36W, 230V, 50HZ, FLUORESCENT EMERGENCY LIGHT FIXTURE , NON-MAINTAINED (WITH SELF-TEST FEATURE), NIMH BATTERY BACKUP FOR 1 HOUR, GLASS REINFORCED POLYESTER (GRP) ENCLOSURE, IP 65, WITH POLYCARBONATE / ACRYLIC DIFFUSER, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, 1X36W BI-PIN FLUORESCENT LAMPS, LAMP HOLDERS ETC, INCLUDING PROVISION OF 2 NOS. CABLE ENTRIES M20 (FOR FIXTURE TO FIXTURE CABLING), COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.														165-2-ELT-005
2.2.1	POLE/STANCHION MOUNTED POLE/STANCHION MOUNTED FIXTURES SHALL BE SUPPLIED WITH INTEGRAL POLE MOUNTING SLEEVE AND ALL MOUNTING AND INSTALLATION ACCESSORIES INCLUDING BRACKETS/CLAMPS COMPLETE IN ALL RESPECTS.	1	NOS.												
2.2.2	CEILING / SURFACE MOUNTED CEILING/BEAM MOUNTED FIXTURES SHALL BE SUPPLIED WITH MOUNTING ACCESSORIES SUCH AS CLAMPS, BRACKETS, ETC. COMPLETE IN ALL RESPECTS.	1	NOS.												
3.0	FLOOD LIGHTS (FOR HAZARDOUS AREA)														
3.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF 400W-230V AC-50HZ FLOOD LIGHT FIXTURE SUITABLE FOR PROTECTION TYPE EEX "n" II-C T4 ,IP-65, POLE TOP MOUNTED, WITH INTEGRAL CONTROL GEAR, GLASS REINFORCED POLYESTER (GRP) OR DIE-CAST ALUMINIUM ENCLOSURE COMPLETE WITH BALLAST/ STARTERS/ CAPACITORS, 400W SON T(BS 4533) LAMP, ASYMMETRICAL REFLECTOR. CABLE ENTRIES OF M20 SHALL BE PROVIDED FOR FIXTURE TO FIXTURE WIRING (LOOP/THROUGH WIRING). ALL MOUNTING ACCESSORIES SHALL BE SUPPLIED WITH FIXTURE, COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	33	NOS.												165-2-ELT-005
4.0	FLOOD LIGHTS (FOR NON-HAZARDOUS AREA)														
4.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF 400W- 230V AC-50HZ FLOOD LIGHT FIXTURE, IP-65, POLE TOP MOUNTED, WITH INTEGRAL CONTROL GEAR, GLASS REINFORCED POLYESTER (GRP) OR DIE-CAST ALUMINIUM ENCLOSURE COMPLETE WITH BALLAST/ STARTERS/ CAPACITORS, 400W SON T(BS 4533) LAMP, ANODIZED ALUMINIUM REFLECTOR (ASYMMETRICAL). CABLE ENTRIES OF M20 SHALL BE PROVIDED FOR FIXTURE TO FIXTURE WIRING (LOOP/THROUGH WIRING).ALL MOUNTING ACCESSORIES SHALL BE SUPPLIED WITH FIXTURE. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	33	NOS.												165-2-ELT-005
5.0	LIGHTING POLES SUPPLY, INSTALLATION, TESTING, ERECTION AND COMMISSIONING OF LIGHTING POLE FOR FLOODLIGHTING, MADE OF GALVANIZED STEEL PIPE, 10 METER HIGH WITH ARMS FOR MULTIPLE 400 WATT FLOODLIGHTS WELD ON THE TOP OF THE POLE AS SHOWN ON TYPICAL DETAIL DRAWING, COMPLETE WITH BASE PLATE, EARTHING BOSS ETC. AND OTHER ACCESSORIES. THE JOB ALSO INCLUDES CONSTRUCTION OF FOUNDATIONS AND ALL OTHER RELATED CIVIL WORKS COMPLETE IN ALL RESPECTS														165-2-ELT-005
5.1	TYPE-A (2 FLOOD LIGHTS PER POLE)	1													
5.2	TYPE-B (3 FLOOD LIGHTS PER POLE)	22													
5.3	TYPE-C (4 FLOOD LIGHTS PER POLE)	1													

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

S NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
6.0	JUNCTION BOX (FOR HAZARDOUS AREA)														
6.1	JUNCTION BOX FOR LIGHTING SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF JUNCTION BOX FOR LIGHTING SUITABLE FOR HAZARDOUS AREA, EEX'E' II-C T4, IP65, IMPACT RESISTANT POLYESTER ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 25MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AND AS PER REFERRED INSTALLATION DETAILS AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	12	NOS.												165-2-ELT-002
6.2	JUNCTION BOX FOR UTILITY SOCKET OUTLET SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF JUNCTION BOX FOR UTILITY OUTLETS SUITABLE FOR HAZARDOUS AREA, EEX'E' II-C T4, IP65, IMPACT RESISTANT POLYESTER ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 25MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AS PER REFERRED ANNEXURES AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	3	NOS.												165-2-ELT-002
7.0	JUNCTION BOX (FOR NON-HAZARDOUS AREA)														
7.1	JUNCTION BOX FOR LIGHTING SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF JUNCTION BOX FOR LIGHTING, IP55 (MIN), UV STABILIZED POLYCARBONATE OR SHEET METAL ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 25MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AS PER REFERRED ANNEXURES AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	12	NOS.												165-2-ELT-002
7.2	JUNCTION BOX FOR UTILITY SOCKET OUTLET SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF JUNCTION BOX FOR UTILITY OUTLETS, IP55 (MIN), UV STABILIZED POLYCARBONATE OR SHEET METAL ENCLOSURE, WITH TERMINALS SUITABLE FOR 2.5MM2 TO 16MM2 STRANDED CONDUCTORS AS SHOWN IN THE REFERRED JB SCHEDULE, EARTHING TERMINAL RAIL, WITH SUITABLE CABLE ENTRIES AND INSTALLATION ACCESSORIES COMPLETE IN ALL RESPECT ALONG WITH INTERNAL WIRING AND TERMINATIONS. THE JB SHALL HAVE METALLIC GLAND PLATES, LOCKNUTS & WASHERS AND ALL OTHER ACCESSORIES REQUIRED FOR INSTALLATION AS PER REFERRED ANNEXURES AND ACCEPTED INDUSTRY PRACTICES. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	3	NOS.												165-2-ELT-002
8.0	UTILITY SOCKET OUTLETS (FOR HAZARDOUS AREA)														
8.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED UTILITY OUTLETS 16A, SINGLE PHASE 3-PIN 230V, PROTECTION TYPE EEX'D' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE. COMPLETE WITH 2 NOS. CABLE ENTRIES OF M25 (WITH STOPPING PLUGS), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	5	NOS.												165-2-ELT-003

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

S NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
8.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED UTILITY OUTLETS 16A, SINGLE PHASE 3-PIN 230V, PROTECTION TYPE EEX'n' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE, COMPLETE WITH 2 NOS. CABLE ENTRIES OF M25 (WITH STOPPING PLUGS), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	1	NOS.												165-2-ELT-003
9.0	UTILITY SOCKET OUTLETS (FOR NON-HAZARDOUS AREA)														
9.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF SWITCHED UTILITY OUTLETS 16A, SINGLE PHASE 3-PIN 230V, IP-65 UV STABILIZED POLYCARBONATE ENCLOSURE, COMPLETE WITH 2 NOS. CABLE ENTRIES OF M25 (WITH STOPPING PLUGS), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	2	NOS.												165-2-ELT-003
10.0	WELDING SOCKET OUTLETS (FOR HAZARDOUS AREA)														
10.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED WELDING SOCKET OUTLET 63A, THREE PHASE 5-PIN 400V, PROTECTION TYPE EEX'D' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE, COMPLETE WITH 1 NO CABLE ENTRY OF M32 (WITH STOPPING PLUG), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	3	NOS.												165-2-ELT-003
10.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF SWITCHED WELDING SOCKET OUTLET 63A, THREE PHASE 5-PIN 400V, PROTECTION TYPE EEX'n' II-C T4, IP-65 GRP POLYAMIDE ENCLOSURE, COMPLETE WITH 1 NO CABLE ENTRY OF M32 (WITH STOPPING PLUG), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	1	NOS.												165-2-ELT-003
11.0	WELDING SOCKET OUTLETS (FOR NON-HAZARDOUS AREA)														
11.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF WEATHER PROOF SWITCHED WELDING SOCKET OUTLET 63A, THREE PHASE 5-PIN 400V, IP-65 UV STABILIZED POLYCARBONATE ENCLOSURE, COMPLETE WITH 1 NO CABLE ENTRY OF M32 (WITH STOPPING PLUG), MATCHING PLUGS AND INTERNAL TERMINAL BLOCK. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	2	NOS.												165-2-ELT-003
12.0	LOCAL CONTROL STATIONS (FOR HAZARDOUS AREA)														
12.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF LOCAL CONTROL STATION (OF FOLLOWING TYPE) FOR LV MOTORS, EEX'N' IIC T4, IP-65. GRP POLYCARBONATE ENCLOSURE, COMPLETE WITH CABLE ENTRY OF M25 (WITH STOPPING PLUG) FOR 12C-2.5MM2 ARMoured CABLE. LOCAL CONTROL STATION SHALL BE SUPPLIED COMPLETE WITH ALL REQUIRED INTERNAL TERMINALS, EARTHING TERMINALS, GLAND PLATE, NUTS, BOLTS, WASHERS, ETC COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	2	NO.												165-2-ELT-004
	THREE POSITION (I-O-II) ROTARY SELECTOR SWITCH FOR MANUAL-OFF-AUTO (MOA) SELECTION AND COMPRISING OF 1 NO. ON PUSH BUTTON (MOMENTARY CONTACT), 1 NO. MUSHROOM STAYPUT (LATCHED CONTACT) TYPE OFF PUSH BUTTON AND 2 NO. GREEN AND RED INDICATION LAMP.														

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR LIGHTING, SOCKETS, LOCAL CONTROL STATIONS

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
13.0	LOCAL CONTROL STATIONS (FOR NON- HAZARDOUS AREA).														
13.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF LOCAL CONTROL STATION (OF FOLLOWING TYPE) FOR LV MOTORS, IP-55. UV STABILIZED POLYCARBONATE ENCLOSURE, COMPLETE WITH CABLE ENTRY OF M25 (WITH STOPPING PLUG) FOR 12C-2.5MM2 ARMoured CABLE. LOCAL CONTROL STATION SHALL BE SUPPLIED COMPLETE WITH ALL REQUIRED INTERNAL TERMINALS, EARTHING TERMINALS, GLAND PLATE, NUTS, BOLTS, WASHERS, ETC. COMPLETE IN ALL RESPECT AND AS PER REFERRED TYPICAL INSTALLATION DRAWING.	2	NOS.												165-2-ELT-004
	THREE POSITION (I-O-II) ROTARY SELECTOR SWITCH FOR MANUAL-OFF-AUTO (MOA) SELECTION AND COMPRISING OF 1 NO. ON PUSH BUTTON (MOMENTARY CONTACT), 1 NO. MUSHROOM STAYPUT (LATCHED CONTACT) TYPE OFF PUSH BUTTON AND 1 NO. GREEN INDICATION LAMP.														
14.0	MULTIPLE SOCKET ASSEMBLIES (FOR HAZARDOUS AREA).														
14.1	SUPPLY OF EX-PROOF MULTIPLE SOCKET ASSEMBLIES, SUITABLE FOR USE AS A PORTABLE SUPPLY POINT IN CLASS I, DIV 1 CLASSIFIED HAZARDOUS AREA. THIS INCLUDES A COMMON ENCLOSURE RATED EEX de IIC T4, IP65 MADE OF GRP OR METAL COMPLETE WITH FOLLOWING COMPONENTS. - 63A, 5 PIN SOCKET INLET FOR RECEIVING POWER CONNECTION. - 63 A 3P MCB AS INCOMING PROTECTION. - 2 NOS 16A 3 PIN SWITCHED SOCKET OUTLET COMPLETE WITH 1P MCB. -1 NOS 32A 5 PIN SWITCHED SOCKET OUTLET. COMPLETE WITH 3P MCB.	1	NOS.												165-2-ELT-004
	Total Price (1 to 14)														

NOTES:

- 1 All taxes shall be payable by contractor.
- 2 The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- 3 Test certificates and MTC's of all items (where applicable) shall be provided.
- 4 The charges shall be supported by verified quotation of Inspection Agency.
- 5 Copy of the SRO 678 (1)/2007 is given in **Annexure-XVIII**



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR MOTOR CONTROL CENTER AND DISTRIBUTION PANELS & BOARDS



0	6/4/2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR MOTOR CONTROL CENTER AND DISTRIBUTION PANELS & BOARDS

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE		
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)	
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H	
1.0	LOW VOLTAGE SWITCHGEAR / MCC / SUB DISTRIBUTION BOARDS:															
1.1	SUPPLY, INSTALLATION, ERECTION, TESTING AND COMMISSIONING OF MOTOR CONTROL CENTER/ SWITCHGEAR (101-MCC-01) FLOOR MOUNTED 400 V, 50 Hz LV MCC / SWITCHGEAR ASSEMBLIES AS PER REFERRED SLDs DATA SHEET AND SPECIFICATION COMPLETE IN ALL RESPECTS INCLUDING BUT NOT LIMITED TO SUPPLY, FABRICATION, FIXING / BOLTING OF GALVANIZED STEEL BASE FRAME AND ALL OTHER INSTALLATION AND MOUNTING ACCESSORIES RQUIRED FOR JOB COMPLETION ALONG WITH TWO YEAR RECOMMENDED SPARE AND TRAININGS. THE JOB ALSO INCLUDES PROTECTION COORDINATION STUDIES OF THE NETWORK.	1	Set													165-2-ELS-002 165-2-SPE-017 165-2-SPE-024
1.2	SUPPLY OF TWO (02) YEARS RECOMMENDED SPARE PARTS. (PLEASE PROVIDE SEPARATE ITEM-WISE PRICED LIST)	1	LOT													
2.0	LOW VOLTAGE SUB DISTRIBUTION PANELS/BOARDS: (Indoor type)															
	SUPPLY, INSTALLATION, ERECTION , TESTING , COMMISSIONING OF FOLLOWING LOW VOLTAGE SUB DISTRIBUTION PANELS , INDOOR TYPE, IP31 ENCLOSURE AS SHOWN IN REFERRED SLD AND AS PER REFERRED DOCUMENTS COMPLETE IN ALL RESPECT INCLUDING ALL INSTALLATIONS, MOUNTING AND FIXING ACCESSORIES. THE JOB INCLUDES EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING BETWEEN PANELS ALONG WITH TWO YEAR RECOMMENDED SPARE AND TRAININGS COMPLETE IN ALL RESPECT.															165-2-SPE-017 165-2-SPE-024
2.1	LIGHTING DISTRIBUTION PANEL (101-LDP-01)	1	Set													165-2-ELS-004
3.0	AC UN-INTERRUPTABLE POWER SUPPLY:															
3.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AC UPS OF 20 KVA SUITABLE FOR 400V INPUT VOLTAGE, 230V OUTPUT VOLTAGE, 50 HZ, DUAL REDUNDANT TYPE, HOT STAND-BY, LEAD ACID SEALED BATTERY TYPE, AS PER REFERRED SPECIFICATIONS AND DATASHEETS. COMPLETE IN ALL RESPECT INCLUDING SUPPLY AND INSTALLATION OF ALL MOUNTING AND INSTALLATION ACCESSORIES. THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF FRAME (IF REQUIRED) AND EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING COMPLETE IN ALL RESPECT. EACH MODULE SHOULD BE SIZED TO WITHSTAND 100% LOAD	1	NO.													165-2-SPE-019 165-2-DSE-003
3.2	SUPPLY OF TWO (02) YEARS RECOMMENDED SPARE PARTS. (PLEASE PROVIDE SEPARATE ITEM-WISE PRICED LIST)	1	LOT													
4.0	AC UN-INTERRUPTABLE POWER SUPPLY:															
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AC UPS OF 30 KVA SUITABLE FOR 400V INPUT VOLTAGE, 400V OUTPUT VOLTAGE, 50 HZ, DUAL REDUNDANT TYPE, HOT STAND-BY, LEAD ACID SEALED BATTERY TYPE, AS PER REFERRED SPECIFICATIONS AND DATASHEETS. COMPLETE IN ALL RESPECT INCLUDING SUPPLY AND INSTALLATION OF ALL MOUNTING AND INSTALLATION ACCESSORIES. THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF FRAME (IF REQUIRED) AND EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING COMPLETE IN ALL RESPECT. EACH MODULE SHOULD BE SIZED TO WITHSTAND 100% LOAD	RATE ONLY	NO.													RATE ONLY

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES FOR MOTOR CONTROL CENTER AND DISTRIBUTION PANELS & BOARDS**

S.NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
5.0	RECTIFIER														
5.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF RECTIFIER OF 4 KVA SUITABLE FOR 400V INPUT VOLTAGE, 24V DC OUTPUT VOLTAGE, LEAD ACID SEALED BATTERY TYPE, AS PER REFERRED SPECIFICATIONS AND DATASHEETS. COMPLETE IN ALL RESPECT INCLUDING SUPPLY AND INSTALLATION OF ALL MOUNTING AND INSTALLATION ACCESSORIES. THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF FRAME (IF REQUIRED) AND EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING COMPLETE IN ALL RESPECT. EACH MODULE SHOULD BE SIZED TO WITHSTAND 100% LOAD, ALONG WITH DC DISTRIBUTION BOARD AND DC CABLING UPTO DISTRIBUTION BOARDS.	1	NO.												165-2-SPE-020 165-2-DSE-004
5.2	SUPPLY OF TWO (02) YEARS RECOMMENDED SPARE PARTS. (PLEASE PROVIDE SEPARATE ITEM-WISE PRICED LIST)	1	LOT												
6.0	UPS DISTRIBUTION PANELS/BOARDS: SUPPLY, INSTALLATION, ERECTION , TESTING , COMMISSIONING OF FOLLOWING UPS DISTRIBUTION PANELS , INDOOR TYPE, IP31 ENCLOSURE AS SHOWN IN REFERRED SLD AND AS PER REFERRED DOCUMENTS COMPLETE IN ALL RESPECT INCLUDING ALL INSTALLATIONS, MOUNTING AND FIXING ACCESSORIES. THE JOB INCLUDES EARTHING CONNECTIONS AND EQUIPOTENTIAL BONDING BETWEEN PANELS COMPLETE IN ALL RESPECT. FOR FLOOR MOUNTED PANELS, THE JOB INCLUDES FABRICATION, SUPPLY AND INSTALLATION OF STEEL BASE FRAME COMPLETE IN ALL RESPECT.														165-2-SPE-019 165-2-DSE-003
6.1	UPS DISTRIBUTION PANEL-01 (102-UDP-01)	1	Set												165-2-ELS-003
6.2	UPS DISTRIBUTION PANEL-02 (102-UDP-02)	1	Set												165-2-ELS-007
7.0	TRAINING TRAINING OF OPERATIONAL PERSONNEL AT PLANT FOR THE PERIOD OF TWO (02) WORKING WEEKS FOR ITEM NO 1.0 AND ITEM NO 3.0	1	JOB												
Total Price (1 to 7)															

NOTES:

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- TEST CERTIFICATES AND MTC'S OF ALL ITEMS (WHERE APPLICABLE) SHALL BE PROVIDED.
- THE CHARGES SHALL BE SUPPORTED BY VERIFIED QUOTATION OF INSPECTION AGENCY.



Zishan Engineers (Pvt.) Ltd.

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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR BUILDINGS



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Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR BUILDINGS

ITEM #	DESCRIPTION	QTY	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)			
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
1.0	WIRING / WIRING ACCESSORIES PROVIDING, INSTALLATION, TESTING & COMMISSIONING OF FOLLOWING ITEMS INCLUDING ALL MATERIAL, TOOLS, LABOR & ACCESSORIES REQUIRED FOR COMPLETION OF WORK AS PER SPECIFICATIONS, DETAILS & DRAWINGS. COMPLETE IN ALL RESPECTS.															
1.1	SMALL WIRING FOR LIGHTS															
1.1.1	CIRCUIT WIRING FROM DISTRIBUTION BOARD (DB) TO SWITCH BOARD USING 3NOS OF 1C X 2.5 SQ.MM CU/PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN DB TO SWITCH BOARD IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	10	NO.													
1.1.2	WIRING FOR LIGHT POINT FROM SWITCH BOARD TO OTHER SWITCH BOARD USING 3NOS OF 1C X 2.5 SQ.MM PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN SWITCH BOARD TO SWITCH BOARD IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	9	NO.													
1.1.3	WIRING FOR LIGHT POINT FROM SWITCH BOARD TO FIRST LIGHT POINT USING 3C X 2.5 SQ.MM PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN SWITCH BOARD TO LIGHT POINT IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	35	NO.													
1.1.4	WIRING FOR LIGHT POINT FROM POINT TO POINT USING 3 nos of 1C X 1.5 SQ.MM PVC/PVC CABLE INCLUDING ANY WIRING BETWEEN LIGHT POINT TO LIGHT IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.	60	NO.													
1.2	SMALL WIRING FOR UTILITY POWER SOCKETS															
1.2.1	CIRCUIT WIRING FROM RESPECTIVE DISTRIBUTION BOARD (DB) TO 5A SWITCH SOCKET UNITS (FIRST OUTLET) USING FOLLOWING SIZE OF MULTI CORE PVC INSULATED SOLID COPPER CONDUCTOR, COLOR CODED WIRES IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.															
1.2.1.1	3 NOS OF 1C - 2.5 SQMM AS PHASE, NEURAL & EARTH	6	NO.													
1.2.2	WIRING FOR 5A SWITCH SOCKET UNITS FROM OUTLET TO OUTLET USING FOLLOWING SIZE OF SINGLE CORE PVC INSULATED SOLID COPPER CONDUCTOR, COLOR CODED WIRES IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.															
1.2.2.1	3 NOS OF 1C - 2.5 SQMM AS PHASE, NEURAL & EARTH	12	NO.													
1.2.3	WIRING FOR 15A SWITCH SOCKET UNITS FROM DB TO OUTLET USING FOLLOWING SIZE OF SINGLE CORE PVC INSULATED SOLID COPPER CONDUCTOR, COLOR CODED WIRES IN 25 MM DIA PVC CONDUIT. COMPLETE WITH ALL ACCESSORIES AS SHOWN IN THE DRAWINGS.															
1.2.3.1	3 NOS OF 1C - 4 SQMM AS PHASE, NEURAL & EARTH	10	NO.													
2.0	WIRING DEVICES / RECEPTACLES PROVIDING, INSTALLATION AND COMMISSIONING OF FOLLOWING WIRING DEVICES / LIGHT CONTROL SWITCHES / POWER RECEPTACLES AS PER BS STANDARDS INCLUDING 16 SWG MS POWDER COATED BACK BOXES, FLUSH WITH WALL AS SHOWN IN DRAWINGS AND DETAILS.															

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR BUILDINGS

ITEM #	DESCRIPTION	QTY	UNIT	Supply						Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS / REFERENCE
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
2.1	LIGHT CONTROLLED SWITCHES														
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 10A SWITCH, INDOOR (COMMERCIAL) TYPE, UV STABILIZED POLYCARBONATE FRONT PLATE COMPLETE WITH FLUSH MOUNTED BACK BOX AND INSTALLATION AND MOUNTING ACCESSORIES.														
2.1.1	2-GANG SWITCH	12	NO.												
2.1.2	3-GANG SWITCH	4	NO.												
2.1.3	4-GANG SWITCH	3	NO.												
2.1.4	5-GANG SWITCH	1	NO.												
2.2	UTILITY / CONDITIONED POWER RECEPTACLES														
2.2.1	5A, SIMPLEX ROUND 2-PIN SWITCH SOCKET UNIT	8	NO.												
2.2.2	15A, SIMPLEX ROUND 3-PIN SWITCH SOCKET UNIT	6	NO.												
3.0	LIGHTING FIXTURES														
3.1	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2X36W, 230V, FLUORESCENT LIGHT FIXTURE, SURFACE MOUNTED, WITH POLYCARBONATE DIFFUSER, CABLE ENTRIES FOR THROUGH (FIXTURE TO FIXTURE) WIRING, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, LAMPS COMPLETE WITH ALL MOUNTING AND INSTALLATION ACCESSORIES.	15	NO.												
3.2	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 4X18W, 230V, FLUORESCENT TROFFER LIGHT FIXTURE, RECESSED MOUNTED, WITH SPECULAR (M2 TYPE) LOUVERS, SHEET STEEL POWDER COATED WHITE BODY, PLASTIC END CAPS, CABLE ENTRIES FOR THROUGH (FIXTURE TO FIXTURE) WIRING, COMPLETE WITH ELECTRONIC BALLAST, CONTROL GEAR, LAMPS COMPLETE WITH ALL MOUNTING AND INSTALLATION ACCESSORIES.	6	NO.												
3.3	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 1X10W, 230V, FLUORESCENT, SURFACE MOUNTED EXIT LIGHT, NON-MAINTAINED (WITH SELF-TEST FEATURE), WITH NIMH BATTERY BACKUP FOR 2 HOURS BACKUP OPERATION INJECTION MOLDED PLASTIC BODY, ACRYLIC DIFFUSER, 'EXIT' OR 'EXIT+ARROW' SIGN, CABLE ENTRY, ELECTRONIC BALLAST, CONTROL GEAR, LAMP COMPLETE WITH ALL MOUNTING AND INSTALLATION ACCESSORIES.	4	NO.												
3.4	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF SURFACE MOUNTED DOWNLIGHT FIXTURE WITH 18W PLC LAMP ALL INSTALLATION AND MOUNTING ACCESSORIES.	6	NO.												
4.0	FANS														
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 230V, 8 INCH SWEEP, EXHAUST FAN WITH SQUARE FRAME INCLUDING ALL MOUNTING AND INSTALLATION ACCESSORIES.	2	NO.												
5.0	DISTRIBUTION PANELS / SWITCHBOARDS														
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF FOLLOWING DISTRIBUTION BOARDS IN ACCORDANCE WITH THE ATTACHED SINGLE LINE DIAGRAMS AND LAYOUT PLANS. THE PANELS SHALL BE MADE WITH 16 SWG SHEET STEEL HOUSING , POWDER COATED AFTER ANTI-RUST PRIMERS. THE COPPER BUS BARS SHALL BE TIN ELECTROPLATED WITH PROTECTIVE COLOR CODED HEAT SHRINK SLEEVES. ALL DISTRIBUTION BOARDS SHALL FOR INDOOR INSTALLATIONS BUT PROVIDED WITH GAS KITS. ALL COMPONENTS AND ACCESSORIES SHALL BE AS PER THE SLD. CONTRACTOR HAS TO SUBMIT THE SHOP DRAWINGS PRIOR TO FABRICATION FOR CLIENT'S APPROVAL.														
5.1	LDB-CONTROL ROOM BUILDING (102-LDB-01)	1	NO.												165-2-ELS-005
5.2	LDB-MCCROOM & GEN SHED BUILDING (101-LDB-02)	1	NO.												165-2-ELS-006

**OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES FOR BUILDINGS**

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		
					A	B	C = A+B	D	E = C+D		F	G	H = F+G			I=E+H
6.0	CABLE RACEWAYS / CONTAINMENT PROVIDING AND LAYING OF FOLLOWING PVC CONDUITS FOR MAIN / SUB MAIN CABLES, POWER , SECURITY AND COMMUNICATION RISERS FROM RESPECTIVE FLOORS TO PULL BOXES / PANELS AS SHOWN IN THE PLANS. COMPLETE WITH ALL ACCESSORIES LIKE JUNCTION BOXES, BENDS, SOCKETS , ELBOWS ETC. ALL ITEMS SHALL BE OF SAME MANUFACTURER.														
6.1	25 MM DIA PVC CONDUIT.	80	RM.												
7.0	TELEPHONE & DATA CABLING PROVIDING , LAYING TESTING TAGGING COMMISSIONING OF CATEGORY 6 , UTP CABLES, FOR TELEPHONE SYSTEM & DATA FROM SERVICE PROVIDER TO MAIN TJB OR DATA RACK AT BUILDING IN APPROPRIATE SIZE OF UNDER FLOOR PVC. WORK INCLUDES ALL TERMINATIONS, MANAGEMENT AND TAGGING AT BOTH ENDS.	50	RM.												165-4-SPE-102
7.1	10 PAIR, 0.6 MM TELEPHONE CABLE FROM MAIN TJB TO OUTLET AT BUILDING IN APPROPRIATE SIZE OF PVC CONDUIT INCLUDING ALL ACCESSORIES. COMPLETE WITH TERMINATION AND TAGGING AT BOTH ENDS.	30	RM.												
7.2	PATCH PANEL PATCH PANEL FOR DATA MAKE IN BUILDING INCLUDING WITH MARKING ARRANGEMENTS FOR 10 PAIR CABLES.	2	NO.												
7.3	TELEPHONE JUNCTION BOX TELEPHONE JUNCTION BOX MAKE IN BUILDING INCLUDING WITH MARKING ARRANGEMENTS FOR 10 PAIR CABLES.	1	NO.												
7.4	INFORMATION OUTLETS														
7.4.1	WORKSTATION/WALL/FLOOR OUTLET BOX MOUNTED INFORMATION OUTLET HAVING SIMPLEX FACE PLATE WITH 1NO. CAT-6, RJ-45 SOCKET FOR TELEPHONE SYSTEM INCLUDING SHUTTERED CLICK-INS, LABELS, JACKS ETC. COMPLETE IN ALL RESPECTS WITH CABLE IDENTIFICATION TAGS.	6	NO.												
7.4.2	WORKSTATION/WALL/FLOOR OUTLET BOX MOUNTED INFORMATION OUTLET HAVING SIMPLEX FACE PLATE WITH 1NO. CAT-6, RJ-45 SOCKET FOR DATA COMMUNICATION SYSTEM INCLUDING SHUTTERED CLICK-INS, LABELS, JACKS ETC. COMPLETE IN ALL RESPECTS WITH CABLE IDENTIFICATION TAGS.	8	NO.												
8.0	FIRE ALARM SYSTEM DESIGN, SUPPLY INSTALLATION, TESTING AND COMMISSIONING OF CONVENTIONAL ADDRESSABLE FIRE ALARM SYSTEM IN CIVIL CONSTRUCTED BUILDING OF PC TENDER SCOPE, COMPRISING OF FOLLOWING EQUIPMENTS INCLUDING ALL ACCESSORIES REQUIRED FOR THE COMPLETION OF THE SYSTEM COMPLETE IN ALL RESPECTS. FIRE / ALARM SYSTEM SHALL CONSIST OF BUT NOT LIMITED TO FOLLOWING MAJOR COMPONENTS SMOKE DETECTORS / HEAT DETECTORS / UV FLARE DETECTORS (SELECTION OF OPTIMUM TYPE OF DETECTOR SHALL BE CONTRACTOR RESPONSIBILITY), BREAK GLASS TYPE MANUAL CALL STATIONS BREAK GLASS SHALL ALSO INCORPORATES AN INDICATION LED FLASHED AFTER PRESSING THE BUTTON TO ACKNOWLEDGE THE ACTIVATION AND KEY OPERATION FACILITY FOR TESTING PURPOSES.	1	JOB.												165-2-SPE-022

OIL & GAS DEVELOPMENT COMPANY LTD.
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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		
	<p>INDOOR ELECTRONIC SOUNDERS WITH FLASHER, MINIMUM SOUND OUTPUT 100 DB AT 1METER WITH FREQUENCIES FOR VARIETY OF SOUNDS AS REQUIRED.</p> <p>ADDRESSABLE FIRE ALARM CONTROL PANEL(S) MINIMUM OF TWO LOOPS WITH ANY COMMUNICATION MODULES REQUIRED TO INTERFACE / INTEGRATE MULTIPLE FACPS. COMPLETE SYSTEM INTEGRATION, TESTING & COMMISSIONING OF THE SYSTEM INCLUDING ALL SOFTWARE / FIRMWARE / HARDWARE REQUIREMENTS, AS REQUIRED FOR SUCCESSFUL COMMISSIONING OF THE SYSTEM AS PER RELEVANT INTERNATIONAL STANDARDS AND INDUSTRY NARROWS.</p> <p>COMPLETE SYSTEM WIRING / CABLING INCLUDING POWER CABLING, SIGNAL WIRING, ETC. COMPLETE WITH ALL REQUIRED CABLE WAYS (CONDUITS / TRAY, ETC). WIRING FOR COMPLETE FIRE ALARM SYSTEM USING 2C, 1.5 SQ. MM. LSZH CABLE IN APPROPRIATE SIZE OF GI CONDUITS. COMPLETE IN ALL RESPECTS. POWER WIRING FOR FACP FROM EMERGENCY DB IN USING 3 X 1.5 SQMM SINGLE CORE PVC INSULATED WIRES IN APPROPRIATE SIZE OF PVC CONDUIT. COMPLETE IN ALL RESPECTS.</p>														
	Total Price (1 to 8)														

NOTES:

- 1 All taxes shall be payable by contractor.
- 2 The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- 3 Test certificates and MTC's of all items (where applicable) shall be provided.
- 4 The charges shall be supported by verified quotation of Inspection Agency.



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR EARTHING WORKS



0	04-06-2018	Issued for Tender	MF	NAK	MIAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR EARTHING WORKS

S. NO.	DESCRIPTION	QTY.	UNIT	Supply						Services				REMARKS / REFERENCE	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)	Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)		Total Amount (Supply + Services) (Pak. Rs.)
					A	B	C = A+B	D	E = C+D	F	G	H = F+G	I=E+H		
1.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 4M LONG EARTH ELECTRODE, COPPER CLADDED STEEL, 3/4" DIA ROD, WITH 2 M LONG AND 2" DIA UPVC PIPE, EXTENDIBLE ON BOTH SIDES COMPLETE WITH DRIVING HEAD CAP ON TOP, 2 NOS. CLAMPS FOR 70 SQ.MM BARE CONDUCTOR CONNECTION, STAINLESS STEEL FASTENING ACCESSORIES ETC. COMPLETE IN ALL RESPECT. THE JOB INCLUDES CONSTRUCTION OF CONCRETE EARTH PIT WITH ALL MATERIALS AS SHOWN IN REFER DRAWING COMPLETE IN ALL RESPECT.	6	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
2.0	SAME AS ITEM#1, BUT WITHOUT CONSTRUCTION OF EARTH PIT. (RODS TO BE BURIED)	8	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
3.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 6M LONG EARTH ELECTRODE, COPPER CLADDED, 3/4" DIA ROD, WITH 3 M LONG AND 2" DIA UPVC PIPE, EXTENDIBLE ON BOTH SIDES COMPLETE WITH DRIVING HEAD CAP ON TOP, 2 NOS. CLAMPS FOR 70 SQ.MM BARE CONDUCTOR CONNECTION, STAINLESS STEEL FASTENING ACCESSORIES ETC. COMPLETE IN ALL RESPECT. THE JOB INCLUDES CONSTRUCTION OF CONCRETE EARTH PIT WITH ALL MATERIALS AS SHOWN IN REFER DRAWING COMPLETE IN ALL RESPECT.	3	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
4.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF EARTH BARS MADE OF HARD DRAWN COPPER (TINNED), SUITABLE FOR MOUNTING ON STEEL STRUCTURE, CONSISTING OF 10 NOS. EQUALLY SPACED M8 HOLES. EACH PLATE SHALL ALSO HAVE 2 NOS. M10 HOLES FOR MOUNTING. EACH PLATE SHALL BE SUPPLIED WITH 2 NOS. GALVANIZED MILD STEEL TUBE SPACERS, AND M10, ELECTROZINC PLATED NUTS, BOLTS AND STAR WASHERS, COMPLETE IN ALL RESPECTS.	12	Nos.												165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
5.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF PVC-INSULATED, GREEN-YELLOW OUTER PVC SHEATHED, CIRCULAR, STRANDED ANNEALED COPPER CONDUCTOR CABLES, CONFIRMING TO BS-6004, (450 / 750 V) ON CABLE LADDER / RACK OR BURIED COMPLETE IN ALL RESPECTS INCLUDING SUPPLY AND INSTALLATION OF CRIMPED CONNECTORS FOR BRANCHING OF ABOVE GROUND EARTH CABLE, SUPPLY AND INSTALLATION CABLE LUGS AND TERMINATIONS ON EQUIPMENT AND EARTHING PHILOSOPHY DOCUMENTS.														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
5.1	1C-240	70	RMtrs.												
5.2	1C-70	180	RMtrs.												
5.3	1C-35	120	RMtrs.												
5.4	1C-16	40	RMtrs.												
5.5	1C-6	240	RMtrs.												
6.0	SUPPLY AND INSTALLATION OF CAD WELD CONNECTIONS ON BURIED CABLE OF FOLLOWING SIZES														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
6.1	1C-70	6	Nos												
6.2	1C-35	12	Nos												
6.3	1C-16	10	Nos												
7.0	SUPPLY, INSTALLATION, LAYING, TERMINATION, TESTING AND COMMISSIONING OF FOLLOWING SIZES BARE COPPER CONDUCTORS (TO IEC 60228) COMPLETE IN ALL RESPECTS. CONDUCTOR TO BE LAID ON LEAN CONCRETED SURFACE. THIS ALSO INCLUDES CABLE TERMINATION / CLAMPING ON ABOVE EARTH RODS, INSTALLATION OF STUB-UP PIPES FOR BRINGING THE CABLE ABOVE SURFACE AND TERMINATION ON STEEL STRUCTURE OR EARTH PLATES ETC. AS SPECIFIED ON EARTHING SCHEMATIC														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
7.1	1C-70	50	RMtrs.												
7.2	1C-35	60	RMtrs.												
7.3	1C-10	80	RMtrs.												
7.4	1C-6	100	RMtrs.												

OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR EARTHING WORKS

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					A	B	C = A+B	D	E = C+D		F	G	H = F+G		I=E+H
8.0	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF C-TYPE, COPPER COMPRESSION TAPS / CONNECTOR FOR CRIMPED CONNECTIONS OF EARTH CABLE BRANCHES FROM MAIN CABLE. CONNECTORS SHALL BE SUITABLE FOR FOLLOWING CABLE SIZES.														165-2-ELT-001 165-2-SPE-023 165-2-SPE-021
8.1	MAIN 70 SQMM; BRANCH 70 SQMM	2	Nos.												
8.2	MAIN 70 SQMM; BRANCH 35 SQMM	11	Nos.												
8.3	MAIN 70 SQMM; BRANCH 16 SQMM	3	Nos.												
8.4	MAIN 35 SQMM; BRANCH 35 SQMM	2	Nos.												
8.5	MAIN 35 SQMM; BRANCH 16 SQMM	8	Nos.												
8.6	MAIN 16 SQMM; BRANCH 16 SQMM	2	Nos.												
9.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF ANNEALED COPPER STRIP 20 mm x 3 mmT IN HORIZONTAL MESH FORMAT ON TOP OF DIFFERENT BUILDINGS INCLUDING CONNECTION OF THE NETWORK WITH STEEL BARS OF ROOF RCC STRUCTURE COMPLETE IN ALL RESPECTS INCLUDING ALL INSTALLATION ACCESSORIES SUCH AS CLAMPS, NUTS, BOLTS ETC. THE JOB INCLUDES SECURELY CONNECTING ALL MUTUALLY CROSSING STRIPS AT INTERSECTION POINTS AS PER REFERRED INSTALLATION DETAILS.	30	RMtrs.												165-2-ELT-008 165-2-SPE-023 165-2-SPE-021
10.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF ANNEALED COPPER STRIP 20 mm x 3 mmT AS DOWN CONDUCTOR OF LP SYSTEM. THIS INCLUDES CLAMPING ON EXTERNAL WALL AND CONNECTION WITH THE EARTH AND RCC STRUCTURE NETWORK.	4	RMtrs.												
11.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF LP TEST POINTS.	3	Nos.												
12.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE IMPRESSED CURRENT CATHODIC PROTECTION FOR 2 NOS OF TANKS AT MELA FACILITY COMPLETE IN ALL RESPECTS AS DETAILED IN SCOPE OF WORK AND SPECIFICATION FOR CP SYSTEM (165-2-SPE-026). THE JOB INCLUDES BUT NOT LIMITED TO COMPLETE ANODE, RECTIFIER, TRANSFORMER, ALL CABLING, TEST POINTS, CONTROL PANEL ETC ETC REQUIRED FOR COMPLETE CATHODIC PROTECTION SYSTEM.	1	JOB												
13.0	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF COMPLETE SACRIFICIAL ANODE CATHODIC PROTECTION FOR COMPLETE PLANT BURIED PIPINGS AS PER ATTACHED PIPING LAYOUTS AND P&IDs AT MELA FACILITY COMPLETE IN ALL RESPECTS AS DETAILED IN SCOPE OF WORK AND SPECIFICATION FOR CP SYSTEM (165-2-SPE-026). THE JOB INCLUDES BUT NOT LIMITED TO COMPLETE ANODE, ALL CABLING, TEST POINTS ETC REQUIRED FOR COMPLETE CATHODIC PROTECTION SYSTEM.	1	JOB												
Total Price (1 to 13)															

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- Test certificates and MTC's of all items (where applicable) shall be provided.
- The charges shall be supported by verified quotation of Inspection Agency.



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR CONDUIT, TRAY, LADDER TRENCHES, SLEEVES ROAD CROSSINGS, STUB UPS ETC (ELECTRICAL WORKS)



0	04-06-2018	Issued for Tender	MF	NAK	MAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	SUPPLY AND INSTALLATION OF GI PIPES/CONDUIT OF FOLLOWING SIZES, BURIED IN SOIL PAVING OR INSTALLED / SUPPORTED ON STEEL/RCC STRUCTURE. THE JOB INCLUDES ALL MOUNTING AND INSTALLATION ACCESSORIES SUCH AS CLAMPS, HOLDERS, SUPPORTS, UNITS / BOLTS, WASHER, ETC. COMPLETE IN ALL RESPECTS.														
1.1	75 MM DIA GI CONDUIT	25	RMTRS.												
1.2	63 MM DIA GI CONDUIT	30	RMTRS.												
1.3	50 MM DIA GI CONDUIT	50	RMTRS.												
1.4	32 MM DIA GI CONDUIT	90	RMTRS.												
1.5	25 MM DIA GI CONDUIT	80	RMTRS.												
1.6	20 MM DIA GI CONDUIT	60	RMTRS.												
2.0	SUPPLY AND INSTALLATION OF FOLLOWING GI PIPES/CONDUITS FITTING OF STATED SIZES, (TO BE INSTALLED UNDERGROUND OR INSTALLED ABOVE GROUND, SUPPORTED ON STEEL STRUCTURE/RCC) INCLUDING ALL MOUNTING AND INSTALLTION ACCESSORIES COMPLETE IN ALL RESPECT.														
2.1	UNIONS:														
2.1.1	75 MM DIA	3	Nos.												
2.1.2	63 MM DIA	10	Nos.												
2.1.3	50 MM DIA	8	Nos.												
2.1.4	32 MM DIA	7	Nos.												
2.1.5	25 MM DIA	10	Nos.												
2.1.6	20 MM DIA	8	Nos.												
2.2	TEES														
2.2.1	75 MM DIA	2	Nos.												
2.2.2	63 MM DIA	2	Nos.												
2.2.3	50 MM DIA	3	Nos.												
2.2.4	32 MM DIA	3	Nos.												
2.2.5	25 MM DIA	5	Nos.												
2.2.6	20 MM DIA	6	Nos.												
2.3	ELBOWS														
2.3.1	75 MM DIA	6	Nos.												
2.3.2	63 MM DIA	8	Nos.												
2.3.3	50 MM DIA	12	Nos.												
2.3.4	32 MM DIA	10	Nos.												
2.3.5	25 MM DIA	20	Nos.												
2.3.6	20 MM DIA	18	Nos.												
2.4	OUTLET BOX 4-WAY WITH COVER														
2.4.1	75 MM DIA	1	Nos.												
2.4.2	63 MM DIA	1	Nos.												
2.4.3	50 MM DIA	1	Nos.												
2.4.4	32 MM DIA	2	Nos.												
2.4.5	25 MM DIA	4	Nos.												
2.4.6	20 MM DIA	5	Nos.												
3.0	SUPPLY AND INSTALLATION OF CLASS "D" UPVC CONDUITS FOR USE AS STUB UP PIPE SLEEVES FOR BURIED CABLE (FROM UNDERGROUND TO SURFACE).														
3.1	4" DIA PIPE OF 1M LENGTH EACH	6	Nos.												
3.2	3" DIA PIPE OF 1M LENGTH EACH	8	Nos.												
3.3	2" DIA PIPE OF 1M LENGTH EACH	15	Nos.												

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
4.0	SUPPLY & INSTALLATION OF CLASS D UPVC CONDUIT AS BURIED RUNS OF PIPE SLEEVES AT DIFFERENT PLANT LOCATION UNDER PAVED AREAS. THE JOBS INCLUDES ALL CONDUIT FITTINGS, REQUIREMENTS FOR COMPLETION OF JOB.														
4.1	4" DIA.	15	RMTRS												
4.2	3" DIA.	18	RMTRS												
4.3	2" DIA.	26	RMTRS												
5.0	SUPPLY & INSTALLATION OF MS PIPE AS BURIED SLEEVES UNDER PAVED AREA IN APPLICATIONS OTHER THAN ROAD CROSSING COMPLETE IN ALL RESPECTS. (PIPE SLEEVES USED AS ROAD CROSSING SHALL BE QUOTED AS PART OF ITEM 9.0)														
5.1	6" DIA	10	RMTRS												
5.2	4" DIA	18	RMTRS												
6.0	SUPPLY & INSTALLATION OF M.S. CHANNELS OF FOLLOWING SIZES, INSTALLED ON STEEL OR RCC STRUCTURES, EITHER AS SUPPORT / MOUNTING OR AS CABLE WAY FOR SMALL DIA SINGULAR CABLE RUNS. THIS INCLUDES SUPPLY AND INSTALLATION OF ALL MOUNTING & INSTALLATION ACCESSORIES SUCH AS CLAMPS, HOLDERS, BOLTS, WASHER'S, COUPLERS, ETC. COMPLETE IN ALL RESPECTS														
6.1	50MM(W) X 50MM(D) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	22	RMTRS												
6.2	50MM (W) X 75MM (D) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	18	RMTRS												
7.0	SUPPLY AND INSTALLATION OF GALVANIZED STEEL CABLE LADDER AND ACCESSORIES, MADE UP OF STRUCTURAL QUALITY STEEL, HOT DIP GALVANIZED TO BS 729, AND SUITABLE FOR USE IN MARINE ENVIRONMENT. COMPLETE IN ALL RESPECTS INCLUDING SUPPLY AND INSTALTION OF ALL REQUIRED SPLICE PLATES, HEX NUT, BOLTS AND WASHERS, ETC. NOTES: 1.THE MENTIONED QUANTITIES ARE COMBINED FOR BOTH ELECTRICAL & INSTRUMENT CABLE LADDER RACKS. 2.OVERALL LADDER RACK SIDE HEIGHT SHALL BE 127MM (MAX.) 3.NUTS BOLTS AND WASHERS SHALL BE GALVANISED AND SUITABLY SIZED. 4.PROVISION TO BE MADE FOR BONDING BETWEEN RACK SECTIONS. 5.RUNGS TO BE SLOTTED, INSTALLED FLAT SIDE UP AND SPACED AT 300MM CENTRES.														
7.1	900MM WIDE STRAIGHT LADDER RACK	130	RMTRS												
7.2	600MM WIDE STRAIGHT LADDER RACK	128	RMTRS												
7.3	300MM WIDE STRAIGHT LADDER RACK	270	RMTRS												
7.4	150MM WIDE STRAIGHT LADDER RACK	330	RMTRS												
7.5	100MM WIDE STRAIGHT LADDER RACK	160	RMTRS												
7.6	90 DEG. HORIZONTAL FLAT BEND, 900MM	2	Nos.												
7.7	90 DEG. HORIZONTAL FLAT BEND, 600MM	3	Nos.												
7.8	90 DEG. HORIZONTAL FLAT BEND, 300MM	4	Nos.												
7.9	90 DEG. HORIZONTAL FLAT BEND, 150MM	5	Nos.												
7.10	90 DEG. HORIZONTAL FLAT BEND, 100MM	2	Nos.												
7.11	45 DEG. HORIZONTAL FLAT BEND, 900MM	3	Nos.												
7.12	45 DEG. HORIZONTAL FLAT BEND, 600MM	4	Nos.												
7.13	45 DEG. HORIZONTAL FLAT BEND, 300MM	1	Nos.												
7.14	45 DEG. HORIZONTAL FLAT BEND, 150MM	1	Nos.												
7.15	HORIZONTAL TEE 900MM	1	Nos.												
7.16	HORIZONTAL TEE 600MM	1	Nos.												
7.17	HORIZONTAL TEE 300MM	1	Nos.												
7.18	HORIZONTAL TEE 150MM	1	Nos.												
7.19	HORIZONTAL TEE 100MM	1	Nos.												

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
7.20	HORIZONTAL REDUCING/EXPANDING TEE 900MM X 600MM	1	Nos.												
7.21	HORIZONTAL REDUCING/EXPANDING TEE 600MM X 300MM	1	Nos.												
7.22	HORIZONTAL REDUCING/EXPANDING TEE 300MM X 150MM	1	Nos.												
7.23	HORIZONTAL CROSS 900MM	1	Nos.												
7.24	HORIZONTAL CROSS 600MM	1	Nos.												
7.25	HORIZONTAL CROSS 300MM	1	Nos.												
7.26	HORIZONTAL CROSS 150MM	1	Nos.												
7.27	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 900MM	1	Nos.												
7.28	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 600MM	1	Nos.												
7.29	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 300MM	1	Nos.												
7.30	90 DEG. VERTICAL INSIDE/OUTSIDE BEND, 150MM	1	Nos.												
8.0	MATERIAL FOR LADDER / RACK SUPPORTS SUPPLY FABRICATION AND INSTALLATION OF CABLE TRAY SUPPORT STRUCTURE COMPRISING OF VARIOUS CONFIGURATIONS OF FOLLOWING STRUCTURAL STEEL MEMBERS (AS SHOWN IN REFERRED TYPICAL DETAILS). COMPLETE IN ALL RESPECTS INCLUDING ALL MATERIALS / ACCESSORIES REQUIRED FOR FABRICATION, FIXING AND INSTALLATION.														
8.1	ANGLE 10MM THICKNESS	300	KG												
8.2	ANGLE 6MM THICKNESS	280	KG												
8.3	CHANNELS 10MM THICKNESS	45	KG												
8.4	CHANNELS 6MM THICKNESS	38	KG												
8.5	PLATE 6MM THK	40	KG												
8.6	PLATE 10MM THK	75	KG												
9.0	CONSTRUCTION OF CABLE DUCT BANKS OF FOLLOWING TYPES AT ROAD CROSSING AS PER REFERRED TYPICAL DETAILS COMPLETE IN ALL RESPECTS WITH ALL CIVIL MATERIAL, INCLUDING SUPPLY AND LAYING OF MS PIPES (OF DIMENSIONS AND QUANTITY) AS SHOWN IN REFERRED DRAWINGS. (ROAD WIDTH TO BE TAKEN AS 6 M FOR EACH ROAD CROSSING)														165-2-ELT-009
9.1	TYPE-A	3	Nos.												
9.2	TYPE-B	3	Nos.												
9.3	TYPE-C	8	Nos.												
9.4	TYPE-D	1	Nos.												
9.5	TYPE-E	1	Nos.												
10.0	CONSTRUCTION OF CABLE PITS / HAND HOLES / MAN HOLES OF FOLLOWING TYPES AS PER REFERRED TYPICAL DETAIL DRAWINGS COMPLETE IN ALL RESPECTS WITH ALL CIVIL MATERIAL AS SHOWN IN REFERRED DRAWINGS (COST OF PIPES SHOWN IN THE DRAWING SHALL NOT BE INCLUDED IN THIS ITEM AND SHALL BE QUOTED SEPARATELY UNDER ITEMS 9.0 & 5.0)														165-2-ELT-010
10.1	TYPE-A	2	Nos.												
10.2	TYPE-B	6	Nos.												
10.3	TYPE-C	4	Nos.												
11.1	EXCAVATION OF CABLE TRENCH 800MM(W) X 1000MM(D) AS PER CABLE LAYOUT DRAWING AND REFERRED TYPICAL INSTALLATION DETAILS. THE JOB ALSO INCLUDES BACKFILLING OF CABLE TRENCH AFTER CABLE LAYING. THIS INCLUDES PROVIDING AND LAYING OF LAYER OF FINE SAND ABOVE AND BELOW THE CABLE, PROVIDING AND LAYING OF CABLE TILES COVERING ENTIRE WIDTH OF THE TRENCH, BACKFILLING OF CABLE TRENCH WITH RUBBLE FREE SOIL, COMPACTING OF TRENCH, INSTALLATION OF DANGER TAPE AND INSTALLATION OF CABLE MARKERS.	510	Mtrs												165-2-ELL-003 165-2-ELT-006

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
BILL OF QUANTITIES (ELECTRICAL WORKS)

S NO.	DESCRIPTION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
11.2	EXCAVATION OF CABLE TRENCH 450MM(W) X 800MM(D) AS PER CABLE LAYOUT DRAWING AND REFERRED TYPICAL INSTALLATION DETAILS. THE JOB ALSO INCLUDES BACKFILLING OF CABLE TRENCH AFTER CABLE LAYING. THIS INCLUDES PROVIDING AND LAYING OF LAYER OF FINE SAND ABOVE AND BELOW THE CABLE, PROVIDING AND LAYING OF CABLE TILES COVERING ENTIRE WIDTH OF THE TRENCH, BACKFILLING OF CABLE TRENCH WITH RUBBLE FREE SOIL, COMPACTING OF TRENCH, INSTALLATION OF DANGER TAPE AND INSTALLATION OF CABLE MARKERS.	635	Mtrs												165-2-ELL-003 165-2-ELT-006
	Total Price (1 to 11)														

NOTES:

- 1 All taxes shall be payable by contractor.
- 2 The quantities mentioned in the BOQs are indicative and may change as detail design progresses. The bid evaluation will be carried out considering the quantities given in BOQs and unit rates quoted by the Bidders.
- 3 Test certificates and MTC's of all items (where applicable) shall be provided.
- 4 The charges shall be supported by verified quotation of Inspection Agency.
- 5 Copy of the SRO 678 (1)/2007 is given in **Annexure-XVIII**



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

UNIT PRICE SCHEDULE



0	04-06-2018	Issued for Tender	MF	NAK	MIAH
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.
MELA DEVELOPMENT PROJECT
SCHEDULE OF RATES FOR ADDITIONAL ELECTRICAL WORKS
UNIT PRICE SCHEDULE

S. NO.	DESCRIPTION	QTY	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REFERENCE / REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	MCC / DISTRIBUTION BOARDS SUPPLY AND INSTALLATION OF CUBICLES OF LV SWITCHGEAR (400 V) INCLUDING BUSBAR, BUS DROPPER, INTERNAL WIRING, CONNECTORS, METERING INDICATIONS AND PROTECTIONS.														
A.	ADDITIONAL CUBICLE FOR 101-MCC-01 OFW=800 X D=800 X H =2200 MM														
2.0	SUPPLY AND INSTALLATION OF FOLLOWING COMPONENTS OF LV SWITCHGEAR (400 V) INCLUDING BUSBAR, BUS DROPPER, INTERNAL WIRING, CONNECTORS, METERING INDICATIONS AND PROTECTIONS.														
	STARTERS:														
	A DOL STARTERS														
	(I) 0.37 KW	1	Nos												
	(II) 1.5 KW	1	Nos												
	(III) 2.2 KW	1	Nos												
	(IV) 3.7 KW	1	Nos												
	(V) 5.5 KW	1	Nos												
	(VI) 7.5 KW	1	Nos												
	(VII) 11 KW	1	Nos												
	(VIII) 15 KW	1	Nos												
	(IX) 18.5 KW	1	Nos												
	(X) 22 KW	1	Nos												
	(XI) 30 KW	1	Nos												
	(XII) 37 KW	1	Nos												
	B. SOFT STARTERS														
	(I) 22 KW	1	Nos												
	(II) 30 KW	1	Nos												
	(III) 37 KW	1	Nos												
	(IV) 45 KW	1	Nos												
	(V) 55 KW	1	Nos												
	(VI) 75 KW	1	Nos												
	C. VARIABLE FREQUENCY DRIVES:														
	I 3.75 KW	1	Nos												
	II 5.5 KW	1	Nos												
	III 7.5 KW	1	Nos												
	IV 11 KW	1	Nos												
	V 15 KW	1	Nos												
	VI 18.5 KW	1	Nos												
	VII 22 KW	1	Nos												
	VIII 30 KW	1	Nos												
	IX 37 KW	1	Nos												
	X 45 KW	1	Nos												
	XI 55 KW	1	Nos												
	XII 75 KW	1	Nos												
	FEEDERS:														
	D. MCCB CIRCUIT BREAKER														
	(I) 400 A	1	Nos												
	(II) 600 A	1	Nos												
	(III) 800 A	1	Nos												
	(IV) 1000 A	1	Nos												
	(V) 1200 A	1	Nos												
	(VI) 1500 A	1	Nos												
Total Price (1 to 2)															

NOTES:

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THIS SHALL INCLUDE TO AND FROM TRAVEL EXPENSES, BOARDING / LODGING, INSURANCE, MEDICAL COVER AND ALL OTHER EXPENSES. THE ABOVE RATES WOULD ONLY BE APPLICABLE TO CALCULATE VARIATION IN SWITCHGEAR PRICES, IN CASE OF ADDITION, REDUCTION OR REPLACEMENT OF ANY OF THE ABOVE MENTIONED COMPONENTS / MODULES AS COMPARED TO ORIGINAL TENDER DESIGN, DUE TO POSSIBLE CHANGE IN LOAD KW RATINGS. CONTRACTOR / SUPPLIER SHALL REMAIN RESPONSIBLE TO INCORPORATE ALL SUCH CHANGES RECEIVED FROM OGDCL BEFORE START OF SWITCHGEAR FABRICATION.IT SHALL BE NOTED THAT THE ABOVE PRICE SCHEDULE SHALL FORM THE BASIS FOR CALCULATION OF PRICE VARIATION IN SWITCHGEAR (IF REQUIRED). BIDDER'S QUOTED PRICES SHALL BE INCLUSIVE OF ANY ASSOCIATED COSTS

ATTACHMENT - 4



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR FIELD INSTRUMENTS / DEVICES



0	04-06-2018	Issued for Tender	JAK	JAK	NAK
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

ITEM	MATERIAL DESIGNATION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
1.0	INSTRUMENTS														
	SUPPLY, INSTALLATION, HOOKUP, CALIBRATION, TESTING AND COMMISSIONING OF FOLLOWING INSTRUMENTS AS PER INSTRUMENT HOOKUP DRAWINGS AND INSTRUMENT DATA SHEETS/SPECIFICATIONS COMPLETE IN ALL RESPECTS. THE PRICES QUOTED SHALL BE INCLUSIVE OF: SUPPLY AND INSTALLATION OF ALL REQUIRED MOUNTING AND INSTALLATION ACCESSORIES SUCH AS MOUNTING STANDS / SUPPORTS, STANCHION, CLAMPS, NUTS, BOLTS, BASE ETC. (AS REFERRED IN TYPICAL DETAIL DRAWINGS). SUPPLY, INSTALLATION, CONNECTIONS, TESTING AND COMMISSIONING OF INSTRUMENT TUBINGS AND FITTINGS (SUCH AS CONNECTORS, COUPLINGS, INST. MANIFOLD VALVES, ETC) WITH ALL RELATED MOUNTING ACCESSORIES SUCH AS CLAMPS/TIES (FOR SECURING TUBING RUNS TO AVAILABLE SUPPORTS), TUBING SUPPORTS (WELDED TO AVAILABLE STEEL STRUCTURE), ETC. COMPLETE IN ALL RESPECTS. (AS REFERRED IN INSTRUMENT HOOKUP DRAWINGS).														FOLLOWING TYPICAL DRAWINGS SHALL REMAIN APPLICABLE TO ALL ITEMS COVERED IN THIS SECTION. 165-2-IDT-001 165-2-IDT-003
1.1	INSTRUMENTS														
1.1.1	PRESSURE INSTRUMENTS														
a)	PRESSURE GAUGES WITH BLOCK AND BLEED VALVE MANIFOLD	31	NOS.												165-2-DSI-001 165-2-IHU-001
b)	PRESSURE DIFFERENTIAL INDICATOR WITH 5 VALVE MANIFOLD	2	NOS.												165-2-DSI-006 165-2-IHU-005
1.1.2	TEMPERATURE INSTRUMENTS														
a)	TEMPERATURE INDICATORS WITH THERMOWELL	1	NO.												165-2-DSI-002 165-2-IHU-002
1.1.3	FLOW INSTRUMENTS														
a)	FLOW INDICATOR WITH FLOW TOTALIZER (TURBINE TYPE)	1	NO.												165-2-DSI-004 165-2-IHU-006
1.1.4	VALVES														
a)	PRESSURE SAFETY VALVE (1" x 2")	1	NO.												165-2-DSI-003
b)	PRESSURE SAFETY VALVE (3/4" x 1")	2	NOS.												165-2-DSI-003
c)	PRESSURE SAFETY VALVE (4" x 6")	2	NOS.												165-2-DSI-003
d)	PRESSURE SAFETY VALVE (6" x 8")	1	NO.												165-2-DSI-003
1.1.5	LEVEL INSTRUMENTS														
(a)	LEVEL INDICATOR (FLOAT & MAGNETIC TYPE)	1	NO.												165-2-DSI-005 165-2-IHU-003
(b)	LEVEL TRANSMITTER (RADAR TYPE)	1	NO.												165-2-DSI-007 165-2-IHU-004
1.2	MISCALLENEOUS INSTRUMENTS														
a)	RESTRICTION ORIFICE	1	NO.												165-2-DSI-008
b)	MOISTURE ANALYZER	1	NO.												165-2-DSI-009

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

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				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
2.0	MISC. TUBING / FITTINGS														
	RATES AGAINST FOLOWING ITEMS SHALL NOT BE APPLICABLE FOR SECTION - 1.0 OF THIS BOQ. THESE RATES SHALL ONLY BE APPLICABLE FOR ANY QUANTITIES NOT COVERED IN INSTRUMENT HOOKUP DRAWINGS REFERRED IN SECTION - 1.0														
	SUPPLY & INSTALLATION OF FOLLOWING TUBING / FITTINGS:														
a)	SEAMLESS STAINLESS STEEL TUBING, 12MM X 2.0MM WT, ASTM A269 GR. TP316	150	MTR.												
b)	DOUBLE FERRULE COMPR. TYPE STRAIGHT COUPLING, NPT SCREW, 12MM OD., MATERIAL AISI 316 SS.	30	NOS.												
c)	MALE STUD COUPLING, 1/2" NPT X 12MM OD. , MATERIAL AISI 316 SS.	15	NOS.												
d)	COMPRESSION ENDS INSTRUMENT VALVE, 12MMOD , MATERIAL AISI 316 SS.	5	NOS.												
3.0	F&G DETECTORS / DEVICES														
3.1	GAS DETECTORS (INFRA RED) POINT TYPE														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING & COMMISSIONING OF GAS DETECTOR, INFRA-RED, POINT TYPE, SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, COMPLETE IN ALL RESPECTS INCLUDING SUPPLY, FABRICATION AND INSTALLATION OF ALL SUPPORT / STANDS, SUNSHADES, MOUNTING AND INSTALLATION ACCESSORIES AS SHOWN IN REFERRED DRAWINGS AND DATA SHEET. THIS JOB ALSO INCLUDES SUPPLY & INSTALLATION OF SUNSHADES COMPLETE IN ALL RESPECTS.	6	NOS.												165-2-DSF&G-001 165-2-IDT-002
3.2	FLAME DETECTORS (INFRA-RED TYPE)														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING & COMMISSIONING OF FLAME DETECTOR (UV / IR) TYPE, SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, COMPLETE IN ALL RESPECTS INCLUDING SUPPLY, FABRICATION AND INSTALLATION OF ALL SUPPORT / STAND, MOUNTING AND INSTALLATION ACCESSORIES AS SHOWN IN REFERRED DRAWINGS AND DATA SHEETS. THIS JOB ALSO INCLUDES SUPPLY & INSTALLATION OF SUNSHADES COMPLETE IN ALL RESPECTS.	6	NOS.												165-2-DSF&G-002 165-2-IDT-002
3.3	MANUAL ALARM CALL POINT (MCP)														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING AND COMMISSIONING OF MANUAL ALARM CALL POINTS, BREAK GLASS TYPE, SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, IP65 COMPLETE IN ALL RESPECTS INCLUDING SUPPLY, FABRICATION AND INSTALLATION OF ALL SUPPORT/ STAND, MOUNTING AND INSTALLATION ACCESSORIES AS SHOWN IN REFERRED DRAWINGS AND DATA SHEETS.	3	NOS.												165-2-DSF&G-004 165-2-IDT-002
3.4	MISCELLANIOUS F&G DEVICES														
a)	SUPPLY, INSTALLATION, CALIBRATION, TESTING AND COMMISSIONING OF HORN SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, IP65, AS PER REFERRED DATA SHEET COMPLETE IN ALL RESPECTS.	3	NOS.												165-2-DSF&G-003 165-2-IDT-002

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

ITEM	MATERIAL DESIGNATION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
b)	SUPPLY, INSTALLATION, CALIBRATION, TESTING AND COMMISSIONING OF BEACON SUITABLE FOR INSTALLATION IN ZONE-1 & 2 CLASSIFIED HAZARDOUS AREA, IP65, AS PER REFERRED DATA SHEET COMPLETE IN ALL RESPECTS.	3	NOS.												165-2-DSF&G-005 165-2-IDT-002
4.0 INSTRUMENT CABLE															
4.1	SUPPLY, LAYING, INSTALLATION, TERMINATION, DRESSING & TAGGING ETC. OF INSTRUMENT CABLES CONFORMING TO BS 5308 OR EN 50288-7, CU CONDUCTOR, PE INSULATED, 300/500V GRADE, FLAME CHARACTERISTICS TO IEC 60331. COMPLETE IN ALL RESPECTS INCLUDING BUT NOT LIMITED TO CABLE TIES, FERRULE TAGS, LUGS, ETC. CABLES TO BE LAID IN CONDUIT, TRENCH OR TRAY, AS PER SITE CONDITIONS.														165-2-SPI-020 165-2-ICL-002
a)	1Q-1.5 SQ MM CU / MICA / XLPE / ISOS / LSHF/SWA/LSHF	300	RM												
b)	1Q-1.5 SQ MM CU / MICA / XLPE / OSCR / LSHF/SWA/LSHF	350	RM												
c)	1P-1.5 SQ MM CU / MICA / XLPE / OSCR / LSHF / SWA / LSHF	325	RM												
d)	10P-1.5 SQ MM CU / MICA / XLPE / ISOS / LSHF / SWA / LSHF	275	RM												
e)	10P-1.5 SQ MM CU / MICA / XLPE / OSCR / LSHF / SWA / LSHF	350	RM												
f)	1P x 1.5 sq. mm CU / PE / OSCR / PVC / SWA / PVC	500	RM												
g)	5P x 1.5 sq. mm CU / PE / ISOS / PVC / SWA / PVC	175	RM												
h)	5P x 1.5 sq. mm CU / PE / OSCR / PVC / SWA / PVC	500	RM												
5.0 INSTALLATION ONLY INSTRUMENT CABLE															
5.1	LAYING, INSTALLATION, TERMINATION, DRESSING & TAGGING ETC. OF OWNER SUPPLIED INSTRUMENT CABLES COMPLETE IN ALL RESPECTS INCLUDING BUT NOT LIMITED TO CABLE TIES, FERRULE TAGS, LUGS, ETC. CABLES TO BE LAID IN CONDUIT, TRENCH OR TRAY, AS PER SITE CONDITIONS.														165-2-SPI-020
a)	5P x 1.5 sq. mm CU / PE / ISOS / PVC / SWA / PVC	250	RM												
b)	10P x 1.5 sq. mm CU / PE / OSCR / PVC / SWA / PVC	250	RM												
6.0 JUNCTION BOXES															
	SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF EX-PROOF JUNCTION BOXES SUITABLE FOR CLASS 1, DIV. 2, IP-65, GRP OR METALLIC ENCLOSURE COMPLETE WITH CABLE ENTRIES, GLANDS, GLAND PLATES, INTERNAL / EXTERNAL EARTH STUD, TERMINAL BLOCK, EARTHING RAIL, ETC. AS PER REFERRED DATASHEET. THE JOB INCLUDES SUPPLY, FABRICATION & INSTALLATION OF MOUNTING FRAME / STANDS COMPLETE IN ALL RESPECTS INCLUDING ALL INSTALLATION & MOUNTING ACCESSORIES AS SHOWN IN REFERRED TYPICAL INSTALLATION DETAIL.														165-2-SPI-019 165-2-SPI-020 165-2-DSF&G-006 165-2-IDT-006
a)	JUNCTION BOXES FOR F&G ANALOG SIGNALS	2	NOS.												
b)	JUNCTION BOXES FOR F&G DIGITAL SIGNALS	3	NOS.												
c)	JUNCTION BOXES FOR ANALOG SIGNALS	1	NO.												
d)	JUNCTION BOXES FOR DIGITAL SIGNALS	1	NO.												

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

ITEM	MATERIAL DESIGNATION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
7.0	INSTRUMENT CABLE GLANDS & ACCESSORIES														
	SUPPLY AND INSTALLATION OF BRASS CABLE GLANDS OF FOLLOWING SIZES CONFORMING TO BS 6121 PART 1 AND SUITABLE FOR PE INSULATED SCREENED OR O/A SCREEN, BLACK PVC SHEATH INSTRUMENT CABLES. GLANDS TO BE SUPPLIED COMPLETE WITH POLYCHLOROPRENE (P.C.P) SHROUD AND SHALL BE SUITABLE FOR CLASS 1, ZONE 2, IP 65 APPLICATIONS.(EACH GLAND SHALL BE PROVIDED WITH METALLIC EARTH TAG (RING) FOR 6-10MM ² EARTHING TERMINATION)														165-2-SPI-019 165-2-SPI-020
7.1	FOR INSTRUMENT END														
a)	20S E1FW (FOR ARMOURED CABLES)	6	NOS.												
b)	20 E1FW (FOR ARMOURED CABLES)	9	NOS.												
c)	25 E1FW (FOR ARMOURED CABLES)	12	NOS.												
7.2	FOR JUNCTION BOXES END														
a)	20 E1FW (FOR ARMOURED CABLES)	9	NOS.												
b)	25 E1FW (FOR ARMOURED CABLES)	15	NOS.												
c)	32 E1FW (FOR ARMOURED CABLES)	5	NOS.												
d)	40 E1FW (FOR ARMOURED CABLES)	2	NOS.												
8.0	M.S. CHANNELS														
	SUPPLY & INSTALLATION OF M.S. CHANNELS OF FOLLOWING SIZES, INSTALLED ON STEEL OR RCC STRUCTURES, EITHER AS SUPPORT / MOUNTING OR AS CABLE WAY FOR SMALL DIA. CABLE RUNS. THIS INCLUDES SUPPLY AND INSTALLATION OF ALL MOUNTING & INSTALLATION ACCESSORIES SUCH AS CLAMPS, HOLDERS, BOLTS, WASHER'S, COUPLERS, ETC. COMPLETE IN ALL RESPECTS														
a)	50 MM(w) X 50 MM(d) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	50	RM												
b)	50 MM(w) X 75MM (d) 14 SWG GALVANIZED SHEET STEEL CHANNEL WITH COVER	50	RM												
9.0	CABLE TRENCH														
	EXCAVATION OF CABLE TRENCH 600MM(W) X 800MM(D) AS PER CABLE LAYOUT DRAWING. THE JOB ALSO INCLUDES BACKFILLING OF CABLE TRENCH AFTER CABLE LAYING. THIS INCLUDES PROVIDING AND LAYING OF LAYER OF FINE SAND ABOVE AND BELOW THE CABLE, PROVIDING AND LAYING OF CABLE TILES COVERING ENTIRE WIDTH OF THE TRENCH, BACKFILLING OF CABLE TRENCH WITH RUBBLE FREE SOIL, COMPACTING OF TRENCH, INSTALLATION OF CABLE MARKERS.	350	MTRS												165-2-ICL-001
10.0	G.I. CONDUIT														
	SUPPLY AND INSTALLATION OF FOLLOWING GI CONDUIT, BURIED OR SUPPORTED ON STRUCTURE AS PER ELECTRICAL CABLE LAYOUT DRAWING COMPLETE IN ALL RESPECTS INCLUDING SUPPLY AND INSTALLATION OF ALL REQUIRED CONDUIT FITTINGS (UNIONS, ELBOWS, BENDS, TEES, ETC.) AND ALL REQUIRED MOUNTING AND INSTALLATION ACCESSORIES.														
a)	25 MM DIA	200	RM												
b)	50 MM DIA	50	RM												
c)	75 MM DIA	25	RM												

OIL & GAS DEVELOPMENT COMPANY LTD.

BOQ/BID PRICE SCHEDULE FOR FIELD INSTRUMENT/ DEVICES

ITEM	MATERIAL DESIGNATION	QTY.	UNIT	Supply					Services				Total Amount (Supply + Services) (Pak. Rs.)	REMARKS	
				Unit Rate (Pak Rs.)	Total Supply (Pak Rs.)	GST on Supply items (Pak. Rs.)	Total Supply inclusive of GST	Third Party Pre Shipment Inspection (Pak. Rs.)	Total Supply inclusive of GST & Pre-Shipment Inspection	Unit Rate (Pak Rs.)	Total Services (Pak Rs.)	GST & Provincial tax on Services (Pak.Rs.)			Total Services inclusive of GST & Provincial Tax on Services (Pak.Rs.)
					A	B	C = A+B	D	E = C+D		F	G			H = F+G	I=E+H
11.0	PLC														
	SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF SIL-2 PLC SYSTEM AS MAIN PLANT PLC PACKAGE IN COMPLETE ACCORDANCE WITH THE DOCUMENT 'SCOPE OF WORK, SPECIFICATION AND IO LIST COMPLETE IN ALL RESPECT	1	JOB												165-2-SPI-011 165-2-SPI-018
12.0	SPARES														
	2 (TWO) YEARS SPARE PARTS FOR PLC (BIDDER TO SUBMIT THE 2 YEARS SPARE PARTS LIST WITH BID)	1	JOB												
13.0	TOOLS														
	SPECIAL TOOLS REQUIRED FOR COMPLETION THE JOB (BIDDER TO SUBMIT LIST OF SPECIAL TOOLS WITH BID)	1	JOB												
	TOTAL PRICE (1 to 14)														

NOTES:-

- ALL TAXES SHALL BE PAYABLE BY CONTRACTOR.
- THE QUANTITIES MENTIONED IN THE BOQS ARE INDICATIVE AND MAY CHANGE AS DETAIL DESIGN PROGRESSES. THE BID EVALUATION WILL BE CARRIED OUT CONSIDERING THE QUANTITIES GIVEN IN BOQS AND UNIT RATES QUOTED BY THE BIDDERS.
- TEST CERTIFICATES AND MTC'S OF ALL ITEMS (WHERE APPLICABLE) SHALL BE PROVIDED.
- THE CHARGES SHALL BE SUPPORTED BY VERIFIED QUOTATION OF INSPECTION AGENCY.
- THE INSTALLATION RATES QUOTED BY BIDDER AGAINST EACH ITEM SHALL BE DEEMED TO BE APPLICABLE ALSO ON ITEMS WHICH ARE OWNER SUPPLIED AND WHOSE INSTALLATION ONLY IS REQUIRED FROM PC CONTRACTOR.

ATTACHMENT - 5



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS



0	05-06-2018	Issued for Tender	MSH	SS	SMM
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
1.0	<u>EARTH WORKS</u>			
1.1	<u>EXCAVATION</u> EXCAVATION FOR FOUNDATIONS TO THE REQUIRED DEPTH WHEREVER REQUIRED AS SHOWN ON DRAWINGS IN ALL KINDS OF SOIL DRY OR WET, HARD, AVERAGE OR SOFT INCLUDING DEWATERING AND SHORING IF REQUIRED, BACKFILLING USING EXCAVATED SOIL IN 150 mm COMPACTED THICKNESS TO 95% MODIFIED PROCTOR RELATIVE DRY DENSITY AND DISPOSAL OF EXCESS MATERIAL AT DESIGNATED PLACES COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.2	<u>IMPORTED WELL GRADED COARSE SAND FILLING (INSIDE RING WALL)</u> SUPPLYING, FILLING AND COMPCTING APPROVED WELL GRADED COARSE SAND WHEREVER SPECIFIED IN THE DWGs. INCLUDING SPREADING AND COMPACTING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.3	<u>CUTTING</u> CLEARING, GRUBBING, REMOVING ALL BUSHES, DUNES AND PERFORMING CUTTING WORKS INCLUDING MAKING GRADES AND SLOPES TO ACHIEVE THE PROPOSED FINISH GRADE LEVELS AS SHOWN ON DRAWINGS INCLUDING DRESSING, WATERING AND CONSOLIDATION BY RAMMING AND COMPACTED TO ENGINEER'S INCHARGE SATISFACTION COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY OWNER'S REPRESENTATIVE/CONSULTANT.	CU.M		
1.4	<u>FILLING</u> CLEARING, GRUBBING AND PERFORMING FILLING WORKS INCLUDING, MAKING GRADES AND SLOPES TO ACHIEVE FINISH GRADE LEVEL AS SHOWN ON DRAWINGS INCLUDING DRESSING, WATERING AND CONSOLIDATION BY RAMMING IN LAYERS NOT EXCEDDING 150 mm THICK TO FULL COMPACTION TO ATTAIN 95% MODIFIED PROCTOR RELATIVE DENSITY AS PER ASTM D 1157. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY THE ENGINEER.			
	i) USING THE APPROVED CUT SOIL FROM WITHIN THE PLOT LIMITS	CU.M		
	ii) USING APPROVED IMPORTED FILL	CU.M		
1.5	<u>STONE SOLING</u> SUPPLYING AND LAYING STONE SOLING OF HARD CORE WITH BROKEN STONE OF REQUIRED SIZE UNDER THE FOUNDATIONS AND WHEREVER REQUIRED INCLUDING FILLING VOIDS SPALLS PACKING AND CHIPS OF STONE, WATERING, COMPACTING, RAMMING AND LEVELING, ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.6	<u>STONE PITCHING</u> PROVIDING AND LAYING STONE PITCHING TO THE THICKNESS AS MENTIONED ON THE DRAWINGS WITH BROKEN STONE OF REQUIRED SIZE AS IN DYKE / EMBANKMENT WALLS AND WHEREVER REQUIRED INCLUDING FILLING VOIDS AND PACKING WITH SPALLS OF STONE, WATERING, RAMMING AND SURFACE LEVELING, POINTING OF JOINTS WITH 1:4 CEMENT SAND MORTAR. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
1.7	<u>FINE SAND CUSHION</u> PROVIDING AND LAYING FINE SAND CUSHION BELOW HEAVY DUTY PAVERS. COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE/ ENGINEER.	CU.M		
1.8	<u>ASPHALT SAND MIX</u> PROVIDING AND APPLYING ASPHALT SAND MIX LAYER 75 mm THICK, ON THE FIRM AND COMPACTED SURFACE INCLUDING TACK COAT @ 0.75 LITRES / SQ.M. ASPHALT COMPACTING WITH ASTM D 946 OR AASHTO M20 PENETRATION GRADE 60 / 70 WITH MIXING PROPORTION OF 6% ASPHALT, 18% CRUSHED STONE (2.5 mm - 5 mm), 66% WELL GRADED SAND AND FINE AGGREGATES (0.07 mm - 0.42 mm). THE ASPHALT SURFACE SHALL BE COMPACTED TO THE REQUIRED SLOPE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
1.9	<u>CRUSHED STONE / GRAVEL FILLING</u> PROVIDE AND FILL WELL GRADED CRUSHED STONE / GRAVEL AS PER ASTM D-693 SIZE 10 - 20mm WHEREVER SPECIFIED IN THE DWGs. INCLUDING SPREADING AND COMPACTING. THE SURFACE VOIDS SHALL BE FILLED UP WITH FINE AGGREGATE OF GRADATION SIZE NO. 10. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
1.10	<u>BRICK PAVING</u> PROVIDE AND FIXING OF BRICK PAVING (75mm thk.) WITH SAND CUSHION LAYER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQM		
1.11	<u>FILLING OF SELECT MATERIAL A-3 (AS PER AASTHO SOIL CLASSIFICATION)</u> SUPPLYING, FILLING AND COMPCTING APPROVED A3 MATERIAL WHEREVER SPECIFIED IN THE DWGs. INCLUDING SPREADING AND COMPACTING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER	CU.M		
2.0	<u>PLAIN & REINFORCED CEMENT CONCRETE</u>			
2.1	<u>C.C 1:4:8 USING O.P CEMENT</u> PROVIDING AND LAYING CEMENT CONCRETE 1:4:8 UNDER FOUNDATIONS WHEREVER REQUIRED WITH APPROVED QUALITY 25mm AND DOWN SIZE STONE OR GRADED GRAVEL AND APPROVED QUALITY OF LOCAL RIVER SAND INCLUDING ALL FORMWORK RODING VIBRATING, LEVELING, COMPACTING, SPREADING AND CURING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.2	<u>REINFORCED CEMENT CONCRETE (3,750 PSI) USING O.P. CEMENT</u> PROVIDING AND LAYING RCC OF 3,750 PSI (CUBICAL STRENGTH) AS MENTIONED IN THE DRAWING & RELATED B.O.Q USING APPROVED QUALITY 20mm MAXIMUM CRUSHED GRADED STONES AND FINE AGGREGATE OF APPROVED QUALITY INCLUDING APPROVED FORMWORK AND ITS REMOVAL, ALL OPERATIONS OF VIBRATING, LEVELING, COMPACTING, SPREADING, CURING AND TESTING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
2.3	<u>REINFORCED CEMENT CONCRETE (3,750 PSI) USING S.R CEMENT</u> PROVIDING AND LAYING RCC OF 3,750 PSI (CUBICAL STRENGTH) AS MENTIONED IN THE DRAWING & RELATED B.O.Q USING APPROVED QUALITY 20mm MAXIMUM CRUSHED GRADED STONES AND FINE AGGREGATE OF APPROVED QUALITY INCLUDING APPROVED FORMWORK AND ITS REMOVAL, ALL OPERATIONS OF VIBRATING, LEVELING, COMPACTING, SPREADING, CURING AND TESTING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.4	<u>C.C 1:2:4 USING O.P. CEMENT (3000 PSI)</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.5	<u>C.C 1:3:6 USING O.P. CEMENT (1500 PSI)</u> PROVIDING AND LAYING 1:3:6 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, VIBRATING, LEVELING, SPREADING, AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.6	<u>C.C 1:2:4 USING S.R CEMENT (3000 PSI)</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.7	<u>C.C 1:3:6 USING S.R CEMENT (1500 PSI)</u> PROVIDING AND LAYING 1:3:6 CEMENT CONCRETE WHEREVER REQUIRED INCLUDING FORMWORK, VIBRATING, LEVELING, SPREADING, AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.8	<u>1:2:4 CEMENT CONCRETE</u>			
a)	<u>FLOOR IN PANELS USING O.P. CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE FLOORING IN PANELS. THE FLOORING SHALL BE MADE SAVE FROM SEEPAGE. AN ANTI WATER LOGGING COMPONENT IGAS LIQUID TO BE APPLIED @ 0.3 KG / SQ.M OVER THE EARLIER PREPARED CONCRETE BASE OR RCC SLAB THEN A POLYTHENE SHEET OF 90/100 MICRON WILL BE SPREAD. FINALLY THE 1:2:4 CC FLOORING IN PANEL HAVING STEEL DOWELS TO FASTEN THE SUCCESSIVE PANELS WITH PROPER FINISH, ETC. TO BE LAID. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
b)	<u>1:2:4 IN SITU USING O.P. CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE IN SITU WHEREVER REQUIRED. A CHEMICAL COMPOUND SIKA LATEX WILL BE MIXED WITH THE CONCRETE TO REDUCE WATER LOGGING. THIS JOB INCLUDES FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
c)	<u>FLOOR IN PANELS USING S.R CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE FLOORING IN PANELS. THE FLOORING SHALL BE MADE SAVE FROM SEEPAGE. AN ANTI WATER LOGGING COMPONENT IGAS LIQUID TO BE APPLIED @ 0.3 KG / SQ.M OVER THE EARLIER PREPARED CONCRETE BASE OR RCC SLAB THEN A POLYTHENE SHEET OF 90/100 MICRON WILL BE SPREAD. FINALLY THE 1:2:4 CC FLOORING IN PANEL HAVING STEEL DOWELS TO FASTEN THE SUCCESSIVE PANELS WITH PROPER FINISH, ETC. TO BE LAID. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
d)	<u>1:2:4 IN SITU USING S.R CEMENT</u> PROVIDING AND LAYING 1:2:4 CEMENT CONCRETE IN SITU WHEREVER REQUIRED. A CHEMICAL COMPOUND SIKA LATEX WILL BE MIXED WITH THE CONCRETE TO REDUCE WATER LOGGING. THIS JOB INCLUDES FORMWORK, SPREADING, LEVELING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
2.9	<u>RCC 1:2:4 IN FLOOR USING O.P. CEMENT</u> PROVIDING AND LAYING 1:2:4 RCC FLOORING IN PANELS AS PER DETAILS SHOWN IN DRAWING. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
2.10	<u>RCC 1:2:4 IN FLOOR USING S.R CEMENT</u> PROVIDING AND LAYING 1:2:4 RCC FLOORING IN PANELS AS PER DETAILS SHOWN IN DRAWING. IT SHALL BE COMPLETED IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER. THE FORMWORK, VIBRATING, LEVELING, SPREADING IN CURING ETC. ARE ALSO INCLUSIVE HEREWITH.	CU.M		
3.0	<u>STEEL WORKS</u>			
3.1	<u>REINFORCEMENT</u> PROVIDING AND LAYING STEEL REINFORCEMENT OF 60,000 PSI YIELD STRENGTH (AS PER ASTM A-615) INCLUDING THE COST OF STRAIGHTENING, CUTTING, BENDING, BINDING, WASTAGE AND SUCH OVERLAPS AS ARE NOT SHOWN OVER THE DRAWINGS, PLACING IN POSITION ON M.S, CHAIRS, TYING WITH BINDING WIRES, ETC., IN ALL KINDS OF RCC WORK INCLUDING THE COST OF 18 GAUGE BINDING WIRES, CHAIRS, SPACERS ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	TON		
4.0	<u>MASONRY WORKS</u>			
4.1	<u>BLOCK MASONRY</u> PROVIDING AND LAYING CEMENT CONCRETE MACHINE MADE SOLID BLOCKS (1200 psi) SET IN 1:4 CEMENT SAND MORTAR INCLUDING CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
4.2	<u>BRICK MASONRY</u> PROVIDING AND LAYING BURNT BRICK MASONRY (SIZE 230 x 115x 65mm) HAVING STRENGTH 1400 PSI AS SHOWN IN DRAWINGS. IT SHOULD BE THOROUGHLY SOAKED IN WATER BEFORE BEING LAID AND JOINED IN CEMENT MORTAR 1:4 STRAIGHT OR TO CURVE WITH INNER RADIUS. BRICK SHOULD BE HARD, SQUARE, EVEN IN SIZE AND TO BE FREE FROM NODULES OF LIME AND OTHER IMPURITIES INCLUDING ALL OPERATIONS OF CURING AND TESTING ETC. INCLUDING PROVIDING DOWELS FOR ANCHORAGE BETWEEN BRICK MASONRY AND R.C.C. COLUMN. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
4.3	<u>BRICK PITCHING</u> PROVIDING AND LAYING BRICK PITCHING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
5.0	<u>CEMENT PLASTERING, ROOFING AND FLOORING WORKS</u>			
5.1	<u>CEMENT PLASTER</u> PROVIDING AND LAYING PLASTER WITH CEMENT SAND MORTAR ON BRICK AND CONCRETE SURFACES, AT ANY HEIGHT, AS SHOWN ON THE DRAWINGS WITH G.I EXPANDED METAL AT THE INTERFACES OF STRUCTURES OF DIFFERENT MATERIALS, PLASTER STOPPER, CORNER BEADS, CHANNELS OF MAKING GROOVES AND DRIP COURSE ETC. WHEREVER REQUIRED INCLUDING HACKING, STAGGING AND CURING UP TO ANY HEIGHT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	12mm THICK PLASTER WITH 1:4 CEMENT SAND MORTAR ON ALL INTERIOR SURFACES.	SQ.M		
ii)	20mm THICK PLASTER WITH 1:4 CEMENT SAND MORTAR ON ALL EXTERNAL SURFACES.	SQ.M		
iii)	12mm THICK 1:4 CEMENT SAND PLASTER MIXED WITH PUDLO @ 2.25 KG/Bag. IN WATER RETAINING STRUCTURE.	SQ.M		
5.2	<u>ROOF SCREEDING</u> MESH OF NOMINAL STEEL OF # 3 @ 300 C/C, 50-75 mm THICK (AVG.) SCREEDING WITH A LAYER OF BITUMEN SAND MIX. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
5.3	<u>DAMP PROOF COURSE</u> PROVIDING AND LAYING 50mm THICK DPC (1:2:4 CC) HAVING 12mm THICK LAYER OF (1:3) CEMENT SAND MORTAR ON THE TOP. BITUMEN COATING (10/20 GRADE) WITH A POLYTHENE SHEET OF 90/100 MICRON SHALL BE LAID BETWEEN THE DPC AND PLINTH BEAM TO CONTROL WATER LOGGING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
5.4	<u>TILES WORK</u> PROVIDING AND FIXING TILES FOR FLOORS WITH APPROVED SHADE, LAID OVER A BASE OF (1:3) C.S MORTAR AND APPROVED DRY BOND (SIKA / EQUIVALENT) INCLUDING SKIRTING & DADO SETTING IN CEMENT SLURRY FILLING THE JOINTS WITH WHITE CEMENT OR PIGMENT OF APPROVED SHADE AND APPROVED TYPE OF DRY BOND. IT ALSO INCLUDES COST OF WASHING, CLEANING AND CURING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	POCELAIN TILES BY MASTER OR ANY APPROVED MAKE (PRIME QUALITY)	SQ.M		
ii)	NON-SLIP CERAMIC TILES BY MASTER OR ANY APPROVED MAKE (PRIME QUALITY)	SQ.M		
iii)	GLAZED CERAMIC TILES BY MASTER OR ANY APPROVED MAKE (PRIME QUALITY)	SQ.M		
iv)	ANTI STATIC TILES BY APPROVED VENDOR	SQ.M		
v)	ACID RESISTANCE CLAY TILES FLOOR	SQ.M		
6.0	<u>COLORING</u>			
6.1	<u>DISTEMPER</u> PROVIDING AND APPLYING 2 COATS OF OIL BOUND DISTEMPER OF ICI / BERGER / NIPPON OR EQUIVALENT OVER A COAT OF PRIMER. DISTEMPER SHOULD BE OF APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
6.2	<u>PLASTIC EMULSION</u> PROVIDING AND APPLYING 2 COATS OF PLASTIC EMULSION OF ICI / BERGER / NIPPON OR EQUIVALENT OVER A COAT OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
6.3	<u>WEATHER SHIELD</u> PROVIDING AND APPLYING 2 COATS OF WEATHER SHIELD OF ICI / BERGER / NIPPON OR EQUIVALENT OVER A COAT OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
6.4	<u>SYNTHETIC ENAMEL</u> PROVIDING AND APPLYING 2 COATS OF SYNTHETIC ENAMEL BY ICI / BERGER / NIPPON OR EQUIVALENT OVER A COATS OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	ON CONCRETE / PLASTER SURFACE	SQ.M		
ii)	ON WOODEN SURFACE	SQ.M		
iii)	ON STEEL SURFACE	SQ.M		
7.0	<u>FENCE, DOORS, WINDOWS & VENTILATORS</u>			
7.1	<u>ALUMINUM WINDOWS AND VENTILATORS</u> PROVIDING AND FIXING FULL GLAZED (OR HALF GLAZED WHERE RQUIRED) POWDER COATED ALUMINUM SAFETY WINDOWS AND VENTILATORS OF APPROVED MANUFACTURER (PRIME ALUMINIUM / LUCKY ALUMINIUM / ALCOP) OF FRAME THICKNESS 1.6mm, USING (PREMIUM MODEL OF ANODIZED BRONZE OR ALUMINUM EXTRUDED), SCREWS, GLAZED WITH DISTORTION FREE IMPORTED TINTED SAFETY GLASS AS SPECIFIED AND FLY PROOFING, COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	WINDOWS	SQ.M		
ii)	VENTILATORS	SQ.M		
7.2	<u>ALUMINUM DOORS</u> PROVIDING AND FIXING GLAZED COLOUR ANODIZED (OF APPROVED SHADE) POWDER COATED ALUMINUM SWING SAFETY DOOR (WITH SAFETY PUSH HANDLE WHERE REQUIRED) OF APPROVED MANUFACTURERS (PRIME ALUMINIUM / LUCKY ALUMINIUM / ALCOP) OF FRAME THICKNESS 1.8mm, USING SCREWS, GLAZED WITH DISTORTION FREE IMPORTED TINTED SAFETY GLASS AND FIXING ON CONCRETE, WOODEN OR STEEL FRAME. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
7.3	<u>STEEL DOORS.WINDOWS & VENTILATORS</u> SUPPLYING AND FIXING JOISTS, CHANNEL, ANGLE, TEE SECTIONS, GUARD BARS, HOOKS, HOLD FAST, GATES, GRILLS ETC., ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 2 COATS OF SYNTHETIC ENAMEL BY ICI / BERGER / NIPPON OR EQUIVALENT OVER A COATS OF PRIMER. COLOUR SHOULD BE APPROVED SHADE INCLUDING SURFACE PREPARATION, FILLING, SAND PAPERING AND SMOOTH FINISHING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	STEEL SWING DOORS / GATES 18 GUAGE MS PLATE (WITH OR WITHOUT 5mm THICK TINTED GLASS)	SQ.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
ii)	M. S. LOUVERED DOORS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
iii)	M. S. LOUVERED WINDOWS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
iv)	M. S. LOUVERED VENTILATORS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
v)	M. S. GLAZED VENTILATORS WITH 5mm THICK TINTED GLASS & LOUVERED VENTILATORS (COMBINATION)	SQ.M		
vi)	FENCE WINDOW (50x50mm DIAMOND SHAPED GALVANIZED CHAIN LINK MESH WITH DIA. 3.15mm WIRE) WITH FRAME	SQ.M		
vii)	FENCE DOOR (50x50mm DIAMOND SHAPED GALVANIZED CHAIN LINK MESH WITH DIA. 3.15mm WIRE, DIA. 38 x 5 G.I PIPE BRACING & SLIDING LATCH WITH PAD LOCK) WITH FRAME	SQ.M		
viii)	M. S. GLAZED WINDOW WITH 5mm THICK TINTED GLASS	SQ.M		
ix)	M. S. LOUVERED VENTILATORS (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm) WITH EXHAUST FAN (600 X 600)	SQ.M		
x)	M. S. GLAZED VENTILATOR WITH 5mm THICK TINTED GLASS	SQ.M		
xi)	STEEL SHUTTER DOOR	SQ.M		
xii)	STEEL SLIDING DOOR (14 GAUGE MS PLATE FOR "Z" SECTION WELDED WITH ANGLE 40x40x6mm. FRAME ANGLE IS 50x50x6mm)	SQ.M		
7.4	<u>HANDRAILING</u> SUPPLYING AND FIXING RAILINGS. ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 03 COATS OF ZINC PHOSPHATE AND 01 COAT OF PRIMER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	RM		REFER DRAWING FOR DETAIL
7.5	<u>WOODEN DOORS</u> SUPPLYING AND FIXING SOLID/ FLUSH DOORS CONSISTING OF DOORS 38 mm THICK CONSISTING OF STEEL FRAME 16SWG AS PER DRAWING WITH 5 mm THICK COMMERCIAL PLY IMPORTED QUALITY, SOLID SHUTTER SINGLE/DOUBLE LEAVES WITH SHEESHAM LEAPING ETC. HAVING APPROVED HARDWARE, INCLUDING COST OF APPLICATION OF SOLIGNUM (TIMBERTONE MADE IN ENGLAND / GERMANY). ONE SET OF MORTISE LOCK OF ALPHA W-DOUBLE LOCK MADE IN JAPAN BEARING WITH ROUND KNOB, BEADING, ARCHITRAVE OXIDIZED FITTING ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
8.0	<u>SANITARY FITTINGS</u>			
8.1	<u>WATER CLOSET</u>			
a)	SUPPLYING AND FIXING WATER CLOSET APPARATUS EUROPEAN PATTERN, COMPLETE COMPRISING CLOSET, 13 LITRES CISTERN FLUSHING (LOW DOWN), FLUSH PIPE, BACK LITE SEAT ETC., SIZE TO BE APPROVED BY OWNER'S REPRESENTATIVE ENGINEER, FIXED TO CONCRETE/BRICK WORK, PORTA OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
b)	SUPPLYING AND FIXING WATER CLOSET ASIATIC PATTERN, CLASS "A", COMPLETE WITH CLOSET, FOOT REST, 13 LITRES FLUSHING CISTERN, FLUSH PIPE ETC; SIZE TO BE APPROVED BY OWNER'S REPRESENTATIVE ENGINEER, FIXED TO CONCRETE/BRICK WORK, PORTA OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
8.2	<u>WASH BASIN</u> SUPPLYING AND FIXING WASH HAND BASIN WITH GLAZED WARE PEDESTAL, SINGLE HOLE, COMPLETE WITH WASTE PIPE, WASTE COUPLING, ONE CHROMIUM PLATED CHAIN AND PLUG, MIXER, AND BRACKET ETC; FIXED TO CONCRETE, PORTA OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
8.3	<u>SHOWER</u> SUPPLYING AND FIXING TOILET SHOWER 15 mm DIA BY MASTER (TO BE APPROVED BY CLIENT) OR ANY EQUIVALENT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
8.4	<u>MIRROR</u> SUPPLYING AND FIXING MIRROR OF REQUIRED SIZE (5 mm THICK), BELGIUM OR ANY EQUIVALENT FOREIGN MADE, EDGES AND BACK COVERED WITH FINE HARD BOARD FURNISHED, FIXED TO CONCRETE, BRICK WALL. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQM		
8.5	<u>GEYSER</u> PROVIDING AND INSTALLING ELECTRICAL WATER GEYSER OF SINGER OR FIREX OR ANY EQUIVALENT MAKE CAPACITY 150 LITERS TO 250 LITERS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
8.6	<u>FIBER GLASS WATER TANKS</u> PROVIDING AND FIXING WATER TANKS MADE OF FIBER GLASS BY "FIBRETECH" OR ANY EQUIVALENT MADE, FIXED WITH INLET, OUTLET, OVERFLOWS AND WASHOUT CONNECTION PIECES COMPLETE WITH MANHOLE AND HINGED COVER, SUPPLY AND FIXING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	300 GALLONS	NO.		
ii)	500 GALLONS	NO.		
iii)	1000 GALLONS	NO.		
iv)	1500 GALLONS	NO.		
v)	3000 GALLONS	NO.		
9.0	<u>MISCELLANEOUS ITEMS</u>			
9.1	<u>BITUMEN COATING</u> PROVIDING AND APPLYING 3 COATS OF BITUMEN GRADE 10 / 20 TO ACHIEVE 1200 MICRONS THICKNESS WITH 1 COAT OF PRIMER ON CONCRETE SURFACES EXPOSED TO EARTH. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.2	<u>POLYETHYLENE SHEET</u> PROVIDING & LAYING POLYETHYLENE SHEET (50 MICRON THK.) OVER PLINTH BEAM. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS INSTRUCTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.3	<u>COUNTER</u> PROVIDING AND LAYING OF GRANITE OR OTHER APPROVED MARBLE COUNTER 25 mm THK COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
9.4	<u>RAIN WATER DRAIN PIPE/SPOUT</u> SUPPLYING & FIXING UPVC PIPES IN ROOF FOR THE DISPOSAL OF RAIN WATER FROM ROOF ALONG WITH ALL NECESSARY FITTINGS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.5	<u>FALSE CEILING</u> PROVIDING AND FIXING MINERAL FIBER FALSE CEILING IN SIZE 600 x 600 x 20 WITH ALUMINUM "T" CHANNEL (ULTRA GRIDS / EQUIVALENT MAKE, THICKNESS SHALL BE AS PER VENDOR RECOMMENDATION) AND MULTIPLE PROFILE INCLUDING G.I. SUSPENSION SYSTEM. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.6	<u>STEEL RUNGS</u> PROVIDING, FABRICATING AND FIXING PAINTED REINFORCING STEEL RUNGS AS SHOWN IN DRAWING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER	KG		
9.7	<u>EMBEDDED ITEMS</u> PROVIDING, FIXING, LEVELING AND PLACING OF ASTM A-36 EMBEDDED PLATES/SECTIONS AT THE DESIGNATED LOCATIONS AT ANY HEIGHT AND REQUIRED LENGTH. EMBEDDED PLATES/SECTIONS MUST BE OF APPROVED SIZE AND STANDARDS , IT INCLUDES ALL NECESSARY ACCESSORIES LIKE RUBBER PACKING AND LUGS ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	KG		
9.8	<u>PVC WATER STOPPER</u> PROVIDING LAYING AND FIXING PVC WATER STOPPER 225 mm WIDE OF SIKA, BERDEX, FOSPAK OR ANY APPROVED AND WELL KNOWN MANUFACTURER. COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.9	<u>ISOLATION JOINT</u> SUPPLYING & MAKING ISOLATION JOINT INCLUDING FILLING THE JOINT WITH MASTER FLEX FIBERFIL OR SIMILAR APPROVED MATERIAL. ALSO FILLING THE JOINT WITH JOINT SEALANT AS SHOWN ON DRAWING. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.10	<u>EXPANSION JOINT</u> PROVIDING AND LAYING 25 mm THICK MASTER FLEX FIBRE FILL INCLUDING POLYSULPHIDE JOINT SEALANT ,ALUMINIUM BACKING STRIP AND STEEL DOWEL BARS ETC. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	R.M		
9.11	<u>WOODEN PARTITIONS (100mm THK.)</u> PROVIDING AND ERECTING WOODEN PARTITIONS . THE WOOD SHOULD BE OF DEODAR, SHEESHAM OR APPROVED EQUIVALENT WHEREVER REQUIRED. THE TIMBER / WOOD MUST BE SOLID AND FREE FROM ALL SORTS OF WOODEN INFECTIONS. THAT APPLICATION OF SOLIGNUM (TIMBERTONE MADE IN ENGLAND / GERMANY) IS NECESSARY, INCLUDING THE PROVISION AND ERECTION OF DOORS & WINDOWS ETC. FOR THE DOORS A SET OF MORTISE LOCK OF ALPHA W-DOUBLE LOCK MADE IN JAPAN BEARING WITH ROUND KNOB, BEADING, ARCHITRAVE OXIDIZED FITTING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
9.12	<u>PLINTH PROTECTION</u> PROVIDING AND LAYING PLINTH PROTECTION OVER COMPACTED SUB-GRADE WITH 75 THK. 1:3:6 PCC. IN S.R. CEMENT, INCLUDING 50 THK. CC. 1:4:8 WITH FORMWORK, VIBRATING, LEVELING, SPREADING AND CURING ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
9.13	<u>MARBLE STRIP</u> SUPPLYING AND FIXING 12MM WIDE MARBLE STRIP IN P.C.C FLOOR. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE/ ENGINEER	RM		
9.14	<u>JOINT SEALANT</u> PROVIDING AND APPLYING SIKAFLEX PRO-3 WF OR ANY EQUIVALENT AS JOINT SEALANT BETWEEN RING WALL FOUNDATION AND ANNULAR BASE PLATE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER .	RM		
9.15	<u>HDPE LINER (GEO MEMBERANE)</u> PROVIDING,LAYING,JOINTING,WELDING AND TESTING OF 60 MIL GEOMEMBRANE USING E-LOCK AS PER MANUFACTURE'S INSTRUCTION .COMPLETE IN ALL RESPECTS AS PER SPECIFICATION,DRAWING AND TO THE ENTIRE SATISFACTIONS OF OWNER'S REPRESENTATIVE/CONSULTANT.	SQ.M		
10.0	<u>STRUCTURAL STEEL WORKS (ASTM A36)</u> SUPPLYING AND FIXING JOISTS, CHANNEL, ANGLE, TEE SECTIONS, GUARD BARS, RAILINGS, LADDERS, BRACKETS, HOOKS, HOLD FASTS, PIPE SUPPORTS PLATES ROOF TRUSSES, BEAMS, PURLINS ETC., ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 03 COATS OF ZINC PHOSPHATE AND 01 COAT OF PRIMER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	TON		
11.0	<u>ANCHOR BOLTS</u> SUPPLYING AND FIXING ANCHOR BOLTS (ASTM A-307) BY USE OF TEMPLATES WITH HEXAGON, SQUARE, CUP OR CHEESE HEADS, SCREWED ONE OR BOTH END, OR ONE END ENLARGED OR JAGGED OR LEWISED, EACH WITH ONE WASHER AND TWO HEXAGONE OR SQUARE NUT. COMPLETE IN ALL RESPECTS AS PER DRAWINGS STANDARDS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	KG		
12.0	<u>GROUTING</u> PROVIDING AND LAYING GROUT IN FOUNDATIONS AND POCKETS INCLUDING FORMWORK, LEVELING AND SPREADING ETC OF APPROVED MANUFACTURER (SIKA / FOSPAK / IMPORIENT CHEMICALS / EQUIVALENT). COMPLETE IN ALL RESPECT AS PER DRAWINGS. SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	NON SHRINK CEMENTITIOUS	CU.M		
ii)	EPOXY	CU.M		
13.0	<u>ROADS & PAVEMENTS</u>			
13.1	<u>GRADED AGGREGATE BASE COURSE</u> PROVIDING AND LAYING GRADED AGGREGATE BASE COURSE INCLUDING PREPARATION OF BASE GRADE BEFORE BASE COURSE WORKS, AS PER ASTM D-693 SIZE AND THICKNESS WHEREVER SPECIFIED IN THE DRAWINGS. SURFACE VOIDS SHALL BE FILLED UP WITH WELL GRADED FINE AGGREGATE INCLUDING SPREADING AND COMPACTION TO ACHIEVE 95% OF MAXIMUM DRY DENSITY AS PER ASTM D1557. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

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S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
13.2	<u>ASPHALT CONCRETE BASE LAYER</u> PROVIDING AND LAYING BASE LAYER OF ASPHALT CONCRETE THICKNESS AS MENTIONED IN THE DRAWINGS AND COMPACTING WITH APPROVED WEIGHT ROLLER INCLUDING PRIME COAT @ 1.75 LTRS/ SQ.M TO BASE COURSE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.3	<u>ASPHALT CONCRETE WEARING COURSE</u> PROVIDING AND LAYING WEARING COURSE OF ASPHALT CONCRETE THICKNESS AS MENTIONED IN THE DRAWINGS AND COMPACTING WITH APPROVED WEIGHT ROLLER INCLUDING TACK COAT @ 0.5 LTRS./SQ.M TO ASPHALT BASE LAYER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.4	<u>SURFACE DRESSING</u> PROVIDING AND APPLYING SURFACE DRESSING (SEAL COAT) OF ASPHALT (0.5 LTRS. / SQ.M) WITH APPROVED QUALITY OF SAND. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.5	<u>TERMITE CONTROL TREATMENT</u> PROVIDING AND SPRAYING "BIFLEX" BY "FMC" OR ANY EQUIVALENT PESTICIDES SOLUTION WITH SPRAYING EQUIPMENT AS SPECIFIED BY THE MANUFACTURERS IN FOUNDATION PITS,(WALL&BASE), TRENCHES, EXCAVATED EARTH, CONSOLIDATED LAYER OF EARTHIN PLINTH, UNDER FLOOR, CAST IN SITU WALLS, TIE BEAMS, WOOD WORK ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		
13.6	<u>PRECAST KURB STONE</u> PROVIDING AND LAYING PRECAST FAIR FACED KURB STONE OF SIZE 450X300X150 TO BE EMBEDDED (50mm) IN 100mm THK.1:3:6 C.C , ALONG THE EDGE OF ROAD AND TO BE PAINTED WITH 2 COATS OF ALKYD ENAMEL PAINT WITH SEALANT AND OF PRIMER COLOUR SCHEME ETC., COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	RM		
14.0	<u>M.S. GRATING (A36)</u> SUPPLYING AND FIXING JOISTS, CHANNEL, ANGLE, TEE SECTIONS, GUARD BARS, HOOKS, HOLD FAST, GATES, GRILLS ETC., ASSEMBLING BY WELDING OR WITH THE USE OF BOLTS, NUTS, RIVETS, WASHERS ETC., AND ERECTION / FIXING IN POSITION INCLUDING MAKING GOOD THE DISTURBED SURFACES WITH 03 COATS OF ZINC PHOSPHATE AND 01 COAT OF PRIMER. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQ.M		SEE DRAWING 165-2-C-010 FOR DETAIL
15.0	<u>HEAVY DUTY PAVERS</u> PROVIDING AND LAYING HEAVY DUTY PAVERS (80mm THK.) OF STRENGTH \geq 7000 PSI. COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATIONS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE/ ENGINEER.	SQ.M		
16.0	<u>MANHOLE</u> SUPPLY & CONSTRUCTION OF MANHOLE RCC, SQUARE (UPTO 1000mm x 1000mm) WITH VARIABLE DEPTH FROM INVERT TO SURFACE OF COVER INCLUDING CONCRETE BENCHING AND PRECAST COVER & WITH FRAME BY CME. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NOS.		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
17.0	<u>ANCHOR POCKET</u> SUPPLYING AND FIXING ANCHOR POCKET IN EQUIPMENT FOUNDATION WITH APPROVED MATERIALS COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NOS.		
18.0	<u>CONCRETE PROTECTIVE COATING</u> SUPPLYING AND APPLICATION OF CONCRETE PROTECTIVE COATING (SIKA SEAL 105N OR APPROVED EQUIVALENT) COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY OWNER'S REPRESENTATIVE / ENGINEER	SQ.M		
19.0	<u>PIPE SLEEVE INCLUDING SEALANT</u> SUPPLYING AND FIXING OF PIPE SLEEVE INCLUDING SEALANT COMPLETE IN ALL RESPECT AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY OWNER'S REPRESENTATIVE / ENGINEER	NOS.		
20.0	<u>PIPING WORKS</u>			
20.1	<u>UPVC PIPES</u> PROVIDING AND INSTALLING UPVC PIPES FOR PLUMBING, AIR-CONDITIONING, DRAINAGE, SEWERAGE AND GAS SUPPLY OF LIANSU, DADEX NIKASI AND PAK ARAB PIPES (APPROVED BY CLIENT) IN WALLS, FLOORS, SLABS BELOW GROUND SURFACE ETC. IT ALSO INCLUDES ALL BENDS, JOINTS, REDUCERS, CONNECTIONS, SOCKETS, TRAPS, STRAINERS, TEE, ENDS, ADOPTERS, ELBOWS, CLIPS, RINGS, COUPLINGS ETC. UP TO ANY HEIGHT OR LENGTH COMPLETE IN ALL RESPECT AS PER REQUIREMENT, DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
	i) 50 mm DIA	RM		
	ii) 75 mm DIA	RM		
	iii) 100mm DIA	RM		
	iv) 150mm DIA	RM		
	v) 200 mm DIA	RM		
	vi) 250 mm DIA	RM		
	vii) 300 mm DIA	RM		
	viii) 400 mm DIA	RM		
20.2	<u>C.S. PIPES</u> SUPPLYING, FABRICATION, WELDING, FIXING AND TESTING OF SEAMLESS CARBON PIPES CONFORMING TO API-5L GR.B/ ASTM A-106/ASTM A-53 (SCH. 40) FOR OILY WATER DRAIN, WASTE DRAIN AND VENT WITH COMPLETE FITTINGS CONFORMING TO ASTM STANDARDS. ALL PIPES AND FITTINGS SHALL BE SUPPLIED WITH BUTT WELDED ENDS. THE WORK ALSO INCLUDES SUPPLY AND APPLICATION OF ALL MATERIAL, SURFACE PREPARATION COATING AND WRAPPING OF PIPING COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATIONS, AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
	i) 100 mm DIA	RM		
	ii) 125 mm DIA	RM		
	iii) 150 mm DIA	RM		
	iv) 200 mm DIA	RM		
	v) 250 mm DIA	RM		
	vi) 300 mm DIA	RM		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
20.3	<u>RCC. PIPES</u> PROVIDING AND LAYING RCC. SPIGOT AND SOCKET PIPES OF CLASS "A" (RAZIA BRAND OR EQUIVALENT) AND FIXING IN TRENCH INCLUDING CUTTING, FITTING, JOINTING WITH RUBBER RINGS AND CEMENT MORTAR (1:1) INCLUDING TESTING WITH WATER TO A HEAD OF 1.2 M ABOVE THE TOP OF THE HIGHEST PIPE, INCLUDING 75mm THICK. FINE SAND CUSHION BED UNDER THE RCC. PIPE. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	150 mm DIA	RM		
ii)	200 mm DIA	RM		
iii)	250 mm DIA	RM		
iv)	300 mm DIA	RM		
v)	350 mm DIA	RM		
vi)	400 mm DIA	RM		
21.0	<u>CAST IRON MANHOLE COVER (600 X 600) 30 THK.</u> SUPPLY AND INSTALLATION OF CAST IRON MANHOLE COVER (600 X 600) 30 THK. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
22.0	<u>DEMOLITION WORKS</u> DEMOLITION OF SPECIFIED ITEMS INCLUDING COMPLETE DISMANTLING, LOADING, TRANSPORTATION AND UNLOADING OF DISMANTLED MATERIAL TO THE AREA DESIGNATED BY THE OWNER'S REPRESENTATIVE / ENGINEER:			
i)	RCC	CU.M		
ii)	PCC	CU.M		
iii)	BRICK/BLOCK	CU.M		
23.0	<u>POLYSULPHIDE JOINT SEALANT</u> PROVIDING AND LAYING POLYSULPHIDE JOINT SEALANT OR SIMILAR APPROVED WHERE REQUIRED COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		
24.0	<u>MAIN GATE</u> SUPPLY AND INSTALLATION, PAINTING OF MAIN GATE INCLUDING COMPLETE FIXING ASSEMBLY COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	KG		
25.0	<u>BOULDERS</u> SUPPLY AND LAYING LOOSE PACKING OF BOULDERS SIZE > 100 & <150 WHERE REQUIRED COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	CU.M		

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****DESCRIPTION OF BILL OF QUANTITIES FOR CIVIL WORKS**

S.NO.	DESCRIPTION	UNIT	UNIT RATE (PKR)	REMARKS
26.0	<u>DRILLING OF HOLES AND FIXING OF REBARS WITH EPOXY</u> DRILLING IN EXISTING RCC CONSTRUCTION WITH PROVIDING AND LAYING OF EPOXY GROUT IN DRILLED HOLES FOR BELOW SPECIFIED ITEMS AS PER DRAWINGS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	12mm DIA BARS	RM		
ii)	16mm DIA BARS	RM		
iii)	20mm DIA BARS	RM		
27.0	<u>BITUMEN COATING</u> PROVIDING AND APPLYING 03 COATS OF BITUMEN GRADE 10 / 20 TO ACHIEVE 1200 MICRONS THICKNESS WITH 01 COAT OF PRIMER ON CONCRETE SURFACES EXPOSED TO EARTH. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	SQM		
28.0	<u>MANHOLE COVER (600mm X 600mm, HEAVY DUTY)</u> SUPPLYING, FIXING AND SETTING OF C.I. MANHOLE COVER AND FRAME BY CME OR EQUIVALENT PAK MADE INCLUDING ANGLE FRAME WITH LUGS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.	NO.		
29.0	<u>CORRUGATED G.I. SHEETS</u> SUPPLYING AND FIXING CORRUGATED GALVANIZED STEEL SHEETS FIXED TO TIMBER / CONCRETE OR STEEL FRAMING OR PURLINS WITH ONE AND A HALF CORRUGATION SIDE LAPS AND 150 mm END LAPS, FIXED WITH "U" BOLTS 10 mm DIA. FIBRE AND GALVANIZED, CURVED OR LIMPED WASHERS, AT CENTERS NOT EXCEEDING 300 mm. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	20 GAUGE	SQ.M	-	
ii)	22 GAUGE	SQ.M	-	
iii)	24 GAUGE	SQ.M	-	
iv)	26 GAUGE	SQ.M	-	
30.0	<u>HILTI BOLTS (CHEMICAL ANCHOR BOLTS)</u> SUPPLYING AND INSTALLING HILTI BOLTS, HIT-RE 500 V3 + HIT-V(5.8) MATERIAL AS PER MANUFACTURER'S INSTRUCTIONS. COMPLETE IN ALL RESPECTS AS PER DRAWINGS, SPECIFICATION AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE / ENGINEER.			
i)	M12	NOS.		
ii)	M16	NOS.		
iii)	M20	NOS.		



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OIL & GAS DEVELOPMENT COMPANY LTD.

MELA DEVELOPMENT PROJECT

BILL OF QUANTITIES FOR CIVIL WORKS



0	05-06-2018	Issued for Tender	MSH	SS	SMM
Rev.	Date	Description	Prepared By	Checked By	Approved By

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR INFRASTRUCTURE WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
1.0	<u>GRADING WORKS</u>					
1.1	EXCAVATED SOIL FILL AS PER ITEM NO. 1.4.i)	7,000	CUM			
1.2	IMPORTED SOIL FILL AS PER ITEM NO. 1.4.ii)	7,000	CUM			
1.3	CUTTING AS PER ITEM NO. 1.3	10,000	CUM			
2.0	<u>ROADS</u>					
2.1	GRADED AGGREGATE BASE COURSE AS PER ITEM NO. 13.1	538	CU.M			
2.2	ASPHALT CONCRETE BASE COURSE LAYER AS PER ITEM NO. 13.2	2,150	SQ.M			
2.3	ASPHALT CONCRETE WEARING COURSE LAYER AS PER ITEM NO.13.3	2,150	SQ.M			
2.4	SUB BASE COURSE AS PER ITEM NO. 1.9	323	CUM			
2.5	PRECAST KERB STONES INCLUDING 1:3:6 AS PER ITEM NO 13.6	650	R.M			
2.6	COMPACTED EARTHFILL AS PER ITEM NO. 1.11	10	CUM			
2.7	STONE PITCHING AS PER ITEM NO. 1.6	5	CUM			
2.8	SURFACE DRESSING AS PER ITEM NO. 13.4	2,150	SQ.M			
3.0	<u>BRICK PAVING</u>		SQM			
3.1	BRICK PAVING AS PER ITEM NO. 1.10	290	SQM			
3.2	C. C. 1:4:8 AS PER ITEM NO. 2.1	22	CU.M			
4.0	<u>STORM WATER SYSTEM</u>					
4.1	EXCAVATION AS PER ITEM NO. 1.1	700	CU.M			
4.2	C. C. 1:4:8 AS PER ITEM NO. 2.1	35	CUM			
4.3	R.C.C. 3750 psi AS PER ITEM NO. 2.2	465	CUM			
4.4	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	28	TONS			
4.5	GRATING AS PER ITEM NO. 14.0	440	SQM			REFER DRAWING FOR DETAIL
4.6	POLYSULPHIDE JOINT SEALANT AS PER ITEM NO. 23	0.1	CUM			
4.7	C.S PIPES AS PER ITEM NO. 20.2					
a)	100 mm DIA PIPE	1	RM			
b)	150 mm DIA PIPE	1	RM			
c)	200 mm DIA PIPE	1	RM			
d)	250 mm DIA PIPE	1	RM			
e)	300 mm DIA PIPE	1	RM			
4.8	R.C.C PIPES AS PER ITEM NO. 20.3					
a)	100 mm DIA PIPE	1	RM			
b)	150 mm DIA PIPE	1	RM			
c)	200 mm DIA PIPE	1	RM			
d)	250 mm DIA PIPE	1	RM			
e)	300 mm DIA PIPE	1	RM			
4.9	STRUCTURAL STEEL AS PER ITEM NO. 10.0	7.20	TON			
4.10	MANHOLE COVER AS PER ITEM NO. 28.0	1	NOS.			
5.0	DEMOLITION WORKS					
a)	AS PER ITEM NO. 22.0 (i)	1	CUM			
b)	AS PER ITEM NO. 22.0 (ii)	1	CUM			
c)	AS PER ITEM NO. 22.0 (iii)	1	CUM			
TOTAL (PKR)						

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR BUILDING & SHED WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
1.0	<u>FIREWATER PUMP SHED (INCLUDING INSIDE PUMPS & DIESEL TANK FOUNDATIONS)</u>					
1.1	EXCAVATION AS PER ITEM NO. 1.1	230	CU.M			
1.2	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	75	CU.M			
1.3	C. C. 1:4:8 AS PER ITEM NO. 2.1	12.0	CU.M			
1.4	C. C. 1:3:6 AS PER ITEM NO. 2.5	30	CU.M			
1.5	RCC 1:2:4 IN FLOOR AS PER ITEM NO. 2.9	60	CU.M			
1.6	R.C.C. 3750 psi AS PER ITEM NO. 2.2	130	CU.M			
1.7	GROUT AS PER ITEM NO. 12.0.i)	0.60	CU.M			
1.8	GROUT AS PER ITEM NO. 12.0.ii)	0.16	CU.M			
1.9	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	17.5	TON			
1.10	PLINTH PROTECTION AS PER ITEM NO. 9.12	66	SQ.M			
1.11	GRATING AS PER ITEM NO. 14	1	SQ.M			
1.12	ANCHOR BOLTS AS PER ITEM NO. 11	400	KG			
1.13	STONE SOLING AS PER ITEM NO. 1.5	61	CU.M			
1.14	ISOLATION JOINT AS PER ITEM NO. 9.9	40	RM			
1.15	STRUCTURAL STEEL AS PER ITEM NO. 10.0	45	TON			
1.16	ANCHOR POCKETS AS PER ITEM NO. 17	38	NOS.			SIZE AS PER DRAWING
1.17	GI SHEET AS PER ITEM NO. 29.0 (i)	500	SQM			
1.18	BRICK MASONRY AS PER ITEM NO. 4.2	11.0	CU.M			
2.0	<u>UTILITY SHED</u>					
2.1	EXCAVATION AS PER ITEM NO. 1.1	125	CU.M			
2.2	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	40	CU.M			
2.3	C. C. 1:4:8 AS PER ITEM NO. 2.1	7.5	CU.M			
2.4	C. C. 1:3:6 AS PER ITEM NO. 2.5	18.5	CU.M			
2.5	C. C. 1:2:4 AS PER ITEM NO. 2.4	1	CU.M			
2.6	R.C.C. 3750 psi AS PER ITEM NO. 2.2	35	CU.M			
2.7	RCC 1:2:4 IN FLOOR AS PER ITEM NO. 2.9	37	CU.M			
2.8	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	5.00	TON			
2.9	GROUT AS PER ITEM NO. 12.0.i)	0.10	CU.M			
2.10	PLINTH PROTECTION AS PER ITEM NO. 9.12	52	SQ.M			
2.11	GRATING AS PER ITEM NO. 14	1	SQ.M			
2.12	ANCHOR BOLTS AS PER ITEM NO. 11	200	KG			
2.13	EMBEDDED ITEMS AS PER ITEM NO. 9.7	10	KG			
2.14	STONE SOLING AS PER ITEM NO. 1.5	37	CU.M			
2.15	STRUCTURAL STEEL AS PER ITEM NO. 10.0	27	TON			
2.16	ISOLATION JOINT AS PER ITEM NO. 9.9	20	RM			
2.17	DPC AS PER ITEM NO. 5.3	12.00	SQM			
2.18	BRICK MASONRY AS PER ITEM NO. 4.2	9.0	CU.M			

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR BUILDING & SHED WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
2.19	GI SHEET AS PER ITEM NO. 29.0 (i)	310	SQM			
3.0	<u>COMPRESSOR SHED</u>					
3.1	EXCAVATION AS PER ITEM NO. 1.1	300	CU.M			
3.2	C. C. 1:4:8 AS PER ITEM NO. 2.1	15	CU.M			
3.3	C. C. 1:3:6 AS PER ITEM NO. 2.5	40	CU.M			
3.4	RCC 1:2:4 IN FLOOR AS PER ITEM NO. 2.9	80	CU.M			
3.5	R.C.C. 3750 psi UPTO PLINTH LEVEL AS PER ITEM NO. 2.2	60.0	CU.M			
3.6	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	8.50	TON			
3.7	GROUT AS PER ITEM NO. 12.0.i)	0.21	CU.M			
3.8	PLINTH PROTECTION AS PER ITEM NO. 9.12	50	SQ.M			
3.9	GRATING AS PER ITEM NO. 14	1	SQ.M			
3.10	ANCHOR BOLTS AS PER ITEM NO. 11	325	KG			
3.11	STONE SOLING AS PER ITEM NO. 1.5	80	CU.M			
3.12	STRUCTURAL STEEL AS PER ITEM NO. 10.0	70	TON			
3.13	ISOLATION JOINT AS PER ITEM NO. 9.9	30	RM			
3.14	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	95	CU.M			
3.15	GI SHEET AS PER ITEM NO. 29.0 (i)	1180	SQM			
4.0	<u>CONTROL ROOM</u>					
4.1	EXCAVATION AS PER ITEM NO. 1.1	43	CU.M			
4.2	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	13.5	CU.M			
4.3	C. C. 1:4:8 AS PER ITEM NO. 2.1	3.0	CU.M			
4.4	C. C. 1:2:4 AS PER ITEM NO. 2.4	1.0	CU.M			
4.5	R.C.C. 3750 psi AS PER ITEM NO. 2.2	40	CU.M			
4.6	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	4.0	TON			
4.7	DPC AS PER ITEM NO. 5.3	8.20	SQM			
4.8	BRICK MASONRY AS PER ITEM NO. 4.2	28.0	CU.M			
4.9	<u>CEMENT PLASTER</u>					
a)	INTERNAL PLASTER AS PER ITEM NO. 5.1 (i)	205	SQ.M			
b)	EXTERNAL PLASTER AS PER ITEM NO. 5.1 (ii)	225	SQ.M			
4.10	ROOF SCREEDING AS PER ITEM NO. 5.2	94	SQ.M			
4.11	<u>COLOURING AS FOLLOWS:</u>					
a)	CEILING AS PER ITEM NO. 6.1	70	SQ.M			
b)	INTERNAL WALLS AS PER ITEM NO. 6.2	135	SQ.M			
c)	EXTERNAL AS PER ITEM NO. 6.3	225	SQ.M			
4.12	<u>TILE WORKS AS FOLLOWS:</u>					
a)	PROCELAIN TILES AS PER ITEM NO. 5.4 (i)	1	SQ.M			
b)	ANTI STATIC TILES AS PER ITEM NO. 5.4 (iv)	72	SQ.M			

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR BUILDING & SHED WORKS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
4.13	ALUMINIUM DOORS, WINDOWS & VENTILATORS					
a)	ALUMINIUM DOORS AS PER ITEM NO. 7.2	1.2	SQ.M			
b)	ALUMINIUM WINDOWS AS PER ITEM NO. 7.1 (i)	13	SQ.M			
4.14	STEEL DOOR AS PER ITEM NO. 7.3. (i)	3	SQ.M			
4.15	RAIN WATER DRAIN PIPE / SPOUT AS PER ITEM NO. 9.4	5	R.M			
4.16	PLINTH PROTECTION AS PER ITEM NO. 9.12	22	SQ.M			
4.17	C. C. 1:3:6 AS PER ITEM NO. 2.5	3.5	CU.M			
4.18	C. C 1:2:4 FLOORING AS PER ITEM NO. 2.8 (a)	5	CU.M			
4.19	DEMOLITION WORKS					
a)	AS PER ITEM NO. 22.0 (i)	1	CUM			
b)	AS PER ITEM NO. 22.0 (ii)	1	CUM			
c)	AS PER ITEM NO. 22.0 (iii)	1	CUM			
4.20	DRILLING OF HOLES AND FIXING OF REBARS WITH EPOXY					
a)	AS PER ITEM NO. 26.0 (i)	1	RM			
b)	AS PER ITEM NO. 26.0 (ii)	1	RM			
c)	AS PER ITEM NO. 26.0 (iii)	1	RM			
TOTAL (PKR)						

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR EQUIPMENT FOUNDATIONS & PIPE SUPPORTS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
1.0	<u>TANK FOUNDATIONS</u>					
1.1	<u>FIREWATER TANK FOUNDATION</u>					
a)	EXCAVATION AS PER ITEM NO. 1.1	350	CU.M			
b)	C. C. 1:3:6 AS PER ITEM NO. 2.5	8.5	CU.M			
c)	C. C. 1:2:4 AS PER ITEM NO. 2.4	1.0	CU.M			
d)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	53	CU.M			
e)	BITUMEN COATING AS PER ITEM NO. 27.0	1	SQM			
f)	HDPE GEOMEMBRANE AS PER ITEM NO. 9.15	142	SQM			
g)	2" (SCH. 40) LEAK DETECTION PIPE AS PER ITEM NO. 20.1 (i)	9	RM			
h)	ASPHALT SAND LAYER AS PER ITEM NO. 1.8	135	SQM			
i)	JOINT SEALENT AS PER ITEM NO. 9.14	43	RM			
j)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	5	TON			
k)	COARSE SAND FILLING AS PER ITEM NO. 1.2	248	CU.M			
l)	GROUT AS PER ITEM NO. 12.0.i)	0.45	CU.M			
m)	PLINTH PROTECTION AS PER ITEM NO. 9.12	40	SQM			
n)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	88	CU.M			
o)	ANCHOR BOLTS AS PER ITEM NO. 11	364	KG			
p)	GRAVEL FILLING AS PER ITEM NO. 1.9	1	CU.M			
1.2	<u>DIESEL OIL STORAGE TANK</u>					
a)	EXCAVATION AS PER ITEM NO. 1.1	14	CU.M			
b)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	5	CU.M			
c)	C. C. 1:4:8 AS PER ITEM NO. 2.1	0.8	CU.M			
d)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	11.5	CU.M			
e)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	0.6	TON			
f)	C. C. 1:3:6 AS PER ITEM NO. 2.5	0.1	CU.M			
g)	GROUT AS PER ITEM NO. 12.0.i)	0.20	CU.M			
1.3	<u>INSTRUMENT AIR COMPRESSOR PACKAGE FOUNDATION</u>					
a)	EXCAVATION AS PER ITEM NO. 1.1	50	CU.M			
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	2.5	CU.M			
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	40	CU.M			
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	2.5	TON			
e)	GROUT AS PER ITEM NO. 12.0.i)	0.60	CU.M			
f)	GROUT AS PER ITEM NO. 12.0.ii)	0.30	CU.M			
g)	ANCHOR BOLTS AS PER ITEM NO. 11	45	KG			
h)	ANCHOR POCKETS AS PER ITEM NO. 17	1	NOS.			SIZE AS PER DRAWING
i)	EMBEDDED PLATES AS PER ITEM NO. 9.7	10	KG			
j)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	16	CU.M			

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR EQUIPMENT FOUNDATIONS & PIPE SUPPORTS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS	
1.4	<u>COMPRESSOR PACKAGE FOUNDATION(S)</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	300	CU.M			SIZE AS PER DRAWING	
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	14.5	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	268	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	11	TON				
e)	GROUT AS PER ITEM NO. 12.0.i)	2.25	CU.M				
f)	GROUT AS PER ITEM NO. 12.0.ii)	11	CU.M				
g)	ANCHOR BOLTS AS PER ITEM NO. 11	380	KG				
h)	ANCHOR POCKETS AS PER ITEM NO. 17	97	NOS.				
i)	EMBEDDED PLATES AS PER ITEM NO. 9.7	10	KG				
j)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	96	CU.M				
1.5	<u>INSTRUMENT AIR VESSEL FOUNDATION</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	55	CU.M				
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	2.60	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	42	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	3.8	TON				
e)	GROUT AS PER ITEM NO. 12.0.i)	0.55	CU.M				
f)	ANCHOR BOLTS AS PER ITEM NO. 11	42	KG				
g)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	17.50	CU.M				
1.6	<u>PIPE SLEEPERS/SUPPORTS/RACKS</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	208	CU.M				
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	7	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	69	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	7	TON				
e)	GROUT AS PER ITEM NO. 12.0.i)	0.10	CU.M				
f)	ANCHOR BOLTS AS PER ITEM NO. 11	255	KG				
g)	EMBEDDED PLATES AS PER ITEM NO. 9.7	1,425	KG				
h)	STRUCTURAL STEEL WORKS AS PER ITEM NO. 10.0	2.50	TONS				
i)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	73.00	CU.M				
j)	HILTI BOLTS AS FOLLOWS :						
-	M12 AS PER ITEM NO. 30 (i)	12	NOS.				
-	M16 AS PER ITEM NO. 30 (ii)	1	NOS.				
-	M20 AS PER ITEM NO. 30 (iii)	1	NOS.				
1.7	<u>PIG LAUNCHER FOUNDATION</u>						
a)	EXCAVATION AS PER ITEM NO. 1.1	4.5	CU.M				
b)	C. C. 1:4:8 AS PER ITEM NO. 2.1	0.2	CU.M				
c)	R.C.C. 3750 psi AS PER ITEM NO. 2.2	1.1	CU.M				
d)	STEEL REINFORCEMENT AS PER ITEM NO. 3.1	0.1	TON				

OIL & GAS DEVELOPMENT COMPANY LTD.**MELA DEVELOPMENT PROJECT****BILL OF QUANTITIES OF CIVIL WORKS FOR EQUIPMENT FOUNDATIONS & PIPE SUPPORTS**

S.NO.	DESCRIPTION	QTY.	UNIT	UNIT RATE (PKR)	AMOUNT (PKR)	REMARKS
e)	GROUT AS PER ITEM NO. 12.0.i)	0.005	CU.M			
f)	ANCHOR BOLTS AS PER ITEM NO. 11	14.0	KG			
g)	SELECT A3 FILL MATERIAL (BELOW FOUNDATION) AS PER ITEM NO. 1.11	1.5	CU.M			
h)	EMBEDDED PLATES AS PER ITEM NO. 9.7	15	KG			
TOTAL (PKR)						

ATTACHMENT – I-A

**TERMS & CONDITIONS OF INLAND L/C FOR
SUPPLY**

ATTACHMENT – I-A**TERMS AND CONDITIONS OF THE INLAND L/C FOR SUPPLY****1.0 IN CHARGE STORE KUNNAR**

The material must be consigned to Chief Stores Officer. Oil & Gas Development Company Limited, Plot No.21, West Wharf Road, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040.

2.0 PACKING

The Packing of the material must conform to the International Standards.

3.0 MARKING

3.1 All Packages/Boxes must bear the Contract as shipping Marks, Country of Origin and Weight in Kilograms (Gross/Net). The marks must tally with shipping documents.

3.2 In addition to the above mentioned shipping marks, the following procedure of color code marking to be adopted / made on each side of the package/box/container while dispatching the material:-

“There will be an isosceles triangle with or less than six inches side, triangle and letters will be in black. On bid packages/boxes/container, the sides or triangle and letters will be increased appropriately. Underneath the triangle there will be two color code bars in “**GREEN**” color size six inches in light and 1^{1/2}” in width. If the above color codes marking is not appropriate/suitable, the sizes and color may be changed”

4.0 SHIPPING DOCUMENTS

Shipping documents shall normally consist of the following:

4.1 Clean Truck Receipt/Carrier Receipt showing freight paid & indicating Contract / Inland LC details.

4.2 Original detailed commercial invoice showing material description, quantity unit price and total price strictly in line with the Contract and verified by OGDCL.

- 4.3 Copy of applicable GST invoice.
- 4.4 Copy of NTN certificate
- 4.5 Packing list
- 4.6 Mill Inspection/Quality Certificates.
- 4.7 Dully Signed & Stamped Delivery Note
- 4.8 Third Party Inspection Certificate from any of the following (if required):
 - I. Lloyds
 - II. SGS
 - III. TUV Austria Bureau
 - IV. Velosi
- 4.9 Warranty Certificate
- 4.10 Certificate of origin.
- 4.11 Certificate issued by OGDCL that ordered equipment/material has been received at delivery location and inspected and accepted

5.0 **INSTRUCTIONS FOR COMPLETING SHIPPING DOCUMENTS**

- 5.1 The shipping invoice should be marked on top in capital words:
 - a) Complete, first and last consignment (if all the contractual material is shipped in one lot).
 - b) First partial Shipment/Second partial shipment (and so on) Final and last shipment as the case may be if shipments are effected in parts.
- 5.2 All invoices should be signed, and must indicate value of the each item total value & also show 'SHIPPING MARKS' as provided in the contract.

6.0 **SHIPMENT INTIMATION**

6.1 The beneficiary within 24-48 hours of making shipment must send Fax to:

- i. Chief Stores Officer, Plot No. 21 West Wharf, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040
- ii. Manager (Procurement)- OGDCL House Plot NO. 3 (New No. 3013) F-6/G6, Blue Area, Jinnah Avenue, Islamabad, email irshad_muhammad@ogdcl.com intimating them the following;
 - a) L/C number and Contract No.
 - b) Total FOR value of the consignment shipped.
 - c) No. of boxes/package/pieces etc.
 - d) Net and gross weights.
 - e) Expected time of arrival (ETA) of material.

7.0 **INSTRUCTION REGARDING TRANSMISSION/NEGOTIATION OF SHIPPING DOCUMENTS**

7.1 **Original/Negotiable Documents**

- a) The beneficiary immediately upon making shipments(s) should negotiate the original clean shipping documents free from any discrepancy with negotiating bank as indicated in the L/C.
- b) Original/negotiable documents must contain at least four sets of the shipping documents mentioned under Clause No. 5 above including one set of the parts catalogue, brochures, technical literature, etc., invariably.
- c) The original shipping documents should be dispatched through courier service by the negotiating bank at the beneficiary's cost within 24-48 hours after receipt from the beneficial.
- d) The discrepant documents with minor discrepancies will be accepted subject to the consent of Procurement Department. Due to the discrepancies reported by L/C opening bank will be on beneficiary account.

7.2 Non-Negotiable Documents

Six complete sets of non-negotiable shipping documents including one set of parts catalogue brochures/technical literature etc. should be received by the following immediately upon shipment is effected:

Manager (Foreign) Procurement,
Oil & Gas Development Company Limited,
OGDC House, Plot No.3 (New No. 3013), F-6/G-6, Blue Area
Jinnah Avenue, Islamabad, Pakistan.

Ph No. 0092-51-920022144

Email: irshad_muhammad@ogdcl.com

Two complete sets of non-negotiable shipping documents along with one set of parts catalogue brochure/technical literature etc. should be received by the following immediately upon shipment is effected:

Manager (Materials)-South,
Oil & Gas Development Company Limited,
Plot No. 21, West Wharf Road,
Karachi, Pakistan.

Fax # 0092-21-32311040

Email: mujahid_ali@ogdcl.com, abdulwaheed_kunbhar@ogdcl.com

8.0 LIQUIDATED DAMAGES

If the contractor fails to deliver any or all of the goods within the time period(s) specified in the Contract, the Purchaser shall, without prejudice to other remedies under the contract, deduct from the contract price / Bank Guarantee as liquidated damages, a sum not more than 0.5% of the contract price per week or part thereof for first four weeks, 1.00% per week for next four weeks and 1.5% per week exceeding four weeks up to maximum extent of 5% of the contract value.

In case the Purchaser is satisfied that the delayed / defective shipment was due to some mistake or circumstances beyond the control of the contractor and the contractor has not intentionally or negligently contributed in the delay, the Purchaser may impose Liquidated Damages for not more than a sum equivalent to 0.5% of the delayed or defective shipment per week or part thereof for first two weeks, 1.00 % per week for next three weeks and 1.5% per week exceeding five weeks but not exceeding 5% of the contract value of the delayed/ defective shipment provided that the contractor takes immediate remedial measures for the-replacement of defective shipment and takes prompt steps to mitigate the delay. The Purchaser may however, impose Liquidated Damages as per (a) above if the delayed or defective shipment has affected the project completion schedule or has resulted in production losses.

Even after imposition of LDs, if the supplier fails to materialize the delivery (material and or services); the Purchaser reserves the right to cancel Purchase order/contract/LC and to forfeit the Guarantee (if applicable) after intimating the supplier for such cancellation / forfeiture.

9.0 **PERFORMANCE BANK GUARANTEE**

Payment against this credit will not be released by the corresponding bank to the beneficiary till receipt of copy of performance bond required to be submitted to OGDCL against the contract against which this letter of credit has been established.

10.0 **AMENDMENT/EXTENSION OF L/C**

The beneficiary will positively confirm shipment of all ordered materials within L/C validity or made request for extension of shipment and negotiation dates at least 15 to 30 days prior to the expiry of L/C. If shipment is not effected within L/C validity or request for extension is not received 15 to 30 days prior to expiry of L/C validity, no request for grant of extension in shipment and negotiation period will be entertained under any circumstances. In case of extension in shipment/negotiation period, the beneficiary will be required to extend the validity of his performance bond (if provided) accordingly. All charges on this account will be on beneficiary's account.

11.0 **CHARGES FOR L/C ESTABLISHMENT**

- 11.1 All Charges of the bank for credit opening will be borne by the OGDCL.
- 11.2 All charges of corresponding bank such as negotiation of documents, adding confirmation to credit etc. will be to the account of beneficiary.
- 11.3 All charges for amendments/extension in L/C will be to the account of beneficiary.

ATTACHMENT – I-B

**TERMS & CONDITIONS OF INLAND L/C FOR
SERVICES**

ATTACHMENT – I-B**TERMS AND CONDITIONS OF THE INLAND L/C FOR SERVICES****1.0 IN CHARGE STORE KUNNAR**

The material must be consigned to Chief Stores Officer. Oil & Gas Development Company Limited, Plot No.21, West Wharf Road, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040.

2.0 PACKING

The Packing of the material must conform to the International Standards.

3.0 MARKING

3.1 All Packages/Boxes must bear the Contract as shipping Marks, Country of Origin and Weight in Kilograms (Gross/Net). The marks must tally with shipping documents.

3.2 In addition to the above mentioned shipping marks, the following procedure of color code marking to be adopted / made on each side of the package/box/container while dispatching the material:-

“There will be an isosceles triangle with or less than six inches side, triangle and letters will be in black. On bid packages/boxes/container, the sides or triangle and letters will be increased appropriately. Underneath the triangle there will be two color code bars in “**GREEN**” color size six inches in light and 1^{1/2}” in width. If the above color codes marking is not appropriate/suitable, the sizes and color may be changed”

4.0 SHIPPING DOCUMENTS

Shipping documents shall normally consist of the following:

4.1 Clean Truck Receipt/Carrier Receipt showing freight paid & indicating Contract / Inland LC details.

4.2 Original detailed commercial invoice showing material description, quantity unit price and total price strictly in line with the Contract and verified by OGDCL.

- 4.3 Copy of applicable GST invoice.
- 4.4 Copy of NTN certificate
- 4.5 Packing list
- 4.6 Mill Inspection/Quality Certificates.
- 4.7 Dully Signed & Stamped Delivery Note
- 4.8 Third Party Inspection Certificate from any of the following (if required):
 - I. Lloyds
 - II. SGS
 - III. TUV Austria Bureau
 - IV. Velosi
- 4.9 Warranty Certificate
- 4.10 Certificate of origin.
- 4.11 Certificate issued by OGDCL that ordered equipment/material has been received at delivery location and inspected and accepted

5.0 **INSTRUCTIONS FOR COMPLETING SHIPPING DOCUMENTS**

- 5.1 The shipping invoice should be marked on top in capital words:
 - a) Complete, first and last consignment (if all the contractual material is shipped in one lot).
 - b) First partial Shipment/Second partial shipment (and so on) Final and last shipment as the case may be if shipments are effected in parts.
- 5.2 All invoices should be signed, and must indicate value of the each item total value & also show 'SHIPPING MARKS' as provided in the contract.

6.0 **SHIPMENT INTIMATION**

6.1 The beneficiary within 24-48 hours of making shipment must send Fax to:

- i. Chief Stores Officer, Plot No. 21 West Wharf, Karachi. Telephone No. 021-32313119, 32311108. Fax No. 021-32311040
- ii. Manager (Procurement)- OGDCL House Plot NO. 3 (New No. 3013) F-6/G6, Blue Area, Jinnah Avenue, Islamabad, email irshad_muhammad@ogdcl.com intimating them the following;
 - a) L/C number and Contract No.
 - b) Total FOR value of the consignment shipped.
 - c) No. of boxes/package/pieces etc.
 - d) Net and gross weights.
 - e) Expected time of arrival (ETA) of material.

7.0 **INSTRUCTION REGARDING TRANSMISSION/NEGOTIATION OF SHIPPING DOCUMENTS**

7.1 **Original/Negotiable Documents**

- a) The beneficiary immediately upon making shipments(s) should negotiate the original clean shipping documents free from any discrepancy with negotiating bank as indicated in the L/C.
- b) Original/negotiable documents must contain at least four sets of the shipping documents mentioned under Clause No. 5 above including one set of the parts catalogue, brochures, technical literature, etc., invariably.
- c) The original shipping documents should be dispatched through courier service by the negotiating bank at the beneficiary's cost within 24-48 hours after receipt from the beneficial.
- d) The discrepant documents with minor discrepancies will be accepted subject to the consent of Procurement Department. Due to the discrepancies reported by L/C opening bank will be on beneficiary account.

7.2 Non-Negotiable Documents

Six complete sets of non-negotiable shipping documents including one set of parts catalogue brochures/technical literature etc. should be received by the following immediately upon shipment is effected:

- **OGDCL**

- **Manager (Foreign)-Procurement**

- Oil & Gas Development Company Limited

- Supply Chain Management Department

- OGDCL House, Plot No. 3 (New No. 3013) F-6/G-6,

- Jinnah Avenue, Islamabad (Pakistan)

- Phone No: 92-51-920022144

- Email: irshad_muhammad@ogdcl.com

- **Manager MELA Project**

- 9th Floor, Tower-C,

- OGDCL House, Jinnah Avenue,

- Blue Area, Islamabad.

- Pakistan.

- Tel: (92-51)-920022909, 9209783

- Email: zaheer_mirza@ogdcl.com

8.0 DRAFTS AT.....

- **Works (Covering Construction, Installation & Erection, Pre-Commissioning, Commissioning & Start-up)**

OGDCL shall make progressive payments to Contractor on monthly basis against Contractor's invoices giving details of that specific work and its completion status. The payment shall be made considering the Bid Price Schedule and verified percentage completion of work. The measurement/verification mechanism for progressive payments is detailed in **Annexure-XVIII**. The measurement/verification of work will be made by OGDCL/Consultant based on progress reports submitted by the Consultant and actual at site.

- **Transportation Loading & Un-loading Services**

Transportation, loading and un-loading charges shall be paid by OGDCL to the PCC Contractor on submission of invoice duly verified by OGDCL/Consultant and accompanied with certificate that the equipment/material and packages have been delivered at Project Site and duly inspected/accepted by OGDCL/Consultant.

➤ **Pre-Commissioning, Commissioning & Start-Up (including Performance Testing)**

The commissioning & Start-Up charges for equipment and packages shall be paid on successful commissioning & performance testing of equipment and packages required for Mela Development Project by OGDCL and submission of PC Contractor's invoice duly verified by OGDCL.

9.0 **DOCUMENTS REQUIRED**

Payment against the letter of credit shall be effective upon submission of following clean documents:

➤ **Works (Covering Construction, Installation & Erection, Pre-Commissioning, Commissioning / Commissioning Assistance & Start-up (including Performance Testing))**

OGDCL shall make progressive payments to Contractor on monthly basis against Contractor's invoices giving details of that specific work and its completion status. The payment shall be made considering the Bid Price Schedule and verified percentage completion of work. The measurement/verification mechanism for progressive payments is detailed in Annexure-XVIII. The measurement/verification of work will be made by OGDCL/Consultant based on progress reports submitted by the Consultant and actual at site.

➤ **Transportation Loading & Un-loading Services**

Transportation, loading and un-loading charges shall be paid by OGDCL to the PCC Contractor on submission of invoice duly verified by OGDCL/Consultant and accompanied with certificate that the equipment/material and packages have been delivered at Project Site and duly inspected/accepted by OGDCL/Consultant

➤ **Invoicing Procedure**

For progressive payment of works on a day in each month, to be agreed between the OGDCL's representative and the PC Contractor's representative the Contractor shall in respect of all amounts owing to him submit an invoice with relevant supporting documents, in three copies, to the OGDCL's Representative with a Work progress report for OGDCL's approval and signature. OGDCL's Representative shall authorize in writing payment to the Contractor as ascertained in accordance with the above clause.

➤ **Timing for Payment**

The Payment of undisputed invoices shall be made in full within estimated thirty (30) days after OGDCL has authorized such payment in writing, provided OGDCL/Consultant representative has first certified such invoice and Contractor has fulfilled all requirements for the release of payment, OGDCL shall pay the amount due less applicable taxes and any amounts which may be due to OGDCL.

➤ **Disputed Invoices**

If any invoice or an amount of invoice is disputed, OGDCL shall within ten (10) days of receipt of invoice inform the Contractor the grounds on which payment of the invoice or an amount is disputed. Efforts shall be made by both parties to resolve the dispute within a period of thirty (30) days.

10.0 **LIQUIDATED DAMAGES**

If the contractor fails to deliver any or all of the goods within the time period(s) specified in the Contract, the Purchaser shall, without prejudice to other remedies under the contract, deduct from the contract price / Bank Guarantee as liquidated damages, a sum not more than 0.5% of the contract price per week or part thereof for first four weeks, 1.00% per week for next four weeks and 1.5% per week exceeding four weeks up to maximum extent of 5% of the contract value.

In case the Purchaser is satisfied that the delayed / defective shipment was due to some mistake or circumstances beyond the control of the contractor and the contractor has not intentionally or negligently contributed in the delay, the Purchaser may impose Liquidated Damages for not more than a sum equivalent to 0.5% of the delayed or defective shipment per week or part thereof for first two weeks, 1.00 % per week for next three weeks and 1.5% per week exceeding five weeks but not exceeding 5% of the contract value of the delayed/ defective shipment provided that the contractor takes immediate remedial measures for the-replacement of defective shipment and takes prompt steps to mitigate the delay. The Purchaser may however, impose Liquidated Damages as per (a) above if the delayed or defective shipment has affected the project completion schedule or has resulted in production losses.

Even after imposition of LDs, if the supplier fails to materialize the delivery (material and or services); the Purchaser reserves the right to cancel Purchase order/contract/LC and to forfeit the Guarantee (if applicable) after intimating the supplier for such cancellation / forfeiture.

11.0 PERFORMANCE BANK GUARANTEE

Payment against this credit will not be released by the corresponding bank to the beneficiary till receipt of copy of performance bond required to be submitted to OGDCL against the contract against which this letter of credit has been established.

12.0 AMENDMENT/EXTENSION OF L/C

The beneficiary will positively confirm shipment of all ordered materials within L/C validity or made request for extension of shipment and negotiation dates at least 15 to 30 days prior to the expiry of L/C. If shipment is not effected within L/C validity or request for extension is not received 15 to 30 days prior to expiry of L/C validity, no request for grant of extension in shipment and negotiation period will be entertained under any circumstances. In case of extension in shipment/negotiation period, the beneficiary will be required to extend the validity of his performance bond (if provided) accordingly. All charges on this account will be on beneficiary's account.

13.0 CHARGES FOR L/C ESTABLISHMENT

- 13.1 All Charges of the bank for credit opening will be borne by the OGDCL.
- 13.2 All charges of corresponding bank such as negotiation of documents, adding confirmation to credit etc. will be to the account of beneficiary.
- 13.3 All charges for amendments/extension in L/C will be to the account of beneficiary.

ATTACHMENT – II

MECHANICAL ACCEPTANCE CERTIFICATE

ATTACHMENT-II

MECHANICAL ACCEPTANCE CERTIFICATE

Effective Date:.....

CONTRACT No..... Dated.....

Between:

Oil & Gas Development Company Limited (hereinafter called OGDCL)

And

.....(hereinafter called Contractor)

1. Pursuant to Article 56.1 of the Contract, OGDCL hereby certifies that the following functional Systems of the PLANT are mechanically completed, accepted and have been tested and pre-commissioned in accordance with the requirements of the Contract and are therefore in readiness for commencement of the associated commissioning activities, in accordance with the requirements of the Contract, with the exception of the outstanding items listed upon the attached Punch List, it being understood that should PC Contractor fail to complete all of the outstanding items in respect of a System within the respective period stated upon the Punch List the present Certificate shall be null and void in respect of such Systems:

.....
.....
.....

2. Issuance of the Mechanical Acceptance Certificate shall not relieve the PC Contractor from his warranty obligations and other provisions of the Contract which expressly or by their nature survive the said certificate.

For and on behalf of
(Oil & Gas Development Company Limited)

For and on behalf of
(Contractor)

Signature:

Signature:

Name:

Name:

Position:

Position:

.....
Consultant

ATTACHMENT – III

PROVISIONAL ACCEPTANCE CERTIFICATE

ATTACHMENT-III

PROVISIONAL ACCEPTANCE CERTIFICATE

Effective Date:.....

CONTRACT No..... Dated.....

Between:

Oil & Gas Development Company Limited (hereinafter called OGDCL)

And

.....(hereinafter called Contractor)

1. Pursuant to Article 56.2 of the Contract, it is hereby certified that the PLANT and the WORK performed by the PC Contractor under the Contract are, effective upon the .../.../... provisionally accepted, with the exception of the outstanding items listed upon the attached Punch List.
2. In accordance with the Contract, the Warranty Period will commence on the .../.../... which shall be the Effective Date for the purpose of this PROVISIONAL ACCEPTANCE CERTIFICATE, it being understood that should Contractor fail to complete all outstanding Punch List items by the .../.../... the PROVISIONAL ACCEPTANCE CERTIFICATE shall be null and void and the requirements of sub-Article ____ shall apply in full and the Effective Date of the PROVISIONAL ACCEPTANCE CERTIFICATE shall be revised accordingly.
3. Issuance of this PROVISIONAL ACCEPTANCE CERTIFICATE shall not relieve PC Contractor from his warranty obligations and other provisions of the Contract which expressly or by their nature survive the said certificate.

For and on behalf of
(Oil & Gas Development Company Limited)

For and on behalf of
(PC Contractor)

Signature:

Signature:

Name:

Name:

Position:

Position:

In presence of:

In presence of:

Signature:

Signature:

Name:

Name:

Position:

Position:

Date:

Date:

.....

Consultant

ATTACHMENT – IV

FINAL ACCEPTANCE CERTIFICATE

ATTACHMENT-IV

FINAL ACCEPTANCE CERTIFICATE

Effective Date:.....

CONTRACT No..... Dated.....

Between:

Oil & Gas Development Company Limited (hereinafter called OGDCL)

And

.....(hereinafter called Contractor)

Whereas the PLANT and the WORK, as specified in the Contract, have been accepted under the form of the TAKE OVER CERTIFICATE dated: .../.../....

And

Whereas the Warranty Period pursuant to Article 40 of the Contract is now completed, both PARTIES agree that:

1. Pursuant to Article 40 (Warranties) of the Contract, it is hereby certified and agreed, by the issuance of the FINAL ACCEPTANCE CERTIFICATE, that the Contractor obligations under the Contract have, effective upon the .../.../...., been fulfilled.
2. Issuance of this FINAL ACCEPTANCE CERTIFICATE shall not relieve PC Contractor from any obligations and other provisions of the Contract which expressly or by their nature survive the said certificate.

For and on behalf of
(Oil & Gas Development Company Limited)

For and on behalf of
(Contractor)

Signature:

Signature:

Name:

Name:

Position:

Position:

In presence of:

In presence of:

Signature:

Signature:

Name:

Name:

Position:

Position:

Date:

Date:

.....

Consultant

ATTACHMENT – V

CERTIFICATE OF COMPLETION

ATTACHMENT-V

CERTIFICATE OF COMPLETION

FOR

(Contract Designation)

To: _____

(OGDCL)

I, the undersigned Contractor for the above Designated Contract (hereinafter called the “PC Contractor”) with oil and gas development company limited (OGDCL) (hereinafter called the “OGDCL”) do hereby certify that:

1. The work to be performed by _____ pursuant to the contact dated _____ is completed and is in all respect in strict compliance with the provision of the Contract, including all plants, specification, maps and contract drawings and modification thereof and vendor information, complete in all respects.
2. Payments have been made in fully by the Contractor to all person/firms who have furnished labor and material for this contract.
3. The Contractor has obtained valid release of lien from all person, firms, and/or corporation furnishing materials, supplies and appliance, which were employed by the Contractor in the performance of this contract, and such releases have been delivered by the Contractor or the OGDCL/Consultant.
4. The complete cost account statement attached hereto and made a part hereof a complete and accurate cost break-down, and in accordance with the cost account code, given to the Contractor by OGDCL, of all materials, equipment and work performed in accordance with the contract.

5. All defects in equipment, materials and workmanship reported by the OGDCL/Consultant have been corrected by the Contractor.

6. The total true and correct cost of the contract as so completed is _____ total currency in Pakistan Rupees _____ of this total the entire balance now due to the Contractor is _____ total currency in Pakistani _____ Rupees

_____.

We certify that the above designation contract has been completed in accordance with the provisions of said contract dated _____ provided however that the acceptance of the Contractor’s work by OGDCL shall not be deemed to relive the Contractor of his obligation contained in the con tract with respect to defective workmanship, materials, or equipment discovered with the guarantee period.

(Contractor)

By:_____

Title:_____

Date:_____

ATTACHMENT – VI

CERTIFICATE OF COMPLIANCE

ATTACHMENT-VI

CERTIFICATE OF COMPLIANCE

FOR

(Contract Designation)

To: _____

(OGDCL)

I, the undersigned Contractor for the Contract above do hereby certify that:

The work to be performed by _____ (hereinafter called the “Contractor”) pursuant to the Contract dated _____ has been completed as of _____ and, to the best of my knowledge, was performed in all respects in strict compliance with the terms and conditions of the Contract and all laws of the city of _____ and the country of Pakistan.

(Contractor)

By: _____

Title: _____

Date: _____

ATTACHMENT – VII

UNDERTAKING

ATTACHMENT-VII

UNDERTAKING

Oil & Gas Development Company Limited (hereinafter called OGDCL)
Islamabad.

Contract No. and Date: _____

DESCRIPTION OF WORK

The above WORKS have been completed in accordance with the provision of the Contract.

The undersigned hereby releases and for ever discharges the Oil and Gas Development Company Limited (OGDCL) their successors and assigns, and their property, from all claims and demands whatsoever in any manner arising out of or related to the Contract or labor performed or material furnished by the undersigned in connection with, or incidental to the execution and completion of the WORKS.

In consideration of and for the purpose of OGDCL/Consultant to issue the Acceptance Certificate and make the final payment, the undersigned hereby presents, warrants and agrees that:

- 1- All sums due to become due and all debts, accounts, damages, obligations, claims and demands of every nature and kind whatsoever in any manner arising out of, or related to labor performed or material furnished in connection with, or incidental to the contract have been paid and satisfied.
- 2- There are no unsettled claims of any nature what so ever including for injuries to or death of person or damage to, or destruction of property in any manner arising out or related to the Contract and
- 3- The undersigned shall indemnify and hold harmless OGDCL successors and assigns from and against all claims, demands, liens, claims of lien, judgements, attachments and related costs and expenses in any manner, arising out of, or related to the Contract.

IN WITNESS WHEREOF, the Contractor has caused this instrument to be executed by its duly authorized representative(s) this ____ day of _____.

(Contractor)

FOR AND BEHALF OF

