OIL & GAS DEVELOPMENT COMPANY LIMITED
PROCUREMENT DEPARTMENT, ISLAMABAD
FOREIGN SECTION

(To be completed, filled in, signed and stamped by the principal)

ANNEXURE 'A'

Material	6" 900# PIG LAUNCHER AND RECEIVER FOR SOGHRI-3
Tender Enquiry No	PROC-FE/CB/PROD-4320/2019
Due Date	
Evaluation Criteria	FULL

SCHEDULE OF REQUIREMENT

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
1	PIG LAUNCHER AND RECEIVER 6" 900#	Sets	1					

1. **Bid bond**; - Pursuant to tender clause # 2.2, 11.4, 13 & 35.3.2, bid bond amounting to USD 2,000/- (USD Two Thousand only) or equivalent in Pak Rupees should be submitted with the technical bid.

2. **Evaluation Criteria**: FULL CONSIGNMENT WISE ON C&F BY SEA KARACHI BASIS.

3. **Delivery Period: 04 Months**

4. **Shipment from ACU member Countries**: In case of shipment from ACU member countries, the LC beneficiary should be of that particular country from where the consignment is being shipped.

5. **Terms and conditions**: -Bidders are advised to carefully read all the terms and conditions of the Tender Document available at OGDCL website in the master tender document and attached technical Terms & Conditions

6. **Foreign Procurement Payment Terms (Competitive Bidding)**
   Following payments methods will be applied;
   i. **Tender value less than or equal to US$ 200,000:**

      Payment to the Contractor/ bidder in foreign currency shall be made by establishing in favor of the Contractor an irrevocable Letter of Credit (hereinafter called the L/C). 70 % Payment (s) under the L/C will be made for the FOB/ CFR / CPT (as the case may be) price of material of each shipment upon submission of the shipping documents. Balance 30% Payment will be released after receipt, inspection and acceptance of material.

   ii. **Tender value more than US$ 200,000:**

      Payment to the Contractor/ bidder in foreign currency shall be made by establishing in favor of the Contractor an irrevocable Letter of Credit (hereinafter called the L/C). 80 % Payment (s) under the L/C will be made for the FOB/ CFR / CPT (as the case may be) price of material of each shipment upon submission of the shipping documents. Balance 20% Payment will be released after receipt, inspection (in addition of pre-shipment inspection) and acceptance of material.

INDENT PROD/PF/SOGRI/006/19

6" 900# PIG LAUNCHER AND RECEIVER

LIST OF ANNEXURES

ANNEXURE-I

FORMAT OF CORPORATE & FINANCIAL INFORMATION

PART - I
GENERAL INFORMATION

1. Name (Full Company Name):

   - Postal Address :
   - Contact Person Name :
   - Contact Person Mobile No. :
   - Company Telephone:
   - Facsimile:
   - Valid e-mail for correspondence:
   - Website Address:

   1.1 Has the Company operated under any other name? If yes please give name, date of change and reason for change.

2. Type of Entity/Firm:
   - Corporation/Stock Company
   - Public Limited
   - Private Limited
   - Partnership
   - Proprietorship

3. Shareholders information/pattern with names and addresses of majority shareholders.

4. Place of Incorporation/Registration:

5. Year of Incorporation/Registration:
   (Please provide copies of Incorporation/Registration Certificates and Memorandum & Articles of Association)

6. Company's National Tax No.

7. Company's Core Business Areas and their annual sales revenue/earnings during last five (5) years.

8. Name & Address of Owners/Directors

9. Registration with Pakistan Engineering Council (PEC) as Contractor. Please provide copy of membership certificate issued by PEC.

PART - II
FINANCIAL STRENGTH

1. Provide details with regard to the financial standing of the applicant including copies of last three (3) years annual audited profit & loss account and balance sheet. Complete postal address, email address and contact numbers of the audited firm should be provided along with the bid. Also, please fill the financial summary as per below table;

S. No.	Description	Years		
		2017	2016	2015
1	Sales Revenue			
2	Paid Up Capital			
3	Profit Before Tax			
4	Profit After Tax			
5	Current Assets			
6	T. Asset			
7	Owner Equity			
8	Long Term Debt			
9	Current Liability			
10	Total Liabilities			

2. Bank(s) credit worthiness certificates (Latest Period) of applicant organization and available credit ceiling/limits with Account Number/Title.

3. Detail record with regard to litigation/arbitration proceedings or any other dispute related to project undertaken/being undertaken by the Bidder their Sub-Contractors and Suppliers (Specially with OGDCL it Joint Venture Partners or other public and private organizations working in the Oil & Gas sector of Pakistan) during past five (05) years.

4. Any information including brochures, references and other documentary evidence of technical qualification, capability and experience of the Applicant to execute the Project.

The undersigned on behalf of _____ hereby declare that the statements made and the information provided official herewith is complete, true and correct in every detail

_____
Signature

Official Seal of the Company

ANNEXURE - II

RELATED PROJECTS BEING EXECUTED

Sr. No.	Name, Description & Capacity of the Project	Name & Address of Client	Country & Year	Project Completion Period	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	Whether the Project is on Schedule? If not, 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, manufacturing and commissioning.

ANNEXURE - III

PROJECTS EXECUTED DURING LAST FIVE (05) YEARS TO RENOWNED AND LEADING E&P COMPANIES OF THE WORLD

Sr. No.	Name, Description & Capacity of the Project	Name & Address of Client	Country & Year	Project Completion Period		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 Manpower Employed	Reason for Delay in Project Completion, if applicable
				Planned	Actual	Foreign Currency	Local Currency	Total				

(*) Please indicate name and unit of currencies.

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

ANNEXURE - IV

HSE DETAILS

1- Do you have a formal written Safety Policy? YES NO

If yes, please attach a copy(s)

Is safety policy distributed to all employees and posted at the offices? YES NO

2- Do you have a safety program manual? YES NO

If yes, please state scope

_____

_____

3- Do documented procedures exist to support the safety manual? YES NO

If no, how is your safety program implemented?

_____

_____

4- Do you operate a formal review/audit of the safety program? YES NO

How are review/audit results identified, documented and implemented?

_____

_____

5- Do you hold regular safety meetings for all employees YES NO

If yes, how frequently do you hold these meetings?

Weekly _____

Fortnightly _____

Monthly _____

Others _____ When? _____

_____

6- Do you hold regular safety inspection ? YES NO

If yes, please provide details.

_____

_____

_____

7- What Type of employee training programs is in place?

_____

_____

_____

Is training delivered to subcontractors / vendors?	YES	NO
Is training delivered to clients?	YES	NO

8- How are accidents investigated and reports circulated to management? Give a copy of any report if available.

_____

_____

_____

ANNEXURE – V

TECHNICAL SUPPORT SERVICES

Please indicate only the type(s) of work your company is involved and is capable of undertaking

1.0	TECHNICAL SUPPORT SERVICES			
1.1	Mechanical Testing		YES	NO
1.2	Stress Analysis		YES	NO
1.3	Radiography		YES	NO
1.4	Ultrasonic Survey and analysis		YES	NO
1.5	Non-Destructive-Testing		YES	NO
1.6	Corrosion Inspection		YES	NO
1.7	Noise Survey and Analysis		YES	NO
1.8	Quality Inspection		YES	NO
1.9	Safety Inspection		YES	NO
1.10	Vibration measurements and Analysis		YES	NO
1.11	HSE Inspection		YES	NO
1.12	Third Party Inspection		YES	NO
1.13	Skilled/Specialist Technical Support Services:			
		Mechanical	YES	NO
		Civil	YES	NO
		Quality	YES	NO
		Safety	YES	NO
		HSE	YES	NO
		Pipeline	YES	NO
		Others	YES	NO
1.14	Non Skilled Support Services		YES	NO
1.15	Vendor Assistance Specify Vendors		YES	NO
	_____			
	_____			
	_____			
1.16	Others		YES	NO
	_____			
	_____			
	_____			
2.0	METALLIC PIPE INSTALLATION, COMMUNICATION AND MAINTENANCE		YES	NO
2.1	Fabrication / Construction		YES	NO
2.2	Welding		YES	NO
2.3	Hot Tapping		YES	NO
2.4	Heat Treatment		YES	NO
2.5	Coating		YES	NO
2.6	Wrapping		YES	NO

2.7	Hydraulic	YES	NO
2.8	Pipe Work Inspection	YES	NO
2.9	Others	YES	NO

3.0 MECHANICAL WORKSHOP FACILITIES — YES NO

3.1	Machining	YES	NO
3.2	Welding	YES	NO
3.3	Heat Treatment	YES	NO
3.4	Steel Fabrication	YES	NO
3.5	Blasting	YES	NO
3.6	Metal Spraying	YES	NO
3.7	Electrolyte Coating	YES	NO
3.8	Hydraulic Testing	YES	NO
3.9	Valves Refurbishment	YES	NO
3.10	Others	YES	NO

4.0 INSULATION — YES NO

4.1	Machining	YES	NO
4.2	Hot Insulation	YES	NO
4.3	Associate Insulation	YES	NO
4.4	Others	YES	NO

5.0 E&I WORKSHOP FACILITIES

5.1 Instrument / Erection / Installation / Calibration / Testing Equipment for following:

• Pressure	YES	NO
• Flow	YES	NO
• Level	YES	NO
• Temperature	YES	NO
• Concentration	YES	NO

5.2 Equipment for the following:

• Control Panel Installation	YES	NO
• Devices for testing, checking and Calibration of control panel items	YES	NO
• Devices for cable laying, Meggering, etc.	YES	NO

6.0 ELECTRICAL WORKSHOP FACILITY

Electrical installations, Meggering, Testing devices for:

• Motors	YES	NO
• Bus Bar	YES	NO
• Control Modules	YES	NO
• Generator Control Panel	YES	NO

	• Alternator	YES	NO
	• Gas Engines	YES	NO
	• Power Cables	YES	NO
7.0	Testing Shop Facilities as per ASME "U" Stamped	YES	NO

Note: In case any service/facility is not available in-house but the company has standing arrangement to outsource such service / facility please indicate with sufficient details.

Annexure "IV"

Documents submission check List

Bidder to submit following documents with bid for technical evaluation:

Sr. No	Description	Bidder	Manufacturer
1	Authority Letter	In favor of local agent	In favor of bidder
2	Valid ASME U-Stamp Certificate		Yes
3	ASME U-Stamp Certificates for last 5 years		Yes
4	API Certifications API 6D, API 5L (Present & Last 5 Years)		
5	Quality Certificates	Yes	Yes
6	Supply record during last 5 years as per Annex II	Yes	Yes
7	Copies of purchase orders	Yes	Yes
8	Copies of third party inspection reports		Yes
9	Copies of performance certificates of Material supplied to companies.		Yes
10	Audited financial reports for last three years	Yes	Yes
11	Delivery Schedule Confirmation	Yes	Yes
12	Corporate Information (Submit Annex I)	Yes	Yes
13	Product Catalogue		Yes
14	Quality Plan		Yes
15	Equipment Details		Yes
16	Manufacturer Specifications		Yes
17	HSEQ Information as per Annex III	Yes	Yes
18	Signed and Stamped P & ID		Yes
19	General arrangement drawing showing valves/Piping and skid detail.		yes

Note:

1. Bid documents should be signed and stamped by bidder and should be properly tagged and numbered.
2. Bid should be submitted in book binding form.
3. Contents of the authority letter should include the following:
    a. Tender Inquiry Number.
    b. Supply of new material as per tender specification.
    c. Signed / Stamped by manufacturer.
    d. Contact details (Name, address, telephone numbers, email).
    e. Delivery schedule.
    f. List of documents provided by manufacturer (Documents not mentioned in the authority letter but part of the bid will not be considered).

ANNEXURE-A	
Spec. No. **4620-126-VA-3001**	

SPECIFICATION FOR PIG LAUNCHER / RECEIVER SOUR SERVICE

Client: **Oil & Gas Development Company Limited**

TABLE OF CONTENTS

1.0 GENERAL

1.1 Scope

This specification covers the criteria for design, manufacture, testing, inspection, and painting of launching and receiving scraper traps for Sour service application.

1.2 Definitions

Company means Oil & Gas Development Company Limited and Contractor mean Supplier/ Manufacturer/Sub-Contractor. This definition shall apply throughout this specification.

1.3 Errors or Omissions

1.3.1 The review and comment by the Company of any contractor's or its manufacturer's drawings, procedures or documents shall only indicate acceptance of general requirements and shall not relieve the Contractor of its obligations to comply with the requirements of this specification and other related parts of the contract documents.

1.3.2 Any errors or omissions noted by the Contractor in this Specification shall be immediately brought to the attention of the Company prior bid submission.

1.4 Conflicting Requirements

In the event of conflict, inconsistency or ambiguity between the contract scope of work, this Specification, National Codes & Standards referenced in this Specification or any other documents, the Contractor shall refer to the Company whose decision shall prevail.

1.5 Reporting Procedure

1.6.1 A reporting and documentation system shall be agreed between the Company and the contractor for the status of procurement, design, manufacturing, inspection, testing and shipment of the equipment/material to be supplied under this specification. Contractor's manufacturer shall provide reports and summaries for production performance and testing operations in conformance with a manufacturing schedule approved by Company.

Daily, weekly monthly and run summaries of all major aspects of the production process shall be provided as reports to the Company.

1.7 Third Party inspection

In addition to the inspection and witnessing of tests by the inspectors to be appointed by the Contractor during the manufacturing and shipment of the Equipment Material, Company may appoint a third party or its own inspector for witnessing of the inspection and tests to be carried out at manufacturer's facility under this specification. Inspection can be divided into following three stages.

- Material Inspection.
- Hydrostatic Test.
- Final Inspection.

2.0 CODES, STANDARDS AND SPECIFICATION

The scraper launching and receiving traps shall conform to the following:

- ANSI B31.3	Chemical Plant & Petroleum Refinery Piping
- ANSI B31.8	Gas Transmission and Distribution Piping Systems
- ASME VIII	Boiler and pressure vessel code.
- API Spec. 5L	Specification for Line Pipe
- API Spec. 6D	Specification for Pipeline Valves (Gate, Plug, Ball & Check valves)
- API Spec.1104	Standard for welding pipelines and related facilities.
- ASME Section IX	Welding & Brazing Qualification
- ISO 15156 and gas production	Materials for use in H2S-containing environments in oil

Other Project Specifications

- Project Specifications as applicable

3.0 GENERAL CHARACTERISTICS

3.1 Scope of Supply

Contractor shall supply all necessary items shown in drawings, P&IDs and data sheets.

The Contractor shall prepare detailed fabrication drawings and get the same approved from Company before taking up the fabrication.

The general data for a launcher/receiver will be according to its drawings. Additional items to be provided with each Launcher & Receiver will be according to scope mentioned in attached P & IDs and as per items listed below

ITEMS

1.	Two sets each consisting of one signaler and one tracker with 100 hours of battery life (data sheet 2734-IDS-008)	02 Sets
2.	PSV (Pressure Safety Valve) (data sheet 2734-PDS-007)	02 Nos
3.	Pressure Gauges (data sheet 2734-IDS-007) (With 01 Spare Pressure Gauge)	02 Nos
4.	O Ring / Seal of Closure Gates (With 02 Spare O Ring/Seal)	02 Nos
5.	6-inch Steel Mandrel Type Wire Brush Cleaning Pigs (With Spare Cups & Disc)	04 Nos
6.	6-Inch De-watering dual cups pigs (With Spare Cups)	04 Nos
7.	6-Inch Foam Pigs	04 Nos
8.	Housing for attaching with dewatering and mandrel type	02 Nos
9.	Hoisting/ Retrieval System	01 Nos

3.2 Rating

The ANSI rating corresponding to working pressures for each installation are defined in the drawing/data sheet.

3.3 Maximum Pressures

The maximum pressure value to be applied is indicated in the P & ID.

3.4 Design

The scraper traps shall be designed in the light of specs and drawings.

3.4.1 Body

NA

3.4.2 Closure

The door shall be hand operated. Its operation shall have to be easy, simple and shall not require excessive effort.

Closures of scraper traps shall be of steel ASTM A-105. They shall be of the welded end type. The ring joint shall be made of "Viton" or in any other synthetic material resistant to hydrocarbons (Sour Service).

Closures shall be of a well-tried type and shall be performed by manufacturers specialized in this kind of production

Screwed-type closures are strictly forbidden.

3.4.3 Supports

As the scraper traps shall be installed on metallic cradles fixed in anchoring blocks, steel wear plates of minimum 12 mm in thickness shall be welded on the body and on the sleeve.

3.4.4 Welded Ends

The dimensions of the welded end shall conform to the requirements of ANSI B 16.25 furthermore, their ovalization shall not exceed ± 0,5 %.

3.4.5 Piping

NA

3.4.6 Pressure Safety Valve

Vendor to Provide Safety relief valves for Scrapper launcher and receiver safety relief.

3.4.7 Flow Recorder

NA

4.0PROCESS OF MANUFACTURE AND MATERIALS

4.1 Mechanical & Chemical Characteristics

The mechanical and chemical characteristics of the materials shall be in accordance with the relevant ASTM sections.

The materials of construction of a trap as a minimum shall be as follows and in compliance to sour service & ISO 15156:

• Flanges	ASTM A-694 Gr.F-52
• Nuts	ASTM A-194 Gr. 2H
• Bolts	ASTM A-193 Gr. B7
• Fittings	ASTM A-694 Gr.F-52
• Pipe	API 5L (X 52) PSL II Annex X
• Structural supports	ASTM A-283 Gr. C

Pressure containing parts shall have a carbon equivalent (CE) not greater than 0.36% on check analysis. CE shall be calculated with the formula:

$$CE = \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Ni + Cu}{15}$$

In any case, the codes, texts and standards defining them are included in the general specification. The Contractor's obligations concerning the certificates of conformity which must be provided as supports to material acceptance formalities are included in the general specification.

The resilience of the steels used shall be measured according to standards:

- ASTM A370 standard methods and definitions for mechanical testing of steel products.
  And
- Supplement V notches on significance of notched-bar impact testing.

It shall meet the requirements, specified for Linepipe. In his bid, the Contractor shall specify the reference standards, the grades of steel proposed as well as their physical characteristics and chemical composition.

4.2 Welding Qualifications

The procedures and performances of welding used in the manufacture of the equipment covered by this specification shall conform to the requirements of the ASME code relating to boilers and pressure vessels – section IX 2 welder's qualifications.

Welding shall be carried out according to the operating methods proposed by the manufacturer; it shall necessarily be done by welders qualified for each type of weld.

The Contractor shall supply the Company with qualification certificates in respect of welding process and welder qualifications.

4.3 Method of Manufacture

The equipment shall be made of forged or welded steel parts, assembled by welding. All welding operations shall be carried out according to the operating methods devised and proposed by the manufacturer for each type of welding.

Repairs shall be subject to the same conditions.

After all component parts have been welded together, the equipment shall be such that no dangerous residual stress due to welding remains, and the welds and neighboring transition zones (H.A.Z.) contain no harmful metallurgical heterogeneity or defect likely to cause a break.

The whole scraper trap, except the closure head, shall undergo heat treatment for stress relief in accordance with the relevant sections of ASME boiler and pressure vessel code, latest edition.

The Contractor shall undertake a radiographic inspection on all welds.

5.0 INSPECTION & TESTING

Inspection will mainly include:

- A dimensional check.
- A 100% radiographic examination.
- Maneuverability of quick opening closure.
- Mechanical operability of door safety system, scraper detector (receiving traps).

The results of all inspections and tests must be agreed as satisfactory by the Company /inspector, prior to dispatch of equipment.

5.1 Checking of Materials

Material shall be checked in each factory or workshop when the manufacturer undertakes the construction of the equipment in different factories. The manufacturer shall carry out the following checks:

5.1.1 Forged Steel

A certificate shall be supplied with forged steel parts indicating the results of the chemical analyses and mechanical tests (tensile test).

5.1.2 Welded Steel

Conformity Certificates for the quality and weldability of the steels used shall be submitted prior to commencement of the manufacturing. Failing this, chemical analyses and tensile tests of the sheet steel used shall be undertaken.

All welds shall be checked by radiography. Macrography of welds may be requested. Rapid hardness tests (BRINELL, ROCKWELL, VICKERS) shall be requested on high tensile steel parts or on steel parts that have undergone surface hardening treatment.

5.2 Hydrostatic test

The Contractor shall have at his disposal all the necessary equipment, machines and apparatus to undertake hydrostatic tests in his own workshops.

Pressure and temperature shall be recorded throughout the test. Recorder strips shall clearly indicate in respect of each test:

- The date
- The type of test
- The duration
- The name and signature of the person responsible
- The name and signature of the representative of test responsible department or official organization previously approved by the Company.

This resistance test shall take place in the presence of the Company's representative and under the direction of an expert appointed by test responsible department or official organism previously approved by the Company who shall affix his stamp to apparatus which will be successfully tested.

The body of the vessel shall pass the water test successfully at 1½ times the design pressure.

The outer wall of the body of the apparatus shall be bare during the test. The pressure shall be maintained for at least 4 hours as long as it is necessary for this wall to be examined and the expert appointed by test responsible department or official organism previously approved by the Company, may require it to be maintained as long as he considers appropriate to enable him to detect any defect he may suspect.

If a defect is detected, the manufacturer shall determine its gravity by grinding or chiseling. The defect must be repaired or the part rejected must be replaced as the case may be.

5.3 Tests on Operation of Closing Devices of the Traps

The aim of these tests will be to check in the factory, that each locking device of traps works properly.

5.3.1 Tests

The door shall be opened and closed several times.

The check shall cover:

- Ease of manual operation.

Effectiveness of the locking and safety device.

6.0 PIG / SCRAPER LOADING AND RETRIEVAL SYSTEM

Hoist/ Jib for loading/ Unloading to be provided with Sling, hooks and sliding guide.

7.0 MARKING

Every item of equipment shall bear a stainless steel identification plate with cast or stamped letters indicating:

- Name of the Contractor or trade name
- Type
- Serial number
- Class of pressure
- Test pressure
- Date of the test and pressure
- Maximum service pressure
- Stamp of test responsible department or official organism previously approved by the Company.
- Stamp of the Company
- Nominal diameter of the body
- Indication concerning the material for the trap.

8.0 PAINTING

The scraper traps and retrieval system shall be painted after successful execution of pressure tests and clearance from the Company's Representative or his nominee. Surface cleaning and painting shall be performed according to Project Specification for Painting.

9.0 SHIPMENT

Before shipment, the machined parts shall be painted with an antirust paint easy to remove.

Flanges or ends shall be plugged with pieces of wood suitable located to preclude the penetration of foreign mater in the body or damage to moving parts and sealed joints, and to afford effective protection to the machined surfaces of flanges or ends.

Fragile accessories shall be dismantled and packed separately, in duly marked boxes.

All parts shall be carefully plugged.

Packages shall be marked on the outside so that the contents can be identified without opening them.

The details of packing and shipment shall be as specified in the Project Specification for General Specification for Packing & Protection of Material & Equipment.

10.0 DOCUMENTS

10.1 Preliminary Documents

With the bid, the bidder shall submit:

The general arrangement drawings / sketches showing dimension of the equipment proposed.

- Material Specifications.
- A brief description of the system.

10.2 Design Documents

Before the commencement of the manufacturing, the Contractor shall submit detailed design drawings, material specifications and design calculations for Company's approval.

- All documents listed above, updated if necessary.
- Operating manual
- Instructions for maintenance and dismantling
- List of spare parts for two years operation, after a guarantee period fixed to one year.

10.3 Material and Test Certificate

The Contractor shall supply with the equipment, material certificates and records of all test and inspections performed on the equipment during its manufacturing and testing at the factory.

10.4 As Built Drawings and QA / QC Dossier:

As built drawings and QA / QC dossier shall be provided with the equipment (Soft/Hard formats).

11.0 SUPPLIER ELIGIBILITY CRITERIA.

The Venders for material should mandatory meet following criteria.

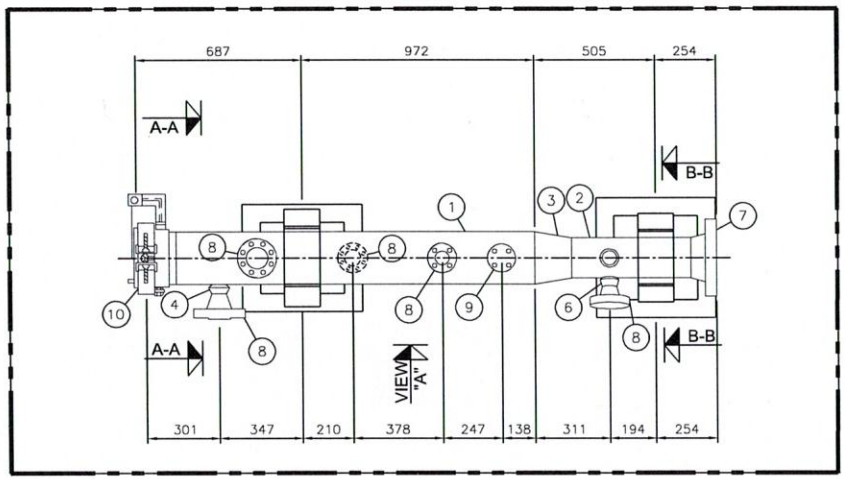
- Supply record to International E&P companies (Copies of five purchases Order).
- Manufacturing facility should have five year experience after obtaining ASME U-Stamp certification.
- Manufacturing facility should have five year experience after obtaining relevant certifications like API 6D for valves, API 5L for Pipes.
- Supply record of last five years. Quality & HSE Certifications.
- Financial Information (Audited Statements for last three years).
- Quick Opening Closure & Pig signal manufacturer should be member of PPSA (PIGGING PRODUCTS & SERVICES ASSOCIATION)
- OGDCL approved TPI (SGS/Velosi, TUV etc) to be allowed 24 hours project inspection and must be facilitated by providing on-site accommodation for entire project execution period by the bidder.

12.0 BIDDER/ MANUFACTURER TO SUBMIT WEIGHT OF PIG LAUNCHER/ RECEIVER ITEMS AS PER BELOW TABLE

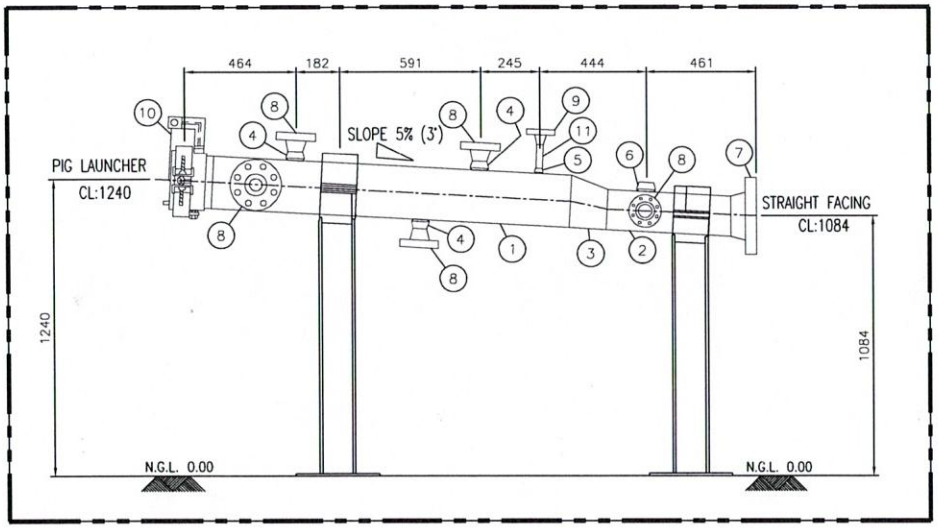
#	Item (for ONE unit either Launcher OR Receiver ONLY)	Weight in Kgs
1	Piping	
2	Quick Opening Door Closure	
3	Instrumentation	
4	Grating	
5	Skid frame	
6	Barrels	
7	Valves	
8	12 spares PIG units with transmitted receiver kits (kgs)	
A	**TOTAL (kgs) TOTAL COMPLETE PACKAGE**	
B	**SIZE** of skid (in meters LxWxH) COMPLETE PACKAGE	

BILL OF MATERIAL

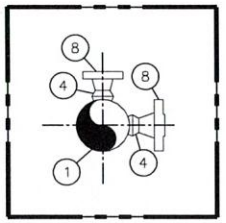
Sr.NO.	SIZE	DESCRIPTION	QTY.	(MAT. SPEC)	UNIT WEIGHT kg/piece	TOTAL WEIGHT kg
1	8"	PIPE SMLS, SCH. 80, API-5L GR.X52 BE	1.5M	-		
2	6"	PIPE SMLS, SCH. 80, API-5L GR.X52 BE	0.5M	DA1		
3	8"x6"	REDUCER, ECC. SCH. 80, BW. MSS SP-75 Gr.WPHY 52	1	-		
4	8"x2"	WELDOLET, BW SCH.80 x 160, ASTM A-694 Gr-F52	4	-		
5	8"x3/4"	SOCKOLET, SW 9000# ASTM A-694-Gr.F52	1	-		
6	6"x2"	WELDOLET, BW SCH.80 x 160, ASTM A-694 Gr-F52	2	DA1		
7	6"	FLG, WN 900# RTJ, SCH.80 ASTM A-694 Gr-F52	1	DA1		
8	2"	FLG, WN 900# RTJ, SCH. 160 ASTM A-694 Gr-F52	5	DA1		
9	3/4"	FLG, SW 1500# RTJ, ASTM A-694 Gr-F52	1	DA1		
10	8"	QUICK CLOSURE	1	-		
11	3/4"	PIPE NIPPLE SCH.160 100mm LONG PE SMLS, API 5L GR.X52	1	DA1		



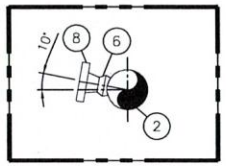
PLAN VIEW OF BARREL
SCALE 1:20



VIEW "A"
SCALE 1:20



SECTION A-A
SCALE 1:20



SECTION B-B
SCALE 1:20

ISSUED FOR CONSTRUCTION

NOTE:-

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
2. ALL DIMENSIONS, ELEVATIONS AND ORIENTATIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE UNDERTAKING ANY KIND OF FABRICATION, CONSTRUCTION AND INSTALLATION WORK AT SITE.

REV.	DATE	DESCRIPTION OF REVISION	PREP'D	CHECK	APPR.
A	06-06-2018	ISSUED FOR REVIEW	SN	SHAH	
0	11-10-2017	ISSUED FOR REVIEW	SN	SHAH	

PETROCHEMICAL ENGINEERING CONSULTANTS
C-2, BLOCK NO. 17, GULSHAN-E-IQBAL, NEAR NATIONAL STADIUM, KARACHI-75300, PAKISTAN.
TEL. +92 (21) 34827780, 34961085, FAX: +92 21 34961085, E-Mail: contact@pcec.com.pk web site: www.pcec.com.pk

CLIENT : OIL & GAS DEVELOPMENT COMPANY LTD.

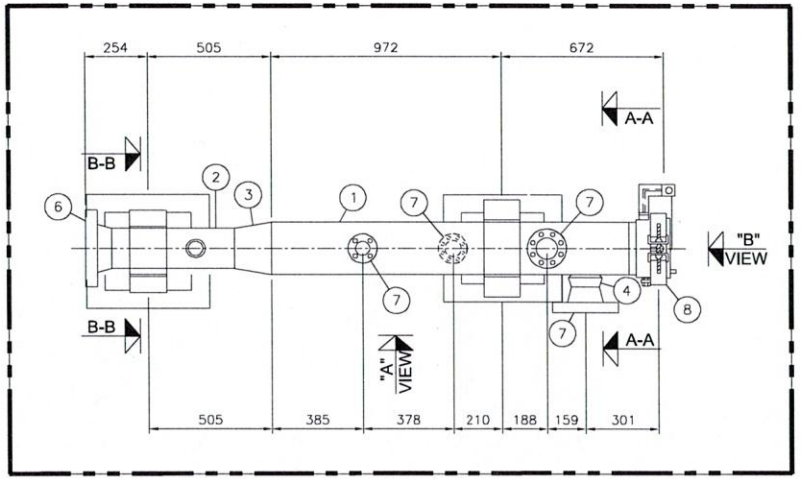
PROJECT : WELL SOGHRI-3

TITLE : GENERAL ARRANGEMENT
Ø6" PIG LAUNCHER 900# (V-403)

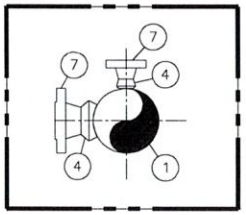
JOB NO	DRAWING NO	SHEET NO	SCALE	SHEET SIZE	REV
2732	2732-PL-403	1 OF 1	1:20	A3	A

BILL OF MATERIAL

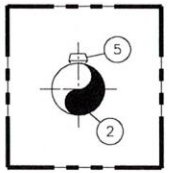
Sr.NO.	SIZE	DESCRIPTION	QTY.	(MAT. SPEC)	UNIT WEIGHT kg/piece	TOTAL WEIGHT kg
1	8"	PIPE SMLS, SCH. 80, API-5L GR.X52 BE	1.5M	-		
2	6"	PIPE SMLS, SCH. 80, API-5L GR.X52 BE	0.5M	DA1		
3	8"x6"	REDUCER,CONC. SCH. 80, BW. MSS SP-75 GR.WPHY 52	1	-		
4	8"x2"	WELDOLET, BW SCH.80 X 160, ASTM A-694-Gr.F52	4	DA1		
5	6"x2"	WELDOLET, BW SCH.80 X 160, ASTM A-694-Gr.F52	1	DA1		
6	6"	FLG, WN 900# RTJ, SCH.80 ASTM A-694 Gr-F52	1	DA1		
7	2"	FLG, WN 900# RTJ, SCH.80 ASTM A-694 Gr-F52	4	DA1		
8	8"	QUICK CLOSURE	1	-		



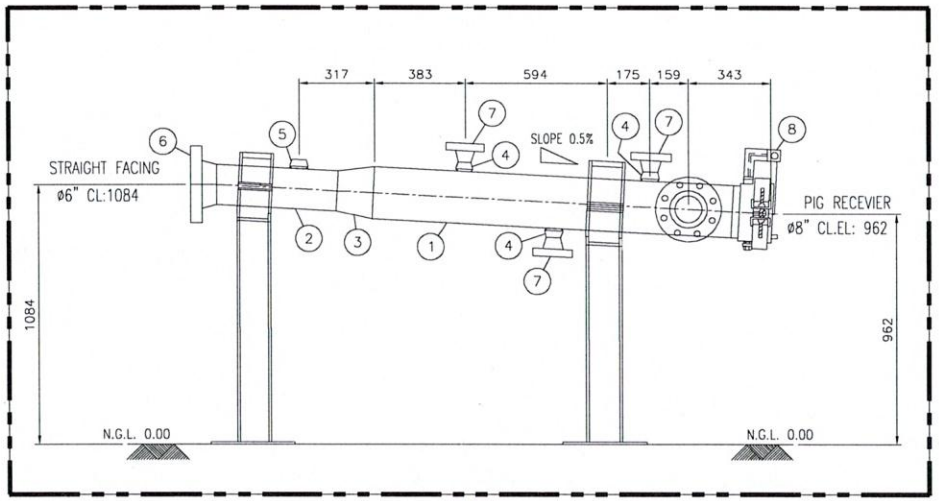
PLAN VIEW OF BARREL
SCALE 1:20



SECTION A-A
SCALE 1:20



SECTION B-B
SCALE 1:20



VIEW "A"
SCALE 1:20

ISSUED FOR CONSTRUCTION

NOTE:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
2. ALL DIMENSIONS, ELEVATIONS AND ORIENTATIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE UNDERTAKING ANY KIND OF FABRICATION, CONSTRUCTION AND INSTALLATION WORK AT SITE.

REV.	DATE	DESCRIPTION OF REVISION	PREP'D.	CHECK	APPR.
A	11-06-2018	ISSUED FOR CONSTRUCTION	SN	SHAH	
0	30-06-2017	ISSUED FOR REVIEW	SN	SHAH	

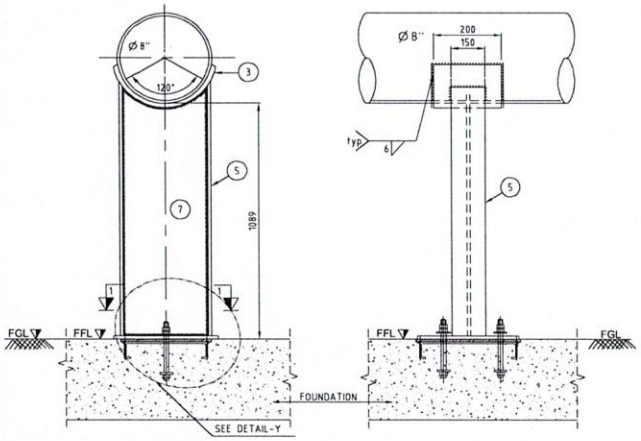
PETROCHEMICAL ENGINEERING CONSULTANTS
C-2, BLOCK NO. 17, GULSHAN-E-IQBAL, NEAR NATIONAL STADIUM, KARACHI-75300. PAKISTAN.
TEL. +92 (21) 34827780, 34961088, FAX: +92 21 34961089, E-Mail: contact@pcec.com.pk web site: www.pcec.com.pk

CLIENT : OIL & GAS DEVELOPMENT COMPANY LTD.

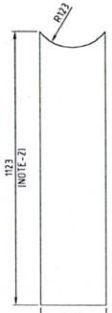
PROJECT : WELL SOGHRI-3

TITLE : GENERAL ARRANGEMENT Ø6" PIG RECEIVER 900# (V-404)

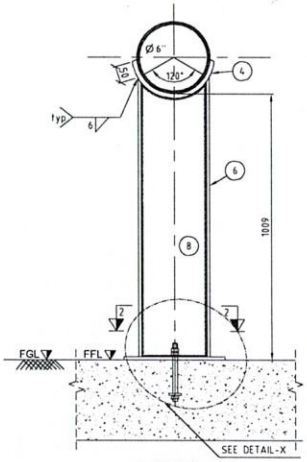
JOB NO	DRAWING NO	SHEET NO	SCALE	SHEET SIZE	REV
2732	2732-PR-404	1 OF 1	1:20	A3	A



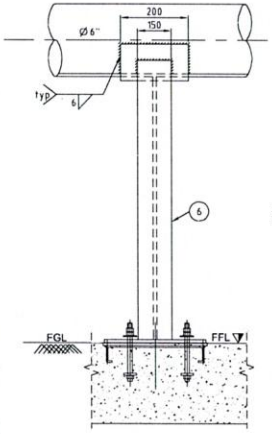
SADDLE 1
PLS-03

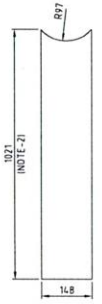


ITEM 7

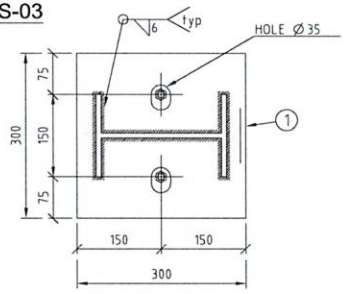


SADDLE 2
PLS-04

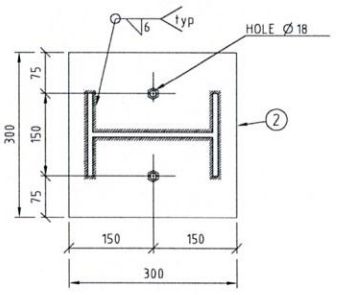




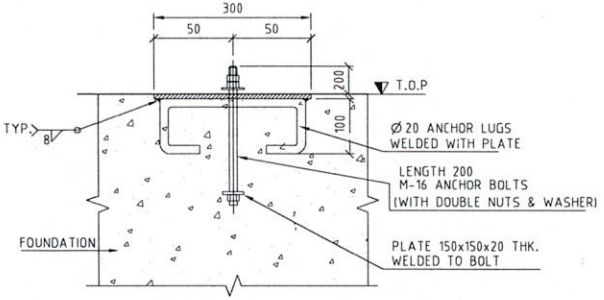
ITEM 8



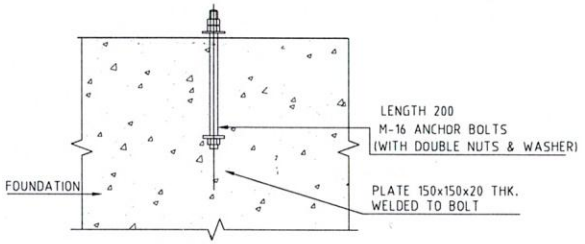
SECTION 1-1
FOR SLIDING END



SECTION 2-2
FOR FIXED END



DETAIL - Y
FOR SLIDING END
(SCALE 1:30)



DETAIL - X
FOR FIXED END
(SCALE 1:30)

PART NO.	DESCRIPTION	QTY.	MATERIAL	UNIT WT.(KG/M)	TOTAL WT. (KG)
9	BOLT M16x200	36	A193 Gr.B7 A194 Gr.2H	–	–
8	WEB PLATE 1021X148x10MM THK.	1	ASTM A-236	78.5 KG/M²	12
7	WEB PLATE 1123X192x10MM THK.	1	ASTM A-236	78.5 KG/M²	17
6	RIB PLATE 1036x150x10MM THK.	2	ASTM A-236	78.5 KG/M²	24
5	RIB PLATE 1138x150x10MM THK.	2	ASTM A-236	78.5 KG/M²	27
4	WEAR PLATE 295X200X13MM THK.	1	ASTM A-236	102.05 KG/M	5
3	WEAR PLATE 345X200X13MM THK.	1	ASTM A-236	102.05 KG/M	5
2	BASE PLATE 300x300x10mm THK.	1	ASTM A-236	78.5 KG/M²	8
1	BASE PLATE 300x300x10mm THK.	1	ASTM A-236	78.5 KG/M²	8
				TOTAL WT.(Kg)	106

BILL OF MATERIAL

For 6" PIG RECEIVER

Hammad Ahmed
JE (Mech) PE & FD

RE-ISSUED FOR CONSTRUCTION

NOTE:-

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
2. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE DIMENSIONS FROM PIPING PLANS PRIOR TO FABRICATION OF STEEL WORKS.
3. SULPHATE RESISTANT CEMENT SHALL BE USED FOR ALL CONCRETE WORKS.

REV.	DATE	DESCRIPTION OF REVISION	PREP'D	CHECK	APPR
B	31-08-2018	RE-ISSUED FOR CONSTRUCTION	M.NO	BA	
A	21-06-2018	ISSUED FOR CONSTRUCTION	M.NO	BA	
0	22-12-2017	ISSUED FOR REVIEW	M.NO	BA	

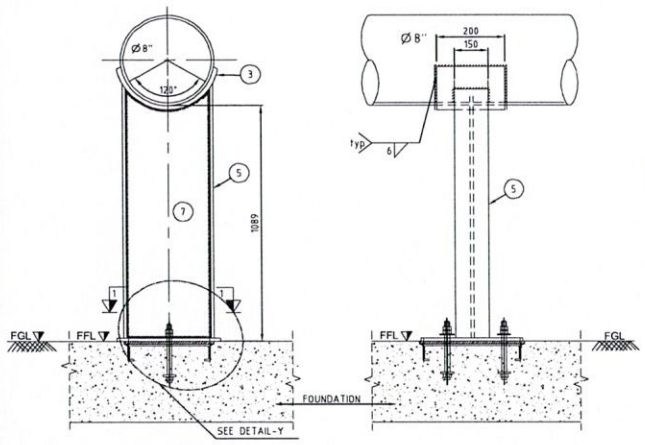
PETROCHEMICAL ENGINEERING CONSULTANTS
C-2, BLOCK NO. 17, GULSHAN-E-IQBAL, NEAR NATIONAL STADIUM, KARACHI-75300 PAKISTAN.
TEL. +92 (21) 34827780, 34961088, FAX. +92 21 34961089, E-Mail: contact@pcec.com.pk web site: www.pcec.com.pk

CLIENT : OIL & GAS DEVELOPMENT COMPANY LTD.

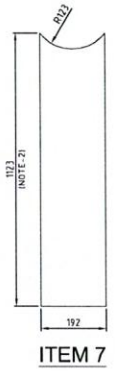
PROJECT : SOGHARI-3

TITLE : SADDLE SUPPORT DETAILS OF PIG RECIEVER (V-212)

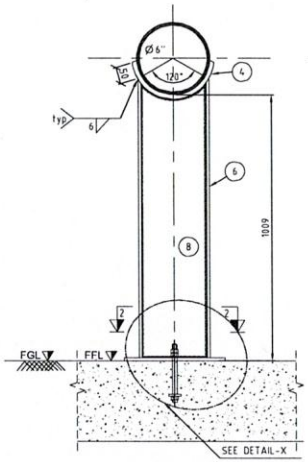
JOB NO	DRAWING NO	SHEET NO	SCALE	SHEET SIZE	REV
2664	2664-CIV-DT-003	1 OF 1	AS SHOWN	A3	B



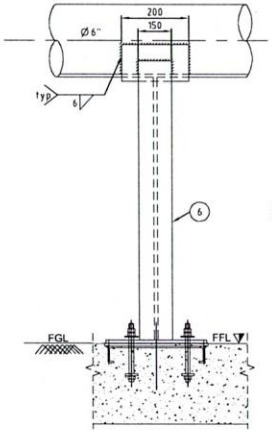
SADDLE 1
PLS-01

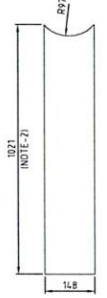


ITEM 7

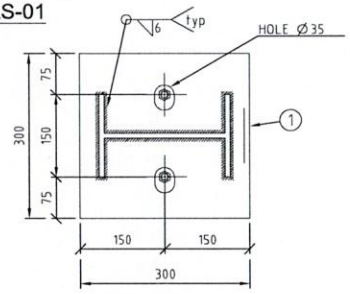


SADDLE 2
PLS-02

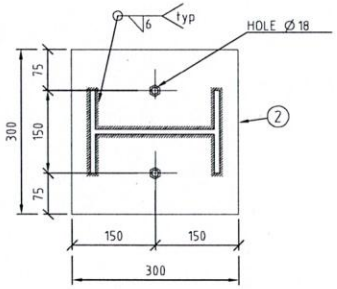




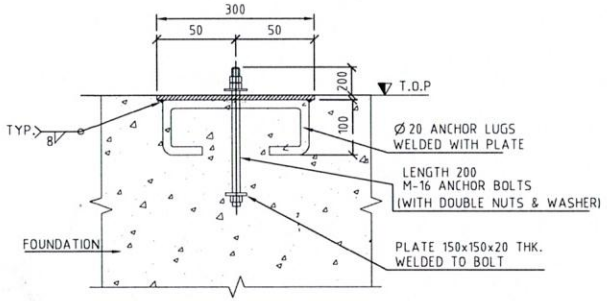
ITEM 8



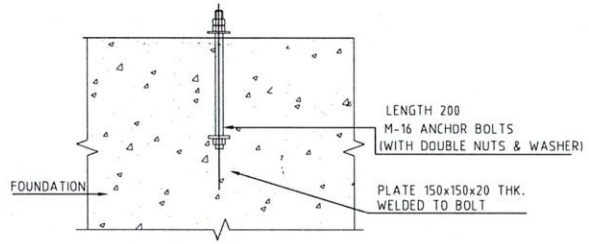
SECTION 1-1
FOR SLIDING END



SECTION 2-2
FOR FIXED END



DETAIL - Y
FOR SLIDING END
(SCALE 1:30)



DETAIL - X
FOR FIXED END
(SCALE 1:30)

PART NO.	DESCRIPTION	QTY.	MATERIAL	UNIT WT.(KG/M)	TOTAL WT. (KG)
9	BOLT M16x200	36	A193 Gr.B7 A194 Gr.2H	–	–
8	WEB PLATE 1021X148x10MM THK.	1	ASTM A-236	78.5 KG/M²	12
7	WEB PLATE 1123X192x10MM THK.	1	ASTM A-236	78.5 KG/M²	17
6	RIB PLATE 1036x150x10MM THK.	2	ASTM A-236	78.5 KG/M²	24
5	RIB PLATE 1138x150x10MM THK.	2	ASTM A-236	78.5 KG/M²	27
4	WEAR PLATE 295X200X13MM THK.	1	ASTM A-236	102.05 KG/M	5
3	WEAR PLATE 345X200X13MM THK.	1	ASTM A-236	102.05 KG/M	5
2	BASE PLATE 300x300x10mm THK.	1	ASTM A-236	78.5 KG/M²	8
1	BASE PLATE 300x300x10mm THK.	1	ASTM A-236	78.5 KG/M²	8
				TOTAL WT.(Kg)	106

BILL OF MATERIAL

For 6" PIG LAUNCHER

Hammad Ahmed
JE (Mech) PE & FD

RE-ISSUED FOR CONSTRUCTION

NOTE:-

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
2. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE DIMENSIONS FROM PIPING PLANS PRIOR TO FABRICATION OF STEEL WORKS.
3. SULPHATE RESISTANT CEMENT SHALL BE USED FOR ALL CONCRETE WORKS.

REV.	DATE	DESCRIPTION OF REVISION	PREP'D.	CHECK	APPR.
B	31-08-2018	RE-ISSUED FOR CONSTRUCTION	USA	MM	
A	31-05-2018	ISSUED FOR CONSTRUCTION	USA	MM	
0	03-07-2017	ISSUED FOR REVIEW	USA	MM	

PETROCHEMICAL ENGINEERING CONSULTANTS
C-2, BLOCK NO. 17, GULSHAN-E-IQBAL, NEAR NATIONAL STADIUM, KARACHI-75300, PAKISTAN.
TEL: +92 (21) 34827780, 34961088, FAX: +92 21 34961089, E-Mail: contact@pcec.com.pk web site: www.pcec.com.pk

CLIENT : OIL & GAS DEVELOPMENT COMPANY LTD.

PROJECT : SOGHARI-3

TITLE : SADDLE SUPPORT DETAILS OF PIG LAUNCHER (V-211)

JOB NO	DRAWING NO	SHEET NO	SCALE	SHEET SIZE	REV
2998	2998-CIV-DT-104	1 OF 1	AS SHOWN	A3	B

CLIENT	Soghari-3		CONSULTANT
	DOC. TITLE	PRESSURE SAFETY VALVE	
	DOC. NO.	2734- PDS-007	REV. 0

S.No.	DESCRIPTION		PSV-002			
1	SERVICE		HYDROCARBON			
2	LINE NO. / VESSEL NO.		V - 003			
3	FULL NOZZLE / SEMI NOZZLE		FULL			
4	SAFETY OR RELIEF		THERMAL - RELIEF			
5	CONV. / BELLOWS / PILOT OP.		CONVENTIONAL			
6	BONNET TYPE		CLOSED			
7	SIZE: INLET	OUTLET	3/4"	1"		
8	FLANGE RATING		900 X 300			
9	TYPE OF FACING		RTJ x RTJ			
10	BODY AND BONNET		ASME SA,216,GR,WCB.CARBON STEEL			
11	NOZZLE AND DISC		SS316L			
12	GUIDE AND RINGS		SS316L			
13	SPRING		ALUMINISED C.S			
14	LIFTING GEAR-TYPE		REQUIRED			
15	TEST GAG		REQUIRED			
16	CAP: SCREWED OR BOLTED		SCREWED			
17	TEST CONNECTION		YES-CARBON STEEL			
18	MANUAL BLOWDOWN		YES-CARBON STEEL			
19	BACK FLOW PREVENTER		NO			
20	CODE		ASME SEC VIII / API RP-520-521			
21	LEAKAGE CODE		ANSI / API 527			
22	SIZING BASIS		THERMAL RELIEF			
23	FLUID		HYDROCARBON			
24	FLUID STATE		MIX			
25	SPECIFIC GRAVITY		0.7 - 0.8			
26	OPER. PRESS. (psig)	SET PRES. (psig)	1000-1620	1700		
27	OPER. TEMP. (°F)	MAX TEMP. (°F)	100-150	170		
28	COLD BENCH TEST PRESSURE		VTS			
29	% ALLOWABLE OVERPRESSURE		10%			
30	OVERPRESSURE FACTOR		N/A			
31	COMPRESSIBILITY FACTOR		-			
32	FLOW MAX		-			
33	RATIO OF SPECIFIC HEATS		-			
34	BACK PRESSURE		ATMOSPHERIC			
35	DISCHARGE COEF kd		0.65			
36	CHANGE OF STATE COEF. C		VTS			
37	P&ID NO.		2734- PID-002			
38	CALC. AREA SQ. IN.		VTS			
39	SELECTED AREA SQ. IN.		VTS			
40	ORIFICE DESIGNATION		D			
41	MANUFACTURER		-			
42	MODEL NUMBER		VTS			

NOTES:

1. VENDOR TO CONFIRM THE SUITABILITY OF THIS MODEL FOR THE REQUIRED SERVICE.
2. VTS-VENDOR TO SPECIFY OR CONFIRM

Rev.	Date	Description	Prepared	Checked	Approved
0	6/7/2017	Issued For Review	RK	NWS	AJ

CONSULTANT		SOGHARI-3	DOCUMENT NO.	
PETROCHEMICAL ENGINEERING CONSULTANTS			2734-IDS-007	
			REV.	DATE.
			0	22/12/2017
CLIENT		INSTRUMENT DATA SHEET	BY	APPR.
OIL & GAS DEVELOPMENT COMPANY Ltd.		PRESSURE GAUGE	ZUA	SAG
		2734-PID-002	SHEET	1 OF 1

GENERAL	1	Tag Number			PI-011					
	2	Service			At Pig Launcher and Receiver					
	3	Line Size			-					
	4	P & ID Drawing Number			2734-PID-302 & 2734-PID-003					
	5									
PROCESS CONDITION	6	Fluid			Gas					
	7	Max. Pressure	Max. Temperature		1700	psi-g	170	°F		
	8	Min. Pressure	Oper. Temperature		800	psi-g	100-150	°F		
	9	Pulsation	Vibration		NO		NO			
	10									
	11									
GAUGE	12	Type			INDICATOR					
	13	Calibration Range Min	Max		0	psi	-g	2500	psi	-g
	14	Figure Interval			Manufacturer Standard					
	15	Minor Graduation			Yes					
	16	Mounting			Direct Mounted					
	17	Dial Size			160	mm				
	18	Dial Color			White Aluminium with Black Numerals					
	19	Case Material			304 St. Stl					
	20	Ring Construction	Ring Material		Bayonet	St. Stl				
	21	Blow-Out Protection			Yes					
	22	Lens Material			Solid Front Full Safety Pattern With Laminated Safety Glass					
	23	Pressure Eelement Type			Bourden Tube					
	24	Pressure Eelement Material			316 St. Stl					
	25	Socket Material			316 St. Stl					
	26	Connection Size			1/2" NPT-μ					
	27	Connection Location			Bottom					
	28	Movement Material			St. Stl. Rack & Pinion					
	29	Nominal Accuracy			+/- 1%					
	30	Micrometer Material			Yes					
	31	Ingress Protection			IP 65					
DIAPHRAGM SEAL	32	Type			N/A					
	33	Process Connection			N/A					
	34	Diaphragm Material			N/A					
	35	Bottom Housing Material			N/A					
	36	Fill Fluid			N/A					
	37	Capillary Length			N/A					
	38	Capillary Material			N/A					
	39	Flushing Connection			No					
	40	Top Housing Material			N/A					
	41	Connection to Instrument			N/A					
	42									
OPTIONS	43	Syphon :	Type	Material	N/A	N/A				
	44	Syphon :	Type	Material	N/A	N/A				
	45	Movement Damping			N/A					
	46									
	47									
	48									
PURCHASE	49	Manufacturer								
	50	Model								
	51	Purchase Order Number								
	52	Price	Item Number			N/A				
	53	Serial Number			N/A					

NOTES :

1	
2	
3	
4	

CONSULTANT		DEVELOPMENT OF CHABARO-1 WELLHEAD	DOCUMENT NO.	
PETROCHEMICAL ENGINEERING CONSULTANTS			2734-IDS-008	
			REV.	DATE.
			0	22/12/2017
CLIENT		INSTRUMENT DATA SHEET	BY	APPR.
OIL & GAS DEVELOPMENT COMPANY Ltd.		PIG DETECTOR	ZUA	SAG
		P&ID NO. 2734-PID-002	SHEET	1 OF 1

GENERAL	1	Tag Number					PXI-001		
	2	Service					PIG LAUNCHER		
	3	Line Size					-		
	4	P & ID Drawing Number					2731-PID-002		
	5	Area Classification					ZONE - 1, I IA, I I B (AS PER IEC), Temp. Class - T3		
DETECTOR	6	Mechanical Flag					REQD		
	7	Isolation Valve					REQD		
	8	MOC					SS316		
	9	NUTS & BOLTS					SS316		
	10	Trigger Assembly Components					Shaft & Plug Assembly with O-ring		
	11	Plug Assembly Type					Uni-directional		
OPERATING CONDITION	12								
	13	Fluid State					GAS / LIQUID		
	14	Process Connection					2"		
	15	Pressure psig Design	Min.	Operating	Max.		800	1000-1600	1700
	16	Temperature °F Design	Min.	Operating	Max.		100	120-150	170
ELECTRICAL	17	Signal Output		Load Resist			N/A		
	18	Power Supply		Electrical Connection			N/A		
	19	Local Indication		Response Time			N/A		
	20	Local Raiser					N/A		
	21	Enclosure Protection					N/A		
	22	Cable Entry					N/A		
	23								
ACCESSORIES	24								
	25								
OTHER	26	Model No.							
	27	Certification							
PURCHASE	28	Manufacturer							
	1	Model							
	2	Purchase Order Number							
	3	Price		Item Number					
	4	Serial Number							

NOTES :

	1	Vendor/Contractor shall provide the piping nozzle standout lengh during detail engineering.
	2	
	3	
	4	

Data Sheet (Steel Mandrel PIG) Doc 2734-PIG-001

Purpose: Cleaning (Debris, Product & rust Removal)

Pipeline Size & Length : 6"

Wall Thickness:

For 6"Ø 10.97mm (Sch -80)

Pipeline Material: API 5L Gr x 52

Barred Tees: No

Additional Requirements:

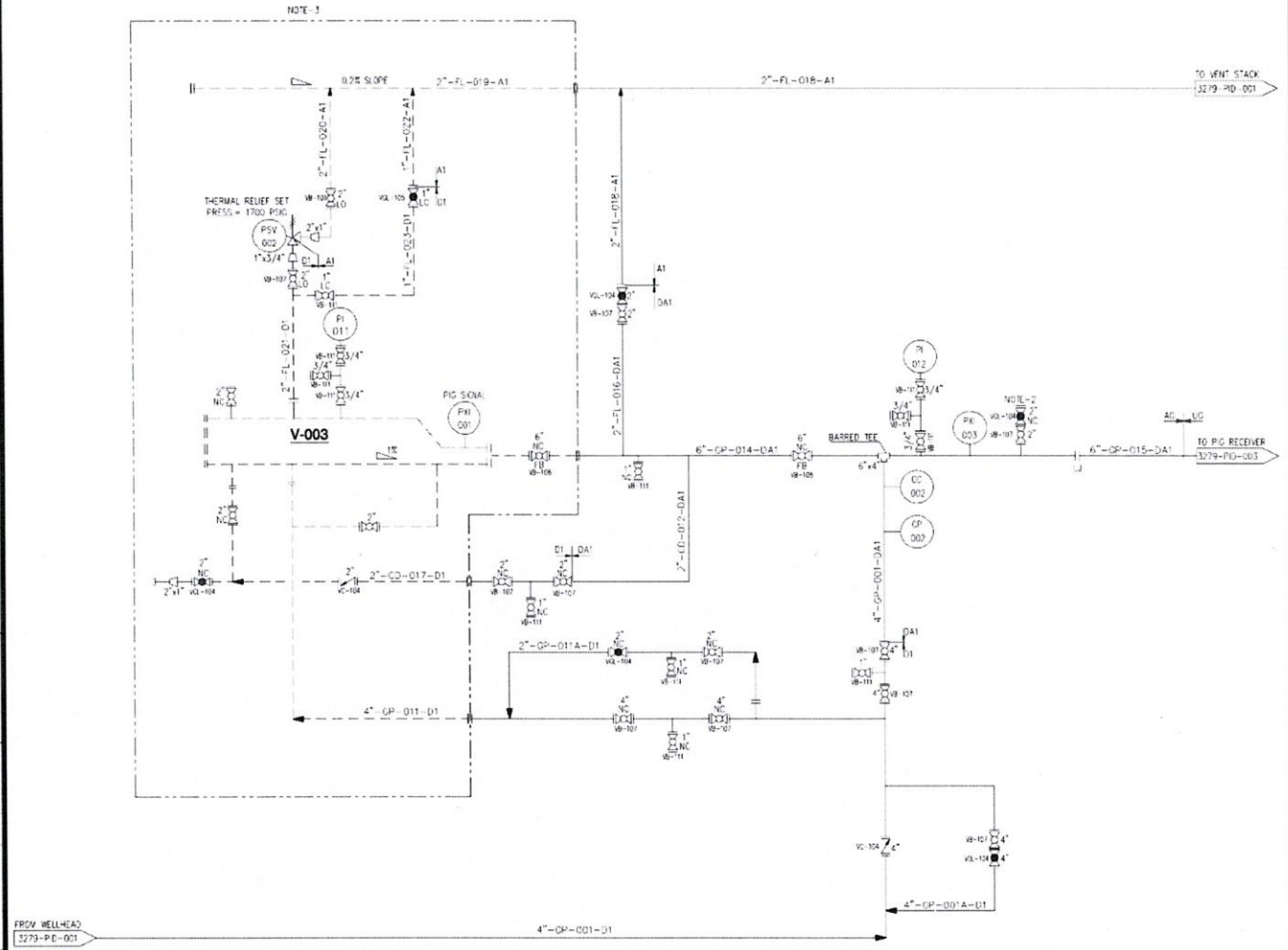
Front pulling/handling rope required

Transmitter mounting

Recommended Type: Carbon steel body, 02 Polyurethane replaceable cups, 01 Polyurethane disc, Spring mounted Brushes with bolts.

V-003
PIG LAUNCHER

DESIGN PRESSURE/TEMPERATURE: 1700 PSIG / 150 °F
OPERATING PRESSURE/TEMPERATURE: 1355 PSIG / 80 °F



NOTES

1. FOR GENERAL NOTES, SYMBOLS & LEGEND REFER DWG# 3279-PID-000.
2. PROVISION FOR FLOWLINE PURGING AND DEPRESSURIZING.
3. PORTABLE PIG LAUNCHER SKID - **CONTRACTOR'S SCOPE OF WORK**

REV	DATE	DESCRIPTION OF REVISION	PREPD	CHECK	APPR.
1	25/06/2018	RE-ISSUED FOR REVIEW	NAH	RK	
0	01/06/2018	ISSUED FOR REVIEW	NAH	RK	

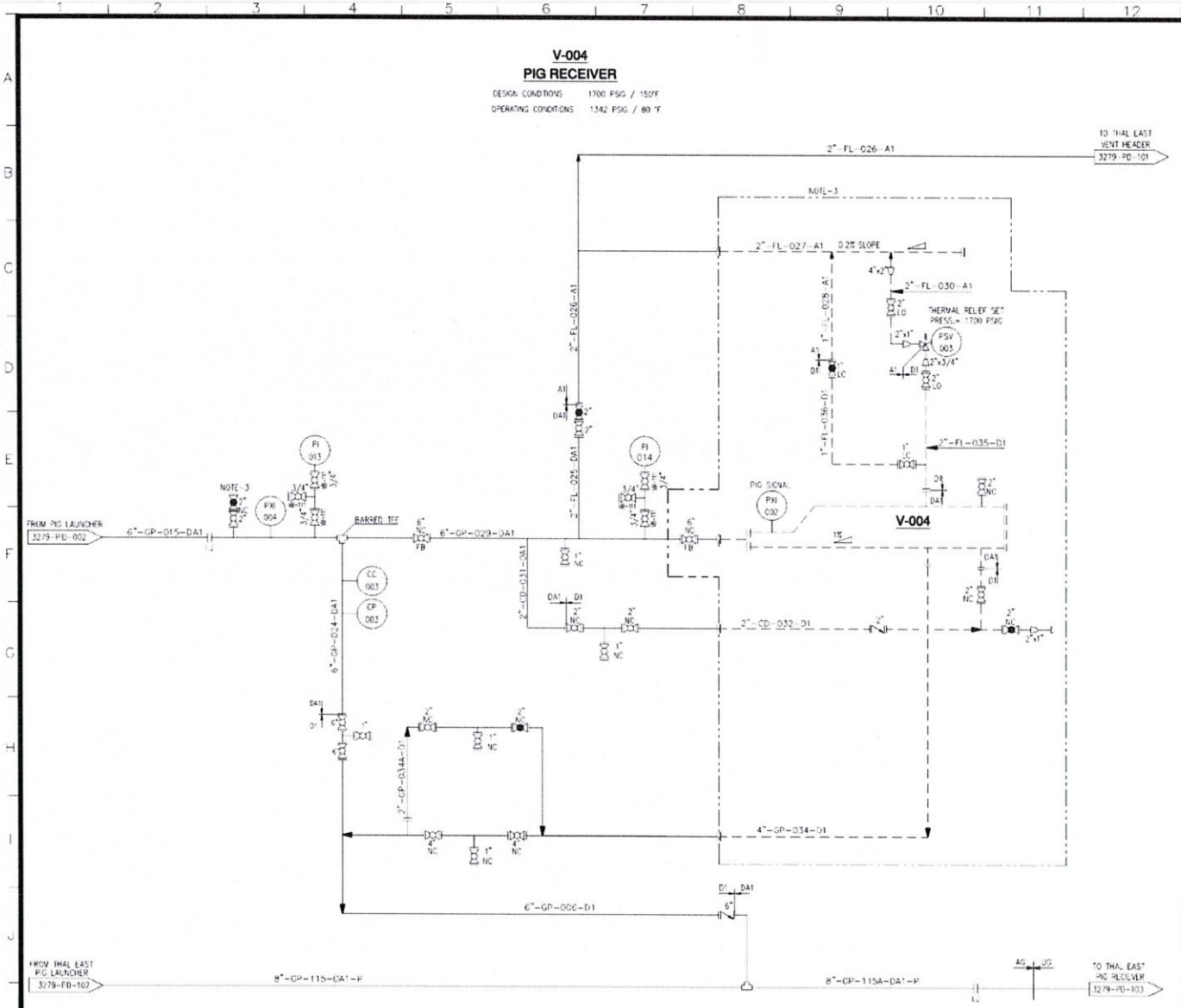
PETROCHEMICAL ENGINEERING CONSULTANTS
C-2, BLOCK NO. 17, GULSHAN-E-IQBAL, NEAR NATIONAL STADIUM, KARACHI-75300, PAKISTAN.
TEL: +92 (21) 34827780, 34951088, FAX: +92 21 34983391, E-Mail: contact@pecc.com.pk web site: www.pecc.com.pk

CLIENT: OIL & GAS DEVELOPMENT COMPANY LIMITED

PROJECT:

TITLE: **PIPING & INSTRUMENTATION DIAGRAM FOR PIG LAUNCHER**

JOB NO	DRAWING NO	SHEET NO	SCALE	SHEET SIZE	REV
3279	3279-PID-002	1 OF 1	N.T.S	A3	1



NOTES

1. FOR GENERAL NOTES, SYMBOLS & LEGEND REFER DWG# 3279-PID-000.
2. PROVISION FOR FLOWLINE PURGING AND DEPRESSURIZING.
3. PORTABLE PIG RECEIVER SKID. - **CONTRACTOR'S SCOPE OF WORK**

REV	DATE	DESCRIPTION OF REVISION	PREP'D	CHECK	APPR.
1	25/06/2018	RE-ISSUED FOR REVIEW	AHM	RK	
0	01/06/2018	ISSUED FOR REVIEW	AHM	RK	

PETROCHEMICAL ENGINEERING CONSULTANTS
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CLIENT : OIL & GAS DEVELOPMENT COMPANY LIMITED

PROJECT :

TITLE : **PIPING & INSTRUMENTATION DIAGRAM FOR PIG RECEIVER**

JOB NO	DRAWING NO	SHEET NO	SCALE	SHEET SIZE	REV
3279	3279-PID-003	1 OF 1	N.T.S.	A3	1