

OIL & GAS DEVELOPMENT COMPANY LIMITED

TERMS OF REFERENCE (TOR)/SCOPE OF WORK(SOW)



TENDER ENQUIRY NO: PROC-SERVICES/CB/P&P-4388/2019

**HIRING TECHNICAL SERVICES FOR EXECUTION OF ANNUAL TURN
AROUND (ATA) 2019 JOBS OF OF KPD-TAY PLANT**

Note: Master set of tender documents (services) uploaded on OGDCL's website (www.ogdcl.com) is the integral part of this TOR/Tender.

Annexure-A

TOR FOR EXECUTION OF ATA-2019 OF KPD-TAY PLANT.

GENERAL SCOPE:

- 1.1 The Owner, Oil & Gas Development Company Limited (OGDCL) is interested in inviting bids for the provision of services (Mechanical, Electrical & Instrumentation) at their KPD-TAY Plant for the execution of the Annual Turnaround (ATA) 2019 maintenance activities from reputable companies in this field. The tentative schedule of annual shutdown is from 19.08.2019 to 31-08-2019 (13 days), planned to be executed partially, shutdown of each train for 09 days inclusive of shutting down & start up time and complete shutdown. The contractor shall develop and submit a detailed work schedule including mobilization and preparatory works prior to shut down & post shutdown. Tentative schedule is attached.
 - a) **Contract Period** will be six months from the date of issuance of Service Order by OGDCL.
 - b) **Completion Period** Contractor shall complete the ATA services within 13 days (excluding pre-shutdown & post-shutdown activities) from the date of plant shut down. Contractor mobilization & plant shutdown date will be communicated through mobilization notice issued by OGDCL's P&P Department (via email or letter).
- 1.2 Although the tentative schedule has been mentioned at clause no. 1.1 However in case of any change of schedule by OGDCL or ministry of petroleum due to gas management in the country or any other reason bidder must confirm to carry out ATA activities as per revised schedule (if any) within 180 days from submission of bid.
- 1.3 Contractor must complete the desired services as per TOR within specified time mentioned above from the date of issuance of Service Order by OGDCL.
- 1.4 Contractor shall be allowed to mobilize resources & manpower 7-10 days before commencement of ATA. Contractor can mobilize limited resources any time before ATA with the prior approval of OGDCL Plant Management for pre-shutdown activities. However, Contractor shall ensure to mobilize all resources before the start date of ATA in order to complete all ATA activities without delay.
- 1.5 Contractor should demobilize all resources within 07 days after completion of ATA activities & post shutdown activities.
- 1.6 The Contractor shall quote separate rate in PKR for each activity against the quantities mentioned in the scope of work and accommodation as well. Moreover, contractor will also be responsible for electric power and water supply for their own manpower at their residence camp.
- 1.7 The items mentioned in the scope of work consist of furnishing all plant, labor, equipment, machinery, scaffolding and materials for completing the work. The work

shall be done, complete in all respects in accordance with the requirements and owner's instructions at site.

- 1.8 The Quantities contained in the scope of work for each activity 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 the scope of work submitted with this tender document. The payment to be made to the Contractor shall be based on the actual quantity of work performed (Refer Scope Registers for Items).
- 1.9 The Contractor shall be responsible for carrying out all work, complete in all respects, according to the scope of work. Any item of work required for completion but not expressly indicated in the scope shall be deemed to have been included in the unit rates quoted by the Contractor. The successful contractor will be required to submit detailed procedures for undertaking shutdown jobs especially repair works, modification jobs and Chemical Cleaning for Owner's approval in due course after award of contract.
- 1.10 The Contractor shall be responsible for ventilation/chillers and getting the vessels fit for entry and working environment. All other works required for equipment / piping repair works, e.g. removal / installation of internals, temporary supports, lighting, ventilation etc., shall be the Contractor's responsibility.
- 1.11 The works are to be carried out on a fast track basis and it is, therefore, essential that the Contractor shall be prepared to execute the work on a round the clock basis (day & night shift) including on holidays.
- 1.12 Unit rates quoted by bidder shall be firm. No extra payments on account of escalation in prices due to any reason shall be admissible.
- 1.13 The Contractor shall be paid only for the work duly approved by Owner's representative. Any rework due to poor quality, demonstrated by NDT results & inspection by OGDCL shall be on Contractor's account.
- 1.14 The work is being executed within the plant during shutdown and the Contractor shall, therefore, abide by all safety Rules and Regulations required to be followed on advice of Company.
- 1.15 Removal / Re-installation of hot & cold insulation where applicable shall be the responsibility of Contractor (materials to supply by OGDCL).
- 1.16 The contractor will arrange cranes and all other shifting/lifting/rigging gears for all activities to be carried out during ATA.
- 1.17 All tools, machinery, special equipment shall be supplied by Contractor.
- 1.18 Skilled manpower should be well experienced in their respective crafts.

- 1.19 OGDCL HSEQ Rules & Regulations will be strictly observed & followed by the Contractor.
- 1.20 Contractor will be responsible for dismantling, shifting to workshop and back to site after maintenance, re-installation and alignment of motors with skilled millwright teams.
- 1.21 Contractor will perform hydro testing / pressure testing of heat exchangers (as per mechanical scope register)
- 1.22 Contractor will develop and submit general hydro test procedure for each exchanger in bid for Technical Evaluation. However specific procedure will be submitted at site minimum seven days before start of ATA for approval.
- 1.23 Contractor will arrange all the material, hydro testing pumps, tubing or hoses to fill water / Nitrogen gas for hydro testing / pressure testing (complete in all aspects). Fabricate all hydro testing / pressure testing assemblies prior to start of ATA.
- 1.24 Work methodologies of Jobs (modification jobs, valve testing / repairing, cleaning of vessels, Columns, heat exchangers and repair work of leakages in piping and pressure vessels) will be developed by keeping in view of under-mentioned references and requirements. Furthermore, contractor shall submit the method statement of repair jobs, hydro testing of mechanical valves (as required, which typically include repaired and leaky valves), at least one week before the commencement of ATA for Owner's approval.

1A REFERENCES:

- ASME Sec II Part-A (Ferrous material Specifications)
- ASME Sec II Part-C (Specifications for welding rods, electrodes and filler materials)
- ASME VIII Div-I (Rules for Construction of Pressure Vessels)
- ASME Sec IX (Welding and Brazing Qualifications)
- ASME B31.3 (Process Piping)
- ASME Sec V (Non Destructive Examination)
- API-510 (Code for Inspection of pressure vessels repair, alteration and re-rating)
- API-572 (Inspection of Pressure Vessels)
- API-570 (Inspection, Repair, Alteration and re-rating of piping)
- API-598 (Valves Inspection & Testing)
- MSS-SP-61 (Pressure Testing of Steel Valves)
- NACE MR-0175
- OGDCL's Specifications

INSPECTION/REPAIR/TESTING OF VALVES:

- 2.1 The Contractor shall quote separate rates for each/individual valve (The valves nos. and type mentioned in Mech Scope Register.

- 2.2 Contractor shall submit methodology / procedure for repairing and testing of valves with respect to the standards specified in the engineering references above.
- 2.3 The repair and build up of valves' seats will be carried out with approved electrodes in accordance with applicable standards (if required).
- 2.4 All valves will be tested for seat tests & body test.
- 2.5 Lapping of valve seats shall be carried out on high-level precision machine.

OGDCL'S RESPONSIBILITIES:

- 3.1 OGDCL will provide blind / spades for isolation and pressure testing. However, the blinds which are not available in stock, contractor will fabricate with MS sheets. MS sheets will be provided by OGDCL. Pressure test ring for heat exchangers (where ever required) will be provided by OGDCL
- 3.2 OGDCL will arrange NDT/Third party inspection.
- 3.3 Only plan Area will be provided to contractor for accommodation and all other boarding and lodging arrangement will be at contractor end considering manpower requirement.
- 3.4 OGDCL will provide gaskets and direct material/spares parts.
- 3.5 OGDCL will provide de-mineralized / RO water for hydro testing.
- 3.6 OGDCL will provide nitrogen for purging/blasting.

CONTRACTOR'S RESPONSIBILITIES:

- 4.1 The technical manpower must be qualified / skilled and have at least five years' experience in its trade in the field of Oil & Gas/Petrochemical Processing Plants. Contractor skilled manpower will be interviewed by OGDCL professionals in all disciplines (Mechanical, Electrical and Instrument), if deemed necessary and contractor should arrange the interview at their premises. The detailed CV's of direct manpower/supervisors is mandatory.
- 4.2 Contractor will arrange the accommodation and three-time meal, and drinking water for their manpower, electric power, and water supply and laundry services at their camp.
- 4.3 Contractor shall deal / communicate with the locals directly.
- 4.4 Emergency/First Aid medical coverage will be the responsibility of contractor.
- 4.5 Although the plant has a safe history however contractor where deemed necessary will arrange their own security.

- 4.6 Pumps, tanks, chemicals and hosepipes for in-place chemical cleaning to be arranged by contractor.
- 4.7 Pumps, tanks, chemicals and hosepipes for in-place chemical cleaning to be arranged by contractor. Contractor shall arrange material & fabricate the tanks (02 Nos) for chemical cleaning having following sizes, detail drawing / sketch will provided to successful bidder. These tanks will be handed over to OGDCL after completion of ATA.
- Length (L) X Width (W) X Height (H) = 9'11" X 6'9" X 4'11" (SS 304 Sheet Thickness: 8mm) with 02 Nos. 6" Nozzles and 01 No. 2" Nozzle.
 - Length (L) X Width (W) X Height (H) = 9'11" X 5'2" X 4'11" (SS 304 Sheet Thickness: 8mm) with 02 Nos. 6" Nozzles and 01 No. 2" Nozzle.
- 4.8 The Contractor shall quote separate rate in PKR for each activity against the quantities mentioned in the scope of work. Contractor shall mention mobilization & demobilization charges separately.
- 4.9 The contractor should plan ATA activities (direct/associated) using latest version of MS Project or equivalent and submit their planned schedule covering all the activities for carrying out ATA of KPD-TAY LPG Gas Processing Plant successfully with high level quality within stipulated time period.
- 4.10 Contractor shall submit in the technical bid; Manpower histogram, to be plotted on each-day basis to show the nos. of people to be on site for execution of ATA works scope. The manpower should be segregated/ separately shown for Mech, Electrical and Instrumentation & Control.
- 4.11 Contractor shall submit in the technical bid; Lev-1 or 2 (MS Project or equivalent) schedule to demonstrate how the ATA work will be executed within OGDCL specified time line. The schedule must include all major machinery and tools/ equipment required to carry out ATA activities.
- 4.12 Contractor should prepare/submit daily progress report and percentage Gantt chart (planned vs actual) at end of the day.
- 4.13 Job compatible tools and consumables for the execution of each job is contractor's responsibility including the chemicals, (Cleaners and Neutralizers compatible with metallurgy) required for internal cleaning of columns, vessels, heat exchangers and external cleaning of fins and tubes of fin-fan coolers. Contractor will be responsible for supply of chemical expert services and supervision during chemical cleaning.
- 4.14 In case of any accident, contractor should have its own medical facility however OGDCL may provide only general first aid as a good gesture.
- 4.15 Contractor shall arrange the standardized valve test bench along with air compressor (with third party valid certification) for manual valves, ON/OFF valves, control valves & PSV's pressure testing.

- 4.16 Safe dismantling/shifting and reinstallation after testing and calibration of manual valves, ON/OFF valves, control valves & PSV's is contractor's responsibility.
- 4.17 All calibration equipment/tools for all instruments, control valves & PSV's should be the responsibility of contractor.
- 4.18 Site administration personnel with associated resources like computer, printers, photocopiers etc.
- 4.19 Contractor will arrange certified E & I calibration and testing equipments, the certificates will be submitted before execution of ATA. List of instruments calibration test tools mention below.
- 475 Hart Communicator, Digital RTD & Thermocouple Calibrator, Fluke Process Calibrator, manometer, PSV test bench with booster unit / Compressor etc.
- Contractors is responsible to provide calibration certificate of tools used for Fire & Gas Detectors calibration.
- 4.20 Contractor shall arrange all Cranes, trucks and fork lifters suitable to carry out all the activities within stipulated time frame. Contractor shall submit equipment deployment plan along with technical bid.
- 4.21 Precision Lathe machines for the repair of manual valves, ball valves, KCV's, control valves & PSV's along with Teflon Bar and Rubber O-ring (sizes: 2" to 10" dia) as per work scope requirement.
- 4.22 Gaskets for pressure testing/bench test of manual valves, control valves & PSV's.
- 4.23 Water jetting machines with all accessories up to 15000 psig operating pressure for hydro-jetting of heat exchangers etc. as job scope requirement.
- 4.24 All Testing Equipment should preferably be of European or American brand like of M/s Megger or M/s Doble or M/s Omicron or similar. Contractor shall submit in their technical bid about information on models/ make/name of testing equipment along with valid test certificates, which they will bring on site for ATA, and any sub-standard equipment shall not be acceptable and no payments will be made, if the equipment proves to be inaccurate.
- 4.25 The contractor electrical team must have proven experience on maintenance of all hazardous classified equipment like motors, JB's and LCS and must ensure that the characteristics of Exd should remain intact after successful execution of such jobs.
- 4.26 Preferably, test equipment should have software connectivity and automated testing feature for better assessment and detailed reporting.
- 4.27 All electrical personnel should be well aware of all risks and hazard involved for execution of jobs and shall be carried out in safe manner and as per NFPA 70E or equivalent standard.

- 4.28 The contractor shall be responsible to provide electrical hazard rated PPEs suitable for both LV and MV where required to relevant work force.
- 4.29 All testing reports of electrical jobs shall include detailed assessment along with test values and graphical representation of test results where applicable with acceptable limits as per relevant standards like NETA, IEEE, IEC, NFPA 70B or equivalent, are required to be submitted in binder form.
- 4.30 All job execution plan and test protocols with timeline for execution of job, as per applicable standards like NETA IEEE, or equivalent, according to SOW should be submitted with technical bid.
- 4.31 Fin Fan coolers external cleaning arrangement (tanks, chemical and suitable pump arrangement of such type cleaning) will be the contractor responsibility.
- 4.32 Certified scaffolding material will be arranged by contractor for all mechanical, electrical and instrumentation activities.
- 4.33 Electrical Supply Boards / Cables along with earth leakage circuit breaker as per HSE standard.
- 4.34 Pneumatic tools for confined spaces (Vessel , Columns).
- 4.35 Contractor should be responsible to use Hydraulic torquing tools for Heat exchangers de-bolting and tightening of bolts, and other sensitive area work due to high BTU gas system for safe execution.
- 4.36 Contractor will perform hydro testing of heat exchangers (as per mechanical scope of work). Contractor will develop and submit hydro test method statement in bid for technical evaluation.
- 4.37 Contractor will arrange all material and fabricate hydro testing assemblies for heat exchangers (where required) along with compatible hydro testing pumps. Contractor shall hand over testing assemblies to OGDCL after completion of ATA.
- 4.38 Contractor will provide all the calibration certificates (Hard and Soft copy) of all the instruments (transmitters/switches/gauges/F&G detectors/mass flow meters etc.), manual valves, ON/OFF valves, control valves & PSV's which will be calibrated in the ATA as per given scope.
- 4.39 Shock absorbing safety harness and breathing apparatus for contractor employees as per job requirement.
- 4.40 Third party fitness certification of lifting gears, cranes, lifters, trucks, crane operators, drivers etc. will be mandatory. Contractor shall submit detail along with bid.
- 4.41 Contractor should arrange HSE I/C, supervisors, inspectors, first aiders, hole watcher, rescuer, fireman and housekeeping man as per work plan activities (well-equipped team).

- 4.42 Contractor shall perform plant housekeeping at the end of ATA including cleaning of open drain channel of complete plant and disposal of recovered waste.
- 4.43 Total nos of deployed manpower list (designation wise) with organogram for the execution of individual job along with manpower deployment plan shall be submitted in the technical bid.
- 4.44 Contractor will arrange transport for the pick and drop for their manpower from residence camp to plant and back for the whole period and also from Hyderabad/Karachi etc. to field & back.
- 4.45 Contractor should ensure the police verification (as per OGDCL requirement), of all manpower direct and indirect, must have bio-data file of each. Deployed manpower should have no criminal record.
- 4.46 Contractor manpower must have CNIC and Contractor identity card.
- 4.47 Contractor should ensure his manpower don't have / possess any kind of ammunition and narcotics.
- 4.48 Mobiles and photo camera are prohibited in the plant premises and contractor should ensure it.
- 4.49 Contractor should deploy his own fully equipped security to control the manpower's in/out movement in plant as well as at residence camp and store with the coordination of OGDCL security Incharge.
- 4.50 Contractor should rectify any breakdown/damage of equipment, material, spare parts due to contractor fault, mismanagement / manhandling.
- 4.51 Contractor to arrange Electrical Supply Boards (EXd rated class as well as non EXd-Specific to EXd Zone-I & II where work is being performed) with Cables for all activities planned in ATA. Supply boards should be EXd certified with Earth leakage breakers, EXd rated glands and receptacles. Contractor to make sure that these boards are sufficient in numbers to avoid shortage during ATA and sufficient man power should be deputed to ensure power supply up to point of consumption. OGDCL will only provide points at which three phase/single power is available at plant area.
- 4.52 Contractors to provide SOPs of all tests / checks / maintenance to be performed on electrical & mechanical equipment, provide detail of test equipment.
- 4.53 Contractor to arrange 220/24 VAC temporary illuminations wherever required at site. These fixtures should be rated as per EXd ratings relevant to area of installation. Their supply to temporary DBs and all relevant cabling will be at contractor scope. OGDC will only provide electrical connection points at site.
- 4.54 QA/QC documents will be provided by contractor after complete overhauling/maintenance/repairing job.
- 4.55 Contractor will provide data in binder form.

- 4.56 Contractor to arrange pneumatic / 24V (intrinsically safe, explosion proof) High RPM round shape exhaust Fans for the ventilation of Columns and Vessels.
- 4.57 Contractor to arrange 24V DC Battery operated Lighting arrangement with power source inside the Column and vessels.
- 4.58 Contractor will arrange third party certified Meggar (5000V), multimeters, clamp meters and earth resistance tester.
- 4.59 Contractor to arrange and install suitable ventilation system to maintain safe entry for people in columns and vessels. Keeping in view the hot weather conditions and working around the clock, the Contractor will be responsible to assess the ventilation requirements for safe entry and comfortable environment for working crew inside the vessel. Accordingly, Contractor shall arrange all necessary equipment (fans and/or ejectors and/or cool air supply equipment etc.) which will be required to provide suitable temperature inside the vessels/columns for working crew.
- 4.60 Contractor shall extend the support for any maintenance activities during start-up of the plant.

CONTRACTOR'S HSE RESPONSIBILITIES:

- 5.1 Contractor will submit Company HSE Policy manual for implementation of safe execution of each activity with zero-injury target. In case of any accident, OGDCL will not be liable for any claim like insurance etc.
- 5.2 Provision of PPE'S to their manpower and each worker should display ID card (HSE concern)
- 5.3 Original certificates of lifting gears, cranes, crane operators, hydro-jetting machines, drivers etc. will be mandatory checked by OGDCL Maintenance representative. Furthermore, contractor will submit copy of these certificates to HSE representative of OGDCL (HSE Concern).
- 5.4 The valid certification of welders, scaffolder etc. will be mandatory. Tags should be displayed for certified scaffolding (HSE Concern).
- 5.5 HSEQ manpower of contractor shall be experienced in its discipline.
- 5.6 Manpower to be acquired by contractor, technical competence and skill to be mentioned. Contractor to provide CV of the manpower
- 5.7 HSEQ Officer should be graduate engineer with Nebosh certification with at least 05 Years of relevant experience.
- 5.8 Supervisor should be Graduate / D.A.E having Safety Courses certificates with at least 5 Years of relevant experience.
- 5.9 HSE assistant should be at least Intermediate having Safety Courses/ certificates with at least 5 Years of relevant experience).

- 5.10 Well-equipped First Aider & Rescuers (Trained/Certified at least 02 Nos.) e.g. ropes/pulley, tri-pod, stretchers, medicines etc.
- 5.11 Contractor to provide Job Safety Plan for critical jobs and respective arrangement regarding preventive measure (safety gadget, HSE equipments etc.) and mitigation measures (in case of emergency e.g. SCBA, rescuer, first aider, specialized arrangement tripod stand for evacuation from confined space etc.)
- 5.12 Emergency Response Plan by the contractor.
- 5.13 Mobiles and photo camera are prohibited in the plant premises and contractor should be ensured. (HSE / Security concern).
- 5.14 Smoking will be allowed only in designated areas.
- 5.15 The work is being executed within the plant during shutdown and the Contractor shall, therefore, abide by all safety Rules and Regulations required to be followed by the Owner.
- 5.16 HSEQ crew will be interviewed by OGDCL HSEQ representative before commencement of ATA by OGDCL.
- 5.17 Skilled manpower should be well experienced in their respective crafts.
- 5.18 Contractor shall strictly observe & follow OGDCL HSEQ Rules & Regulations, OGDCL contractor management manuals, HSE protocol for project management.

MOBILIZATION / DEMOBILIZATION PERIOD:

- 6.1 Contractor shall be allowed to mobilize resources & manpower 7-10 days before commencement of ATA. Contractor can mobilize limited resources any time before ATA with the prior approval of OGDCL Plant Management for pre-shutdown activities. However, Contractor shall ensure to mobilize all resources before the start date of ATA in order to complete all ATA activities without delay.
- 6.2 Contractor should demobilize all resources within 07 days after completion of ATA activities & post shutdown activities.

NON-COMPLIANCE WITH TERMS / PENALTIES:

- 7.1 If Contractor does not mobilize within agreed time period; OGDCL will have the right to terminate the contract and confiscate the performance bond / guarantee etc.
- 7.2 If Contractor regrets or fails to provide the service or complete the agreed job (which is part of the service order/contract) during ATA then the Contractor shall be liable to pay penalty @ 5% of the total contract value (including mobilization & demobilization charges), which will be deducted from the invoice & charges of that specific job will also not be paid. However, if OGDCL hold or terminate / delete any

services, job scope then no penalty will be imposed to the Contractor but the payment of that particular job will not be paid to Contractor.

- 7.3 If Contract is terminated due to negligence / fault at the part of the Contractor, then mobilization & demobilization charges will not be paid and Company has the right to confiscate the performance bond / guarantee.
- 7.4 In case of any damage or break down of the equipment due to maintenance fault, assembly, disassembly, box up, Contractor will bear all cost of services, consumables & parts used to restore the equipment in original condition.

MINIMUM REQUIREMENTS FOR BIDDER QUALIFICATION:

All the interested parties intending to participate to execute the ATAs must fulfil all the requirements / parameters required for bidder qualification as per tender document in their bids. The evaluation of the bids shall be done through grading of the contractors according to marks calculated as per criteria defined in Annexure-A. A Contractor should earn minimum qualifying marks in each category & total 70 marks as overall in order to qualify. The Minimum qualifying marks in each category are also defined in Annexure-A.

8.1 The Contractor(s) are required to provide the following documents for bidder qualification:

- i. Certified copy of valid NTN / GST certificates.
- ii. Contractor profile.
- iii. Documentary proof for providing the satisfactory services for ATA / Shutdown (which include copy of purchase orders, Contract, completion certificates showing nature of job, client name & value) of at least 03 years in oil & gas, refinery or petrochemical plants. ATA at other plant like sugar, textile, cement, power plants etc. will not be considered. Project (like erection of new plants etc.) experience will not be considered as ATA experience.
- iv. Comprehensive list of all available equipment, tools, camp, office & workshop facilities, logistic equipment, cranes, lifters etc. should be provided. It may be verified physically if OGDCL deem necessary.
- v. Contractor's site organogram of ATA, manpower deployment plan & equipment deployment plan with total numbers of each craft, machinery, tools etc. It should cover all required resources (manpower, machinery & tools) specially; Mechanical, Instrument, Electrical, HSEQ, Inspection crews etc.
- vi. CVs of the all Management & Supervisory ATA team (as per organogram). The Managers, Engineers, supervisors should have experience of ATA execution.
- vii. List of all the offices and service agencies across Pakistan.

- viii. Contractor's HSEQ policy & detail required to claim the marks as per annexure-A Sr. No. 05.
 - ix. Verifiable copy of purchase orders & satisfactory performance certificate from Oil & Gas companies, refineries or petrochemical plants for execution of previous ATA in order to claim the marks as per Annexure-A.
 - x. Level-1 or 2 (MS Project or equivalent) schedule to demonstrate how the ATA work will be executed within OGDCL specified time line. The schedule must include all major machinery and tools / equipment required to carry out ATA activities.
- 8.2 In case of bid submitted by any Joint Venture Contractors, the experience of one Contractor will be considered for evaluation (for example 01-year experience of one Contractor & 01 year of the another JV Contractor will not be considered as two years. Similarly, two ATAs performed by one Contractor & one ATA by JV will not be considered as three ATAs.
- 8.3 Contractor declared as black listed at PPRA website will not be entertained.
- 8.4 Contractor shall have strong financial strength to meet the execution of ATA services, evidence of financial resources / strength should be provided.

Important Note:

- a) All interested parties / bidders are requested to visit KPD-TAY site to clarify / understand the scope of work if deem necessary. It will also be helpful to understand the scope, to avoid unnecessary clarification & submit the bid well in time.
- b) OGDCL requirement for bidders is to explicitly demonstrate in their "Technical Bid Submission" that they have allocated enough manpower, machinery, equipment, tools, consumables etc. to carry out all ATA activities safely and within planned timeline. Any of the bidders appearing to be short of resources in their technical bid submission may be rejected, if found non-compliant / non-responsive to OGDCL requirements. It should also be noted that after award of ATA Contract by OGDCL, Contractor shall have sole responsibility to review the current situation / onsite situation (including any changes to priorities by OGDCL) and arrange the additional resources (people/ machinery, Tools, equipment, consumables etc.) to ensure ATA delivery within stipulated timeline and OGDCL defined targets. All such activities shall be performed without additional and/or extra cost to OGDCL.
- c) Bidder shall confirm to provide & execute all activities as per TOR / Scope of work, any bidder who will obtain 70 marks but not confirm to execute complete TOR / Scope of work will be declared as technically non responsive.

Contractor Qualification Criteria

Sr. No.	Evaluation Item	Description of Criteria	Max. Marks / Calculations	Maximum Marks	Minimum Qualifying Marks	Remarks
1.	Contractor strength to execute Mechanical, Electrical & Instrumentation work.	Contractor should have experience for execution of Mechanical, Electrical and Instrument works in ATAs.	Fully Complied = 15	15	15	The Contractor should submit the detail of scope of work along with supporting documents to prove that they have executed Mechanical, Electrical & Instrument activities during ATAs. Experience of Contractor itself will be considered only (experience of manpower is separately covered in TOR)
2.	Specific experience of Annual Turn Around (ATA).	Contractor's experience of ATAs.	Contractor shall earn 06 marks against each ATA up to maximum of 30 marks, Only 05 ATAs will be considered for Marks calculation.	30	10	In order to get 06 Marks for each ATA, the value/ worth of each previous ATA performed by contractor should be at least 10 Million (PKR). If value/ Cost of ATA performed is less than 10 Million but above 07 Million (PKR) 05 points each. If value/ Cost of ATA performed is less than 07 Million but above 04 Million (PKR) 04 points each. If value/ Cost of ATA performed is less than 04 Million but above 1.5 Million (PKR) 03 points each. If value/ Cost of ATA performed is less than 1.5 Million then it will not be considered.
3.	Certifications.	Contractor should provide following valid certificates; 1. ISO 9000 certification: 2. ASME U/R/S-Stamp 3. PEC Registration	1. 04 Marks 2. 03/02/02 Marks 4. 04 Marks	15	04	Contractor should submit the valid copy of certificates. If the certificate status is in progress no marks shall be given.

Sr. No.	Evaluation Item	Description of Criteria	Max. Marks / Calculations	Maximum Marks	Minimum Qualifying Marks	Remarks
4.	Offices, Workshop, Tools, Equipment, Machinery, Infrastructure .	<p>Contractor should have following facilities with in Pakistan.</p> <ol style="list-style-type: none"> 1. Workshop & office, 2. Tools to execute the ATA activities (Mechanical, Instrument, Electrical). 3. Equipment / Machinery (Valve test bench, hydro jetting machines, welding machines/ Generators). 4. Cranes, fork lifters. 5. Relevant professional CVs & site deployment Organogram for Mechanical, Instrument & Electrical works. 	<ol style="list-style-type: none"> 1. 03Marks 2. 08 Marks 3. 03 Marks 4. 06 Marks (04 + 02) 5. 10 Marks. 	30	15	<p>Established workshop: 02 Marks Established Office: 01 Marks</p> <p>Mechanical tools: 04 Marks. Instrument tools: 02 Marks. Electrical tools: 02 Marks.</p> <p>01 Marks for each main equipment / Machinery.</p> <p>01 Crane (Min 25 tons). 02 Marks Max: 04 Marks 01 fork lifters (Min 3 Tons). 01 Mark Max: 02 marks</p> <p>Organogram: 02 Mark. Mechanical CVs: 04 Mark Electrical CVs: 02Mark Instrument CVs: 02Mark</p>

Sr. No.	Evaluation Item	Description of Criteria	Max. Marks / Calculations	Maximum Marks	Minimum Qualifying Marks	Remarks
5.	Safety & HSE Policy	1. Contractor's documentary evidence of HSE policy with commitment to provide PPE, Helmet, Ear plugs and safety shoes to the skilled labour at work. 2. Well defined HSE policy with commitment and to provide 1 Million Safe Man hours' record. 3. Deployment of first aid boxes & medical team for the labour at site.	1. 04 Marks for full compliance, partial compliance zero Marks. 2. 04 Marks, 3. 02 Marks for full compliance partially compliance zero Marks.	10	06	The Contractor who will provide 1 Million safe man hours record will be awarded 04 marks while the Contractor who will provide 0.5 Million safe man hours record will be awarded 02 Marks.

Total Marks= 100

Minimum Qualifying Marks = 70

Note:

All contractors / bidders are requested to provide all required documents in the technical bid, Points calculation will be carried out as per available record / evidence in the bid, it will be helpful to avoid long clarifications & undue delays during technical evaluation.

1. Contractors capable of executing Electrical, Instrument & Mechanical activities will be considered for qualification. Partial compliance i.e. if the Contractor has experience of mechanical jobs only, having no experience in Electrical & Instrumentation field & vice versa, then it will be not considered for qualification.
2. Contractor should get minimum qualifying marks in each category as mentioned in above table. Contractor will not be qualified if above mentioned minimum qualifying marks in any category will not be scored by the contractor. In addition, the total marks should also be not less than 70. Any contractor who will score less than 70 marks shall not be considered for qualification.
3. Contractor must have three years' total experience of providing ATA/ shutdown services. Contractors having experience less than three years will be disqualified & shall not be considered for qualification even if they score marks more than 70 as per above tabulated criteria. In order to prove three years' experience, Contractor can claim the ATA whose worth / value is less than Rs.1.5 million however these ATA shall not be considered for marks calculation and only ATAs having worth / value more than Rs. 1.5 million will be considered for marks calculation as per above table Sr. No. 02.
4. In case of JV, JV agreement to be provided by contractor. Experience of both JV partner will be not added together for marks calculation.

FINANCIAL BID FORMAT/EVALUATION CRITERIA

KPD-TAY Plant ATA-2019

Sr.	Description	Price in PKR (exclusive of PST / ICT)
01.	Cost of Services for ATA jobs, activity wise breakdown should be provided as per enclosed document / scope of work (the cost must be inclusive of all types of equipments, tools, manpower, machinery, consumables and PPE) for I. Mechanical works II. Electrical works III. Instrument works	
02.	Mob / Demob Cost (lumpsum)	
03.	Total cost (inclusive of all taxes (except Provincial Sales Tax/ ICT Tax on services in Pakistan), duties, levies, charges etc)	
Note: i) Total Price should be inclusive of all taxes (except Provincial Sales Tax/ ICT Tax on services in Pakistan), duties, levies, charges etc. ii) Bidders are requested to quote the above mentioned rates separately for each activity of the jobs at Sr. No. 01. & provide the activity wise break down as per attached list. iii) OGDCL reserves the right to delete / cancel any activity mentioned in the scope of work at any stage of the ATA and payment will be made as per actual job done. iv) Contract will be awarded to technically qualified and financially lowest evaluated bidder on complete package basis. v) There will be an estimated Amount Contract. vi) Price shall be quoted against each activity however payment will be made as per actual against verified invoices.		

BID PRICE:

- i. Bid price must be quoted in PKR otherwise the bid will be rejected.
- ii. Bid price shall be inclusive of all taxes, duties, levies, charges etc., except Provincial Sales Tax (PST)/ Islamabad Capital Territory Sales Tax (ICT) on services in Pakistan.
- iii. The prices quoted by the successful bidder (contractor) for required services shall remain firm and final throughout contract period. The price charged by the successful bidder (contractor) for required services shall not vary from the prices quoted by the service company.

(This clause shall prevail instead of Master Tender document "ITB" clause # 06 'BID PRICE')

PAYMENT TERMS:

100% payment will be made after completion of job as per Scope of Work and against verified invoices at actual along with completion certificate issued by OGDCL.

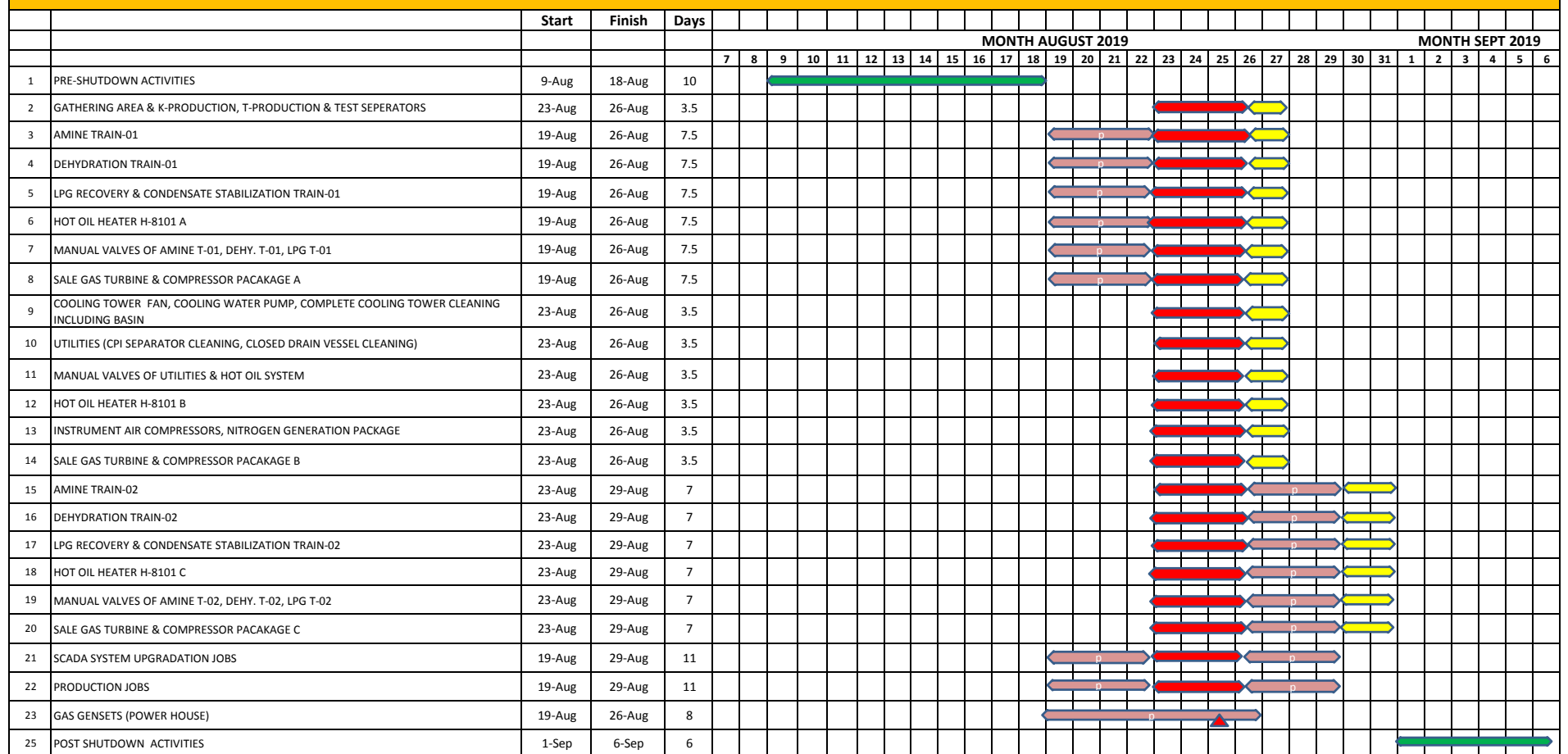
(This clause will prevail instead of Master Tender document "ITB" clause # 07 'PAYMENT').






AMOUNT OF BID BOND: Bid Bond /Bid Security amounting to **PKR: 900,000/-** is to be attached / provided with the technical bid. Please see Master Set of Tender Document for further details.

Note : -

The master set of tender documents (services) uploaded on OGDCL's website (www.ogdcl.com) is the integral part of this TOR.

ATA-2019 MECHANICAL/PROCESS/ELECTRICAL/INSTRUMENT JOB EXECUTION PLAN AREA WISE



 COMPLETE SHUTDOWN
 PARTIAL SHUTDOWN
 STARTUP
 PRESHTUTDOWN/POST SHUTDOWN
 NOTE:- COMPLETE POWER SHUTDOWN FOR BUS BAR

INSTRUMENT SECTION SCOPE OF WORK / JOB LIST FOR ATA - 19 OF KPD-TAY PLANT

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIP MENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
CONTROL VALVES										
i) STROKE TEST/MAINTENANCE										
1	Stroke Test/ Maintenance of LCV-4400; Feed Gas Knock out Drum, Amine Train-1	Control Valve	1"	RF, 600#	FISHER	To record As-Found /As-Left calibration data. On-Site calibration and integrity checks of Actuator, Positioner. Functional testing to be performed. No dismantelling/ re-installation is required. Provide soft and hard copies of assignments and certifications. Note: Blind flanges if required ratings to be arranged by contractor used for pressure testing.	All tools, consumables & calibration equipments for executing the said job will be in contractor's scope.	1		
2	Stroke Test/ Maintenance of LCV-4408; Treated Gas Knock Out Drum, Amine Train-1	Control Valve	1"	RF, 600#	FISHER			1		
3	Stroke Test/ Maintenance of LCV-4410; Amine Regenerator, Amine Train-1	Control Valve	10"	WAFER, 150#	FISHER			1		
4	Stroke Test/ Maintenance of LCV-4415; Amine Regenerator Reflux Drum, Amine Train-1	Control Valve	2"	RF, 150#	FISHER			1		
5	Stroke Test/ Maintenance of PCV-4405; Hydrocarbon Skim Drum, Amine Train-1	Control Valve	8"	RF, 600#	FISHER			1		
6	Stroke Test/ Maintenance of PCV-4407A; Fuel Gas Absorber, Amine Train-1	Control Valve	1.5"	RF, 150#	FISHER			1		
7	Stroke Test/ Maintenance of PCV-4407B; Fuel Gas Absorber, Amine Train-1	Control Valve	1.5"	RF, 150#	FISHER			1		
8	Stroke Test/ Maintenance of PCV-4411; Amine Regenerator Reflux Drum, Amine Train-1	Control Valve	10"	WAFER, 150#	FISHER			1		
9	Stroke Test/ Maintenance of FCV-4407; Amine Regenerator Reboiler, Amine Train-1	Control Valve	10"	WAFER, 300#	FISHER			1		
10	Stroke Test/ Maintenance of FCV-4408; Amine Regenerator Reboiler, Amine Train-1	Control Valve	10"	WAFER, 300#	FISHER			1		
11	Stroke Test/ Maintenance of FCV-4411; Amine Regenerator Reflux Drum, Amine Train-1	Control Valve	1"	RF, 150#	FISHER			1		
12	Stroke Test/ Maintenance of FCV-4414; Amine Circulation Pump, Amine Train-1	Control Valve	6"	RF, 150#	FISHER			1		
13	Stroke Test/ Maintenance of FCV-4417; Amine Charge Pump, Amine Train-1	Control Valve	8"	RF, 600#	FISHER			1		
14	Stroke Test/ Maintenance of FCV-4419; Amine Charge Pump, Amine Train-1	Control Valve	3"	RF, 600#	FISHER			1		
15	Stroke Test/ Maintenance of FCV-4420; Amine Charge Pump, Amine Train-1	Control Valve	3"	RF, 600#	FISHER			1		
16	Stroke Test/ Maintenance of FCV-4421; Amine Charge Pump, Amine Train-1	Control Valve	3"	RF, 600#	FISHER			1		
17	Stroke Test/ Maintenance of FCV-4422; Lean Amine Trim Cooler, Amine Train-1	Control Valve	2"	RF, 150#	FISHER			1		
18	Stroke Test/ Maintenance of PDCV-4410; Lean Amine Filter, Amine Train-1	Control Valve	6"	RF, 150#	FISHER			1		
19	Stroke Test/ Maintenance of LCV-4403 Inlet Gas Trim Cooler, Amine Train-1	Control Valve	1"	RF 600#	FISHER			1		
20	Stroke Test/ Maintenance of LCV-4412 Lean Amine Air Cooler, Amine Train-1	Control Valve	8"	RF, 150#	FISHER			1		
21	Stroke Test/ Maintenance of PCV-4411 Amine Regenerator Reflux Drum, Amine Train-1	Control Valve	10"	WAFER, 150#	FISHER			1		
22	Stroke Test/ Maintenance of TCV-4433A Lean Amine Air Cooler, Amine Train-1	Control Valve	8"	RF 150#	FISHER			1		
23	Stroke Test/ Maintenance of TCV-4433B Lean Amine Air Cooler, Amine Train-1	Control Valve	6"	RF 150#	FISHER			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
24	Stroke Test/ Maintenance of LCV-5400; Feed Gas Knock out Drum, Amine T-2	Control Valve	1"	RF 600#	FISHER			1		
25	Stroke Test/ Maintenance of LCV-5408; Treated Gas Knock Out Drum, Amine T-2	Control Valve	1"	RF 600#	FISHER			1		
26	Stroke Test/ Maintenance of LCV-5410; Amine Regenerator, Amine T-2	Control Valve	10"	WAFER, 150#	FISHER			1		
27	Stroke Test/ Maintenance of LCV-5415; Amine Regenerator Reflux Drum, Amine T-2	Control Valve	2"	RF 150#	FISHER			1		
28	Stroke Test/ Maintenance of PCV-5405; Hydrocarbon Skim Drum, Amine T-2	Control Valve	8"	RF 600#	FISHER			1		
29	Stroke Test/ Maintenance of PCV-5407A; Fuel Gas Absorber, Amine T-2	Control Valve	1.5"	RF 150#	FISHER			1		
30	Stroke Test/ Maintenance of PCV-5407B; Fuel Gas Absorber, Amine T-2	Control Valve	2"	RF 150#	FISHER			1		
31	Stroke Test/ Maintenance of PCV-5411; Amine Regenerator Reflux Drum, Amine T-2	Control Valve	10"	WAFER, 150#	FISHER			1		
32	Stroke Test/ Maintenance of FCV-5407; Amine Regenerator Reboiler, Amine T-2	Control Valve	10"	WAFER, 300#	FISHER			1		
33	Stroke Test/ Maintenance of FCV-5408; Amine Regenerator Reboiler, Amine T-2	Control Valve	10"	WAFER, 300#	FISHER			1		
34	Stroke Test/ Maintenance of FCV-5411; Amine Regenerator Reflux Drum, Amine T-2	Control Valve	1"	RF 150#	FISHER			1		
35	Stroke Test/ Maintenance of FCV-5414; Amine Circulation Pump, Amine T-2	Control Valve	6"	RF 150#	FISHER			1		
36	Stroke Test/ Maintenance of FCV-5417; Amine Charge Pump, Amine T-2	Control Valve	8"	RF 600#	FISHER			1		
37	Stroke Test/ Maintenance of FCV-5419; Amine Charge Pump, Amine T-2	Control Valve	3"	RF 600#	FISHER			1		
38	Stroke Test/ Maintenance of FCV-5420; Amine Charge Pump, Amine T-2	Control Valve	3"	RF 600#	FISHER			1		
39	Stroke Test/ Maintenance of FCV-5421; Amine Charge Pump, Amine T-2	Control Valve	3"	RF 600#	FISHER			1		
40	Stroke Test/ Maintenance of FCV-5422; Lean Amine Trim Cooler, Amine T-2	Control Valve	2"	RF 150#	FISHER			1		
41	Stroke Test/ Maintenance of PDCV-5410; Lean Amine Filter, Amine T-2	Control Valve	6"	RF 150#	FISHER			1		
42	Stroke Test/ Maintenance of LCV-5405; Amine Absorber, Amine T-2	Control Valve	8"	RF 600#	FISHER			1		
43	Stroke Test/ Maintenance of PCV-5405B; Treated Gas Knock Out Drum, Amine T-2	Control Valve	8"	RF 600#	FISHER			1		
44	Function Test of LCV-4512; Condensate Coller, LPG Train-1	Control Valve	1.5"	RF 300#	FISHER			1		
45	Stroke Test/ Maintenance of LCV-4514; De-Euthanizer Reflux Pump, LPG Train-1	Control Valve	1.5"	RF 300#	FISHER			1		
46	Stroke Test/ Maintenance of FCV-4500; Low Temp. Separator, LPG Train-1	Control Valve	1"	RF 600#	FISHER			1		
47	Stroke Test/ Maintenance of FCV-4501; Feed Gas Cooler, LPG Train-1	Control Valve	3"	RF 300#	FISHER			1		
48	Stroke Test/ Maintenance of FCV-4508; De-Euthanizer Reboiler, LPG Train-1	Control Valve	2"	RF 300#	FISHER			1		
49	Stroke Test/ Maintenance of FCV-4509; De-Botanizer Column, LPG Train-1	Control Valve	1.5"	RF 300#	FISHER			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
50	Stroke Test/ Maintenance of FCV-4510; De-Euthanizer Column, LPG Train-1	Control Valve	2"	RF 300#	FISHER			1		
51	Stroke Test/ Maintenance of PCV-4506; Low Temperature Separator, LPG Train-1	Control Valve	8"	RF 600#	FISHER			1		
52	Stroke Test/ Maintenance of PCV-4518; Turbo Expander, LPG Train-1	Control Valve	4"	RF 600#	FISHER			1		
53	Stroke Test/ Maintenance of PCV-4553A; De-Botanizer Reflux Drum, LPG Train-1	Control Valve	1"	RF 300#	FISHER			1		
54	Stroke Test/ Maintenance of PCV-4553B; Control Ter-4501 Inlet Pressure, LPG Train-1	Control Valve	1"	RF 300#	FISHER			1		
55	Stroke Test/ Maintenance of PCV-4553C; De-Botanizer Reflux Drum, LPG Train-1	Control Valve	2"	RF 300#	FISHER			1		
56	Stroke Test/ Maintenance of PDCV-4510; De-Euthanizer Over Head Condenser, LPG Train-1	Control Valve	3"	RF 300#	FISHER			1		
57	Stroke Test/ Maintenance of TCV-4503; Feed Gas Cooler, LPG Train-1	Control Valve	3"	RF 300#	FISHER			1		
58	Stroke Test/ Maintenance of TCV-4514; Feed Gas Cooler, LPG Train-1	Control Valve	6"	RF 300#	FISHER			1		
59	Stroke Test/ Maintenance of TCV-4550; De-Euthanizer Reboiler, LPG Train-1	Control Valve	6"	RF 300#	FISHER			1		
60	Stroke Test/ Maintenance of TCV-4570; De-Euthanizer Over Head Condenser, LPG Train-1	Control Valve	2"	RF 300#	FISHER			1		
61	Stroke Test/ Maintenance of TCV-4588; De-Botanizer Reboiler, LPG Train-1	Control Valve	3"	RF 300#	FISHER			1		
62	Stroke Test/ Maintenance of FCV-4504 Turbo Expander Recycle Valve; LPG T-1	Control Valve	6"	RF, 300#	FISHER			1		
63	Stroke Test/ Maintenance of FCV-4506 De-Euthanizer Reflux Pump; LPG T-1	Control Valve	1.5"	RF, 300#	FISHER			1		
64	Stroke Test/ Maintenance of LCV-7102; FLASH SEPARATOR, Condensate Stabilization Area, LPG	Control Valve	1"	RF 300#	FISHER			1		
65	Stroke Test/ Maintenance of LCV-7108; STABILIZER REBOILER, Condensate Stabilization	Control Valve	1.5"	RF 300#	FISHER			1		
66	Stroke Test/ Maintenance of LCV-7110; COMPRESSOR SUCTION DRUM, Condensate	Control Valve	1"	RF 300#	FISHER			1		
67	Function Test of FCV-7101; CONDENSATE FILTER COALESCER, LPG Train-1	Control Valve	1.5"	RF 300#	FISHER			1		
68	Stroke Test/ Maintenance of PCV-7103A; FLASH SEPARATOR, LPG Train-1	Control Valve	1"	RF 300#	FISHER			1		
69	Stroke Test/ Maintenance of PCV-7103B; FLASH SEPARATOR, LPG Train-1	Control Valve	1"	RF 300#	FISHER			1		
70	Stroke Test/ Maintenance of PCV-7115A; COMPRESSOR SUCTION DRUM, LPG Train-1	Control Valve	1"	RF 300#	FISHER			1		
71	Stroke Test/ Maintenance of PCV-7115B; COMPRESSOR SUCTION DRUM, LPG Train-1	Control Valve	1"	RF 600#	FISHER			1		
72	Stroke Test/ Maintenance of TCV-7110; STABILIZER REBOILER, LPG Train-1	Control Valve	4"	RF 300#	FISHER			1		
73	Stroke Test/ Maintenance of LCV-7106 CONDENSATE FILTER COALESCER; LPG T-1	Control Valve	1"	RF 300#	FISHER			1		
74	Stroke Test/ Maintenance of LCV-5512; Condensate Coller, LPG T-2	Control Valve	1.5"	RF 300#	FISHER			1		
75	Stroke Test/ Maintenance of LCV-5514; De-Euthanizer Reflux Pump, LPG T-2	Control Valve	1.5"	RF 300#	FISHER			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
76	Stroke Test/ Maintenance of FCV-5500; Low Temp. Separator, LPG T-2	Control Valve	1"	RF 600#	FISHER			1		
77	Stroke Test/ Maintenance of FCV-5501; Feed Gas Cooler, LPG T-2	Control Valve	3"	RF 300#	FISHER			1		
78	Stroke Test/ Maintenance of FCV-5508; De-Euthanizer Reboiler, LPG T-2	Control Valve	2"	RF 300#	FISHER			1		
79	Stroke Test/ Maintenance of FCV-5509; De-Botanizer Column, LPG T-2	Control Valve	1.5"	RF 300#	FISHER			1		
80	Stroke Test/ Maintenance of FCV-5510; De-Euthanizer Column, LPG T-2	Control Valve	2"	RF 300#	FISHER			1		
81	Stroke Test/ Maintenance of PCV-5506; Low Temperature Separator, LPG T-2	Control Valve	8"	RF 600#	FISHER			1		
82	Stroke Test/ Maintenance of PCV-5518; Turbo Expander, LPG T-2	Control Valve	4"	RF 600#	FISHER			1		
83	Stroke Test/ Maintenance of PCV-5553A; De-Botanizer Reflux Drum, LPG T-2	Control Valve	1"	RF 300#	FISHER			1		
84	Stroke Test/ Maintenance of PCV-5553B; Control Ter-5501 Inlet Pressure, LPG T-2	Control Valve	1"	RF 300#	FISHER			1		
85	Stroke Test/ Maintenance of PCV-5553C; De-Botanizer Reflux Drum, LPG T-2	Control Valve	2"	RF 300#	FISHER			1		
86	Stroke Test/ Maintenance of PDCV-5510; De-Euthanizer Over Head Condenser, LPG T-2	Control Valve	3"	RF 300#	FISHER			1		
87	Stroke Test/ Maintenance of TCV-5503; Feed Gas Cooler, LPG T-2	Control Valve	3"	RF 300#	FISHER			1		
88	Stroke Test/ Maintenance of TCV-5514; Feed Gas Cooler, LPG T-2	Control Valve	6"	RF 300#	FISHER			1		
89	Stroke Test/ Maintenance of TCV-5550; De-Euthanizer Reboiler, LPG T-2	Control Valve	6"	RF 300#	FISHER			1		
90	Stroke Test/ Maintenance of TCV-5570; De-Euthanizer Over Head Condenser, LPG T-2	Control Valve	2"	RF 300#	FISHER			1		
91	Stroke Test/ Maintenance of TCV-5588; De-Botanizer Reboiler, LPG T-2	Control Valve	3"	RF 300#	FISHER			1		
92	Stroke Test/ Maintenance of TCV-7210; STABILIZER REBOILER, LPG T-2	Control Valve	4"	RF 300#	FISHER			1		
93	Stroke Test/ Maintenance of LCV-7202; FLASH SEPARATOR, LPG T-2	Control Valve	1"	RF 300#	FISHER			1		
94	Stroke Test/ Maintenance of LCV-7208; STABILIZER REBOILER, LPG T-2	Control Valve	1.5"	RF 300#	FISHER			1		
95	Stroke Test/ Maintenance of LCV-7210; COMPRESSOR SUCTION DRUM, LPG T-2	Control Valve	1"	RF 300#	FISHER			1		
96	Stroke Test/ Maintenance of FCV-7201; CONDENSATE FILTER COALESCER, LPG T-2	Control Valve	1.5"	RF 300#	FISHER			1		
97	Stroke Test/ Maintenance of PCV-7203A; FLASH SEPARATOR, LPG T-2	Control Valve	1"	RF 300#	FISHER			1		
98	Stroke Test/ Maintenance of PCV-7203B; FLASH SEPARATOR, LPG T-2	Control Valve	1"	RF 300#	FISHER			1		
99	Stroke Test/ Maintenance of PCV-7215A; COMPRESSOR SUCTION DRUM, LPG T-2	Control Valve	1"	RF 300#	FISHER			1		
100	Stroke Test/ Maintenance of PCV-7215B; COMPRESSOR SUCTION DRUM, LPG T-2	Control Valve	1"	RF 600#	FISHER			1		
101	Stroke Test/ Maintenance of LCV-4501; V-4501, Dehydration T-1	Control Valve	1"	RF 600#	FLOWSERVE			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
102	Stroke Test/ Maintenance of LCV-4503; F-4501A, Dehydration T-1	Control Valve	1"	RF 600#	FLOWSERVE			1		
103	Stroke Test/ Maintenance of LCV-4503; F-4501B, Dehydration T-1	Control Valve	1"	RF 600#	FLOWSERVE			1		
104	Stroke Test/ Maintenance of LCV-4505; V-4503 REG GAS SCRUBER, Dehydration T-1	Control Valve	1"	RF 600#	FLOWSERVE			1		
105	Stroke Test/ Maintenance of FCV-4501 ; E-4503, Dehydration T-1	Control Valve	3"	RF 600#	FLOWSERVE			1		
106	Stroke Test/ Maintenance of LCV-5501; V-5501, Dehydration T-2	Control Valve	1"	RF 600#	FLOWSERVE			1		
107	Stroke Test/ Maintenance of LCV-5503A; F-5501A, Dehydration T-2	Control Valve	1"	RF 600#	FLOWSERVE			1		
108	Stroke Test/ Maintenance of LCV-5503B; F-5501B, Dehydration T-2	Control Valve	1"	RF 600#	FLOWSERVE			1		
109	Stroke Test/ Maintenance of LCV-5505; V-5503 REG GAS SCRUBER, Dehydration T-2	Control Valve	1"	RF 600#	FLOWSERVE			1		
110	Stroke Test/ Maintenance of FCV-5501; E-5503, Dehydration T-2	Control Valve	3"	RF 150#	FLOWSERVE			1		
111	Stroke Test/ Maintenance of FCV-8106; HOT OIL SIDE STREAM FILTER	Control Valve	4"	RF 300#	FISHER			1		
112	Stroke Test/ Maintenance of TCV-8108; SECONDARY CIRCULATION PUMP P-8103A	Control Valve	6"	RF 300#	FISHER			1		
113	Stroke Test/ Maintenance of PDCV-8101; HOT OIL FIRED HEATER	Control Valve	6"	RF 300#	FISHER			1		
114	Stroke Test/ Maintenance of PDCV-8102; SECONDARY CIRCULATION PUMP P-8103D	Control Valve	12"	WAFER 300#	FISHER			1		
115	Stroke Test/ Maintenance of PDCV-9804; COOLING WATER CIRCULATION PUMP	Control Valve	4"	RF 150#	FISHER			1		
116	Stroke Test/ Maintenance of PCV-4302; Produced Water Degasser T-4301	Control Valve	1"	RF 150#	ARCA			1		
117	Stroke Test/ Maintenance of LCV-4301; Produced Water Degasser V-4301	Control Valve	3"	RF 150#	ARCA			1		
118	Stroke Test/ Maintenance of PDCV-4101 K Slug Catcher	Control Valve	16"	RF, 600#	ARCA			1		
119	Stroke Test/ Maintenance of LCV-4102 K Slug Catcher	Control Valve	3"	RF, 600#	ARCA			1		
120	Stroke Test/ Maintenance of LCV-4103 K Slug Catcher	Control Valve	2"	RF, 600#	ARCA			1		
121	Stroke Test/ Maintenance of PDCV-5101 T-Slug Catcher	Control Valve	8"	RF, 600#	ARCA			1		
122	Stroke Test/ Maintenance of LCV-5102 T-Slug Catcher	Control Valve	3"	RF, 600#	ARCA			1		
123	Stroke Test/ Maintenance of LCV-5103 T-Slug Catcher	Control Valve	1.5"	RF, 600#	ARCA			1		
124	Stroke Test/ Maintenance of FCV-4210, Slug Catcher & Separator Area	Control Valve	12"	RF, 600#	ARCA			1		
125	Stroke Test/ Maintenance of FCV-4211, Slug Catcher & Separator Area	Control Valve	12"	RF, 600#	ARCA			1		
126	Stroke Test/ Maintenance of FCV-4212, Slug Catcher & Separator Area	Control Valve	3"	RF, 600#	ARCA			1		
127	Stroke Test/ Maintenance of FCV-4213, Slug Catcher & Separator Area	Control Valve	3"	RF, 600#	ARCA			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIP MENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
128	Stroke Test/ Maintenance of PCV-4200; K-Production Separator	Control Valve	16"	RF, 600#	PARCOL			1		
129	Stroke Test/ Maintenance of PCV-4201; K-Production Separator	Control Valve	2"	RF, 600#	PARCOL			1		
130	Stroke Test/ Maintenance of LCV-4200; K-Production Separator	Control Valve	2"	RF, 600#	PARCOL			1		
ii) PASSING RECTIFICATION & OVERHAULING										
1	Passing Rectification & Overhauling of PCV-4102, Slug Catcher & Separator Area	Control Valve	6"	RF, 600#	ARCA	Removal of Valves from line, inspection / testing of valve, Disassembling for rectification / machining / part replacement (if required), Pressure testing, calibration, re-installation To record As-Left calibration data. Provision of soft and hard copies of assignments & Certifications. Gaskets and Valve spares will be provided by OGDCL Note: Blind flanges if required ratings to be arranged by contractor used for pressure testing.	All tools, consumables calibration & testing equipments including Pressure Test Bench, Lathe Machine for executing the said job will be in contractor's scope. Gaskets will be provided by OGDCL.	1		
2	Passing Rectification & Overhauling of PCV-5102, Slug Catcher & Separator Area	Control Valve	3"	RF, 600#	ARCA			1		
3	Passing Rectification & Overhauling of LCV-4201, K-Production Separator	Control Valve	2"	RF, 600#	PARCOL			1		
4	Passing Rectification & Overhauling of LCV-5201, T-Production Separator	Control Valve	1"	RF, 600#	PARCOL			1		
5	Passing Rectification & Overhauling of LCV-4405; Amine Absorber, Amine Train-1	Control Valve	8-inch	RF, 600#	FISHER			1		
6	Passing Rectification & Overhauling of PCV-4405B; Treated Gas Knock Out Drum, Amine	Control Valve	8-inch	RF, 600#	FISHER			1		
7	Passing Rectification & Overhauling of LCV-5405; Amine Absorber, Amine Train-2	Control Valve	8-inch	RF, 600#	FISHER			1		
8	Passing Rectification & Overhauling of PCV-5405B; Treated Gas Knock Out Drum, Amine	Control Valve	8-inch	RF, 600#	FISHER			1		
9	Passing Rectification & Overhauling of PCV-8002A; Hp Fuel Gas Knock Out Pot	Control Valve	3"	RF 600#	FISHER			1		
10	Passing Rectification & Overhauling of PCV-8002B; Hp Fuel Gas Knock Out Pot	Control Valve	3"	RF 300#	FISHER			1		
11	Passing Rectification & Overhauling of PCV-8010; LP Fuel Gas Knock Out Pot	Control Valve	3"	RF 300#	FISHER			1		
12	Passing Rectification & Overhauling BDV-6309A; SG Compressor Air Cooler	Blowdown Valve	6"	RTJ 900#	KOSO			1		
13	Passing Rectification & Overhauling of BDV-6309B; SG Compressor Air Cooler	Blowdown Valve	6"	RTJ 900#	KOSO			1		
14	Passing Rectification & Overhauling of BDV-6309C; SG Compressor Air Cooler	Blowdown Valve	6"	RTJ 900#	KOSO			1		
15	Passing Rectification & Overhauling of PCV-6303A; Sale Gas Compressor	Control Valve	6"	RF 300#	WZ Pneumatic			1		
16	Passing Rectification & Overhauling of PCV-6303B; Sale Gas Compressor	Control Valve	6"	RF 300#	WZ Pneumatic			1		
17	Passing Rectification & Overhauling of PCV-6303C; Sale Gas Compressor	Control Valve	6"	RF 300#	WZ Pneumatic			1		
18	Passing Rectification & Overhauling of FCV-4503; E-4502 REG GAS HEATER, Dehydration T-1	Control Valve	3"	RF 600#	FLOWSERVE			1		
19	Passing Rectification & Overhauling of FCV-5503; E-5502 REG GAS HEATER, Dehydration T-2	Control Valve	3"	RF 300#	FLOWSERVE			1		
20	Installation & Commissioning of 10" PCV at sale gas line	Control Valve	10"	RF 600#	FISHER			1		
LEVEL TRANSMITTERS (SERVICE & CALIBRATION)										
1	Service and Calibration of LT-4405, Amine Absorber, Amine Train-1	Level Transmitter (DP)	ROSEMOUNT		Servicing,Calibration & Functional testing	All tools,	1			
2	Service and Calibration of Test of LT-4410, Rich Amine Flash Drum, Amine Train-1	Level Transmitter (DP)	ROSEMOUNT				1			

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
3	Service and Calibration of LT-4412, Amine Regenerator, Amine Train-1	Level Transmitter (DP)		ROSEMOUNT		Functional Testing of Transmitters. (Dismantling, if required) To record As-Left calibration data. Provision of soft and hard copies of assignments and Certifications.	consumables, calibration & testing equipments including for executing the said job will be in contractor's scope.	1		
4	Service and Calibration of LT-8705A; R.O. Water	Level Transmitter (DP)		Endress+Hauser				1		
5	Service and Calibration of LT-8705B ; R.O. Water	Level Transmitter (DP)		Endress+Hauser				1		
6	Service and Calibration of LT-8706 ; R.O. Water	Level Transmitter (DP)		Endress+Hauser				1		
7	Service and Calibration of LT-8707 ; R.O. Water	Level Transmitter (DP)		Endress+Hauser				1		
8	Service and Calibration of LT-8708 ; R.O. Water	Level Transmitter (DP)		Endress+Hauser				1		
9	Calibration/Function Test of LT-4501; V-4501, Dehydration T-1	Level Transmitter (GWR)		Endress + Hauser (GWR)		Servicing, Calibration and Functional Testing of Transmitters. To record As-Left calibration data. Provision of soft and hard copies of assignments & certifications.	All tools, consumables, calibration & testing equipments required for executing the said jobs will be in contractor's scope.	1		
10	Calibration/Function Test of LT-4503A; F-4501A, Dehydration T-1	Level Transmitter (GWR)		Endress + Hauser (GWR)				1		
11	Calibration/Function Test of LT-4503B; F-4501B, Dehydration T-1	Level Transmitter (GWR)		Endress + Hauser (GWR)				1		
12	Calibration/Function Test of LT-4505; V-4503, Dehydration T-1	Level Transmitter (GWR)		Endress + Hauser (GWR)				1		
13	Calibration/Function Test of LT-5501; V-4501, Dehydration T-2	Level Transmitter (GWR)		Endress + Hauser (GWR)				1		
14	Calibration/Function Test of LT-5503A; F-5501A, Dehydration T-2	Level Transmitter (GWR)		Endress + Hauser (GWR)				1		
15	Calibration/Function Test of LT-5503B; F-5501B, Dehydration T-2	Level Transmitter (GWR)		Endress + Hauser (GWR)				1		
16	Calibration/Function Test of LT-5505; V-5503, Dehydration T-2	Level Transmitter (GWR)		Endress + Hauser (GWR)				1		
17	Calibration/Function Test of LT-4100, Slug Catcher & Separator Area	Level Transmitter (GWR)		VEGA Grieshaber KG (GWR)				1		
18	Calibration/Function Test of LT-4101, Slug Catcher & Separator Area	Level Transmitter (GWR)		VEGA Grieshaber KG (GWR)				1		
19	Calibration/Function Test of LT-5100, Slug Catcher & Separator Area	Level Transmitter (GWR)		VEGA Grieshaber KG (GWR)				1		
20	Calibration/Function Test of LT-5101, Slug Catcher & Separator Area	Level Transmitter (GWR)		VEGA Grieshaber KG (GWR)				1		
21	Service and Calibration of LT-4400, Feed Gas Knock Out Drum, Amine Train-1	Level Transmitter (Displacer)		Magnetrol				1		
22	Service and Calibration of LT-4402, Feed Gas Filter Coalescer, Amine Train-1	Level Transmitter (Displacer)		Magnetrol				1		
23	Service and Calibration of LT-4403, Feed Gas Filter Coalescer, Amine Train-1	Level Transmitter (Displacer)		Magnetrol				1		
24	Service and Calibration of LT-4408, Treated Gas Knock Out Drum, Amine Train-1	Level Transmitter (Displacer)		Magnetrol				1		
25	Service and Calibration of LT-4415; Amine Regenerator Reflux Drum, Amine Train-1	Level Transmitter (Displacer)		Magnetrol				1		
26	Service and Calibration of LT-4414; Amine Train-1	Level Transmitter (Displacer)		Magnetrol				1		
27	Service and Calibration of LT-5400; Feed Gas Knock Out Drum, Amine T-2	Level Transmitter (Displacer)		Magnetrol				1		
28	Service and Calibration of LT-5402; Feed Gas Filter Coalescer, Amine T-2	Level Transmitter (Displacer)		Magnetrol				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
29	Service and Calibration of LT-5403; Feed Gas Filter Coalescer, Amine T-2	Level Transmitter (Displacer)		Magnetrol		Servicing, Calibration and Functional Testing of Transmitters. To record As-Left calibration data. Provision of soft and hard copies of assignments& certifications.	All Tools & calibration / testing equipment required to perform complete job will be in contractor's scope.	1		
30	Service and Calibration of LT-5405; Amine Absorber, Amine T-2	Level Transmitter (Displacer)		Magnetrol				1		
31	Service and Calibration of LT-5408; Treated Gas Knock Out Drum, Amine T-2	Level Transmitter (Displacer)		Magnetrol				1		
32	Service and Calibration of LT-5410; Rich Amine Flash Drum, Amine T-2	Level Transmitter (Displacer)		Magnetrol				1		
33	Service and Calibration of LT-5412; Amine Regenerator, Amine T-2	Level Transmitter (Displacer)		Magnetrol				1		
34	Service and Calibration of LT-5415; Amine Regenerator Reflux Drum, Amine T-2	Level Transmitter (Displacer)		Magnetrol				1		
35	Service and Calibration of LT-5414; Amine Train-2	Level Transmitter (Displacer)		Magnetrol				1		
36	Service and Calibration of LT-4500; Low Temperature Separator, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
37	Service and Calibration of LT-4501; Inlet Gas Absorber, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
38	Service and Calibration of LT-4505; De-Euthanizer Reboiler, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
39	Service and Calibration of LT-4512; De-Botanizer Reboiler, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
40	Service and Calibration of LT-4514; De-Euthanizer Reflux Drum, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
41	Service and Calibration of LT-5500; Low Temperature Separator, LPG T-2	Level Transmitter (Displacer)		Magnetrol				1		
42	Service and Calibration of LT-5501; Inlet Gas Absorber, LPG T-2	Level Transmitter (Displacer)		Magnetrol				1		
43	Service and Calibration of LT-5505; De-Euthanizer Reboiler, LPG T-2	Level Transmitter (Displacer)		Magnetrol				1		
44	Service and Calibration of LT-5512; De-Botanizer Reboiler, LPG T-2	Level Transmitter (Displacer)		Magnetrol				1		
45	Service and Calibration of LT-5514; De-Euthanizer Reflux Drum, LPG T-2	Level Transmitter (Displacer)		Magnetrol				1		
46	Service and Calibration of LT-7102; Flash Separator, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
47	Service and Calibration of LT-7104; Flash Separator, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
48	Service and Calibration of LT-7106; Condensate Filter Coalescer, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
49	Service and Calibration of LT-7108; Stabilizer Reboiler, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
50	Service and Calibration of LT-7110; Compressor Suction Drum, LPG Train-1	Level Transmitter (Displacer)		Magnetrol				1		
51	Service and Calibration of LT-7202; Flash Separator, Condesate Stabilization Area	Level Transmitter (Displacer)		Magnetrol				1		
52	Service and Calibration of LT-7204; Flash Separator, Condesate Stabilization Area	Level Transmitter (Displacer)		Magnetrol				1		
53	Service and Calibration of LT-7206; Condensate Filter Coalescer, Condesate Stabilization Area	Level Transmitter (Displacer)		Magnetrol				1		
54	Service and Calibration of LT-7208; Stabilizer Reboiler, Condesate Stabilization Area	Level Transmitter (Displacer)		Magnetrol				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
55	Service and Calibration of LT-7210; Compressor Suction Drum, Condensate Stabilization Area	Level Transmitter (Displacer)		Magnetrol				1		
56	Service and Calibration of LT-8102; Hot Oil	Level Transmitter (Displacer)		Magnetrol				1		
57	Service and Calibration of LT-8001; HP Fuel Gas Knock Out Pot (V-8001)	Level Transmitter (Displacer)		Magnetrol				1		
58	Service and Calibration of LT-8002; LP Fuel Gas Knock Out Pot (V-8002)	Level Transmitter (Displacer)		Magnetrol				1		
59	Service and Calibration of LT-8201A; Flare Knock Out Drum (V-8201A)	Level Transmitter (Displacer)		Magnetrol				1		
60	Service and Calibration of LT-8201B; Flare Knock Out Drum (V-8201B)	Level Transmitter (Displacer)		Magnetrol				1		
61	Service and Calibration of LT-4301; Produced Water Degasser	Level Transmitter (Displacer)		Magnetrol				1		
62	Calibration/Function Test of LT-4200, Slug Catcher & Separator Area	Level Transmitter (Displacer)		Spriano				1		
63	Calibration/Function Test of LT-4201, Slug Catcher & Separator Area	Level Transmitter (Displacer)		Spriano				1		
64	Calibration/Function Test of LT-5200, Slug Catcher & Separator Area	Level Transmitter (Displacer)		Spriano				1		
65	Calibration/Function Test of LT-5201, Slug Catcher & Separator Area	Level Transmitter (Displacer)		Spriano				1		
LEVEL SWITCHES (SERVICE & CALIBRATION)										
1	Service and Calibration of LSSL-4400; Feed Gas Knock Out Drum, Amine Train-1	Level Switch		Magnetrol		Servicing, Calibration & Functional Testing of Switches. To record As-Left calibration data.Provision of soft and hard copies of assignments & certificates will be in contractor's scope. Note:Level troll internal cleaning, Displacer cleaning may be required for following Tags (LT-7101/7201,LT-7111/7211,LT-7102/7202,LT7103/7203)	All Tools calibration / testing equipment required to perform complete job will be in contractor's scope.	1		
2	Service and Calibration of LSSL-4402; Feed Gas Filter Coalescer, Amine Train-1	Level Switch		Magnetrol				1		
3	Service and Calibration of LSSL-4403; Feed Gas Filter Coalescer, Amine Train-1	Level Switch		Magnetrol				1		
4	Service and Calibration of LSSL-4405; Amine Absorber, Amine Train-1	Level Switch		Magnetrol				1		
5	Service and Calibration of LSSL-4407; Treated Gas Knock Out Drum, Amine Train-1	Level Switch		Magnetrol				1		
6	Service and Calibration of LSSL-4410; Rich Amine Flash Drum, Amine Train-1	Level Switch		Magnetrol				1		
7	Service and Calibration of LSSL-4412; Amine Regenerator, Amine Train-1	Level Switch		Magnetrol				1		
8	Service and Calibration of LSSL-4414; Amine Storage Tank, Amine Train-1	Level Switch		Magnetrol				1		
9	Service and Calibration of LSSL-4450; Chemical Reservoir, Amine T-1	Level Switch		Magnetrol				1		
10	Service and Calibration of LSHH-4400; Feed Gas Filter Coalescer, Amine Train-1	Level Switch		Magnetrol				1		
11	Service and Calibration of LSHH-4401; Amine Absorber, Amine Train-1	Level Switch		Magnetrol				1		
12	Service and Calibration of LSHH-4402; Treated Gas Knock Out Drum, Amine Train-1	Level Switch		Magnetrol				1		
13	Service and Calibration of LSHH-4405; Rich Amine Flash Drum, Amine Train-1	Level Switch		Magnetrol				1		
14	Service and Calibration of LSHH-4407; Amine Regenerator, Amine Train-1	Level Switch		Magnetrol				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
15	Service and Calibration of LSL-5450; Hydrocarbon Skim Drum	Level Switch		Magnetrol				1		
16	Service and Calibration of LSL-5400; Feed Gas Knock Out Drum, Amine T-2	Level Switch		Magnetrol				1		
17	Service and Calibration of LSL-5402; Feed Gas Filter Coalescer, Amine T-2	Level Switch		Magnetrol				1		
18	Service and Calibration of LSL-5403; Feed Gas Filter Coalescer, Amine T-2	Level Switch		Magnetrol				1		
19	Service and Calibration of LSL-5405; Amine Absorber, Amine T-2	Level Switch		Magnetrol				1		
20	Service and Calibration of LSL-5407; Treated Gas Knock Out Drum, Amine T-2	Level Switch		Magnetrol				1		
21	Service and Calibration of LSL-5410; Rich Amine Flash Drum, Amine T-2	Level Switch		Magnetrol				1		
22	Service and Calibration of LSL-5412; Amine Regenerator, Amine T-2	Level Switch		Magnetrol				1		
23	Service and Calibration of LSL-5414; Amine Storage Tank, Amine T-2	Level Switch		Magnetrol				1		
24	Service and Calibration of LSH-5400; Feed Gas Filter Coalescer, Amine T-2	Level Switch		Magnetrol				1		
25	Service and Calibration of LSH-5401; Amine Absorber, Amine T-2	Level Switch		Magnetrol				1		
26	Service and Calibration of LSH-5402; Treated Gas Knock Out Drum, Amine T-2	Level Switch		Magnetrol				1		
27	Service and Calibration of LSH-5405; Rich Amine Flash Drum, Amine T-2	Level Switch		Magnetrol				1		
28	Service and Calibration of LSH-5407; Amine Regenerator, Amine T-2	Level Switch		Magnetrol				1		
29	Service and Calibration of LSL-4500; Low Temperature Separator, LPG Train-1	Level Switch		Magnetrol				1		
30	Service and Calibration of LSL-4501; Inlet Gas Absorber, LPG Train-1	Level Switch		Magnetrol				1		
31	Service and Calibration of LSL-4502; De-Ethanolizer Reflux Drum, LPG Train-1	Level Switch		Magnetrol				1		
32	Service and Calibration of LSL-4503; De-Ethanolizer Reboiler, LPG Train-1	Level Switch		Magnetrol				1		
33	Service and Calibration of LSL-4504; De-Ethanolizer Reflux Drum, LPG Train-1	Level Switch		Magnetrol				1		
34	Service and Calibration of LSL-4505; De-Ethanolizer Reboiler, LPG Train-1	Level Switch		Magnetrol				1		
35	Service and Calibration of LSH-4500; Low Temperature Separator, LPG Train-1	Level Switch		Magnetrol				1		
36	Service and Calibration of LSH-4501; Inlet Gas Absorber, LPG Train-1	Level Switch		Magnetrol				1		
37	Service and Calibration of LSH-4504; Low Temperature Separator, LPG Train-1	Level Switch		Magnetrol				1		
38	Service and Calibration of LSH-4504; Low Temperature Separator	Level Switch		Magnetrol				1		
39	Service and Calibration of LSH-4508; De-Ethanolizer Reboiler, LPG Train-1	Level Switch		Magnetrol				1		
40	Service and Calibration of LSH-4509; De-Ethanolizer Reflux Drum, LPG Train-1	Level Switch		Magnetrol				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
41	Service and Calibration of LSHH-4510; De-Botanizer Reboiler, LPG Train-1	Level Switch		Magnetrol				1		
42	Service and Calibration of LSL-5500; Low Temperature Separator, LPG T-2	Level Switch		Magnetrol				1		
43	Service and Calibration of LSL-5501; Inlet Gas Absorber, LPG T-2	Level Switch		Magnetrol				1		
44	Service and Calibration of LSL-5502; De-Euthanizer Reflux Drum, LPG T-2	Level Switch		Magnetrol				1		
45	Service and Calibration of LSL-5503; De-Euthanizer Reboiler, LPG T-2	Level Switch		Magnetrol				1		
46	Service and Calibration of LSL-5504; De-Euthanizer Reflux Drum, LPG T-2	Level Switch		Magnetrol				1		
47	Service and Calibration of LSL-5505; De-Botanizer Reboiler, LPG T-2	Level Switch		Magnetrol				1		
48	Service and Calibration of LSHH-5500; Low Temperature Separator, LPG T-2	Level Switch		Magnetrol				1		
49	Service and Calibration of LSHH-5501; Inlet Gas Absorber, LPG T-2	Level Switch		Magnetrol				1		
50	Service and Calibration of LSHH-5504; Low Temperature Separator, LPG T-2	Level Switch		Magnetrol				1		
51	Service and Calibration of LSHH-5508; De-Euthanizer Reboiler, LPG T-2	Level Switch		Magnetrol				1		
52	Service and Calibration of LSHH-5509; De-Euthanizer Reflux Drum, LPG T-2	Level Switch		Magnetrol				1		
53	Service and Calibration of LSHH-5510; De-Botanizer Reboiler, LPG T-2	Level Switch		Magnetrol				1		
54	Service and Calibration of LSL-7101; Flash Separator, LPG Train-1	Level Switch		Magnetrol				1		
55	Service and Calibration of LSL-7111; Condensate Filter Coalescer, LPG Train-1	Level Switch		Magnetrol				1		
56	Service and Calibration of LSL-7102 STABILIZER REBOILER	Level Switch		Magnetrol				1		
57	Service and Calibration of LSL-7103 COMPRESSOR SUCTION DRUM	Level Switch		Magnetrol				1		
58	Service and Calibration of LSL-7112 FLASH SEPARATOR	Level Switch		Magnetrol				1		
59	Service and Calibration of LSHH-7102; Flash Separator, Condensate Stabilization Area	Level Switch		Magnetrol				1		
60	Service and Calibration of LSHH-7103 STABILIZER REBOILER	Level Switch		Magnetrol				1		
61	Service and Calibration of LSHH-7104 COMPRESSOR SUCTION DRUM	Level Switch		Magnetrol				1		
62	Service and Calibration of LSL-7201; Flash Separator, LPG T-2	Level Switch		Magnetrol				1		
63	Service and Calibration of LSL-7211; Condensate Filter Coalescer, LPG T-2	Level Switch		Magnetrol				1		
64	Service and Calibration of LSHH-7202; Flash Separator, LPG T-2	Level Switch		Magnetrol				1		
65	Service and Calibration of LSL-4508 V-4501, Dehydration T-1	Level Switch		Magnetrol				1		
66	Service and Calibration of LSL-4509A; F-4501A, Dehydration T-1	Level Switch		Magnetrol				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
67	Service and Calibration of LSLL-4509B; F-4501B, Dehydration T-1	Level Switch		Magnetrol				1		
68	Service and Calibration of LSLL-4507; V-4503, Dehydration T-1	Level Switch		Magnetrol				1		
69	Service and Calibration of LSHH-4502; V-4501, Dehydration T-1	Level Switch		Magnetrol				1		
70	Service and Calibration of LSHH-4504A; F-4501A, Dehydration T-1	Level Switch		Magnetrol				1		
71	Service and Calibration of LSHH-4504B; F-4501B, Dehydration T-1	Level Switch		Magnetrol				1		
72	Service and Calibration of LSHH-4506; V-4503, Dehydration T-1	Level Switch		Magnetrol				1		
73	Service and Calibration of LSLL-5508; V-5501, Dehydration T-2	Level Switch		Magnetrol				1		
74	Service and Calibration of LSLL-5509A; F-5501A, Dehydration T-2	Level Switch		Magnetrol				1		
75	Service and Calibration of LSLL-5509B; F-5501B, Dehydration T-2	Level Switch		Magnetrol				1		
76	Service and Calibration of LSLL-5507; V-5503, Dehydration T-2	Level Switch		Magnetrol				1		
77	Service and Calibration of LSHH-5502; V-5501, Dehydration T-2	Level Switch		Magnetrol				1		
78	Service and Calibration of LSHH-5504A; F-5501A, Dehydration T-2	Level Switch		Magnetrol				1		
79	Service and Calibration of LSHH-5504B; F-5501B, Dehydration T-2	Level Switch		Magnetrol				1		
80	Service and Calibration of LSHH-5506; V-5503, Dehydration T-2	Level Switch		Magnetrol				1		
81	Service and Calibration of LSLL-8001; START UP ELECTRIC HEATER (E-8001)	Level Switch		Magnetrol				1		
82	Service and Calibration of LSHH-8001; START UP ELECTRIC HEATER	Level Switch		Magnetrol				1		
83	Service and Calibration of LSLL-8002; LP Fuel Gas Knock Out Pot	Level Switch		Magnetrol				1		
84	Service and Calibration of LSHH-8002; LP Fuel Gas Knock Out Pot	Level Switch		Magnetrol				1		
85	Service and Calibration of LSLL-8101; HOT OIL EXPANSION VESSEL	Level Switch		Magnetrol				1		
86	Service and Calibration of LSHH-8101; HOT OIL EXPANSION VESSEL	Level Switch		Magnetrol				1		
87	Service and Calibration of LSLL-8201A; Flare Knock Out Drum	Level Switch		Magnetrol				1		
88	Service and Calibration of LSLL-8201B; Flare Knock Out Drum	Level Switch		Magnetrol				1		
89	Service and Calibration of LSHH-8201A; Flare Knock Out Drum	Level Switch		Magnetrol				1		
90	Service and Calibration of LSHH-8201B; Flare Knock Out Drum	Level Switch		Magnetrol				1		
91	Service and Calibration of LSLL-8301; SLOP VESSEL V-8301	Level Switch		Magnetrol				1		
92	Service and Calibration of LSHH-8302;	Level Switch		Magnetrol				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
93	Service and Calibration of LSH-9801; Cooling Water	Level Switch		SOR				1		
94	Service and Calibration of LSHH-4100, Slug Catcher & Separator Area	Level Switch		SOR				1		
95	Service and Calibration of LSLL-4100, Slug Catcher & Separator Area	Level Switch		SOR				1		
96	Service and Calibration of LSHH-4101, Slug Catcher & Separator Area	Level Switch		SOR				1		
97	Service and Calibration of LSLL-4101, Slug Catcher & Separator Area	Level Switch		SOR				1		
98	Service and Calibration of LSHH-4201, K-Production Separator	Level Switch		OFFICINE OROBICHE				1		
99	Service and Calibration of LSLL-4201, K-Production Separator	Level Switch		OFFICINE OROBICHE				1		
100	Service and Calibration of LSHH-5201, T-Production Separator	Level Switch		OFFICINE OROBICHE				1		
101	Service and Calibration of LSLL-5201, T-Production Separator	Level Switch		OFFICINE OROBICHE				1		
TESTING & OVERHAULING OF DEHYDRATION UNIT KCVs (Butterfly type Valves)										
1	Overhauling and Testing of KCV-4501A; Regeneration Gas Outlet Tower V-4502A,	ON/OFF Valve	6"	RJ 900#	FLUICON	Removal of KCV's from line, Pressure testing, Disassembling for rectification / machining / part replacement (if required). Calibration & Function testing after re-installation. Integrity checks of actuator, servicing of limit switches, SOVs, and Air filter/regulators To record As-Left calibration data. Provision of soft and hard copies of assignments & Certifications. Gaskets will be provided by OGDCL Note: Blind flanges if required ratings to be arranged by contractor used for pressure testing.	All Tools, consumables, calibration & testing equipment (including pressure test bench), Lathe Machine will be in contractor's scope. Gaskets and Valve spares will be provided by OGDCL	1		
2	Overhauling and Testing of KCV-4501B; Regeneration Gas Outlet Tower V-4502B,	ON/OFF Valve	6"	RJ 900#	FLUICON			1		
3	Overhauling and Testing of KCV-4504A; Regeneration Gas Inlet Tower V-4502A, Dehydration T-1	ON/OFF Valve	6"	RJ 900#	FLUICON			1		
4	Overhauling and Testing of KCV-4504B; Regeneration Gas Inlet Tower V-4502B,	ON/OFF Valve	6"	RJ 900#	FLUICON			1		
5	Overhauling and Testing of KCV-4502A; Inlet Gas Tower V-4502A, Dehydration T-1	ON/OFF Valve	12"	RJ 900#	FLUICON			1		
6	Overhauling and Testing of KCV-4502B; Inlet Gas Tower V-4502B, Dehydration T-1	ON/OFF Valve	12"	RJ 900#	FLUICON			1		
7	Overhauling and Testing of KCV-4503A; Outlet Gas Tower V-4502A, Dehydration T-1	ON/OFF Valve	12"	RF 600#	FLUICON			1		
8	Overhauling and Testing of KCV-4503B; Outlet Gas Tower V-4502B, Dehydration T-1	ON/OFF Valve	12"	RF 600#	FLUICON			1		
9	Overhauling and Testing of KCV-5501A; Regeneration Gas Outlet Tower V-5502A,	ON/OFF Valve	6"	RJ 900#	FLUICON			1		
10	Overhauling and Testing of KCV-5501B; Regeneration Gas Outlet Tower V-5502B,	ON/OFF Valve	6"	RJ 900#	FLUICON			1		
11	Overhauling and Testing of KCV-5504A; Regeneration Gas Inlet Tower V-5502A,	ON/OFF Valve	6"	RJ 900#	FLUICON			1		
12	Overhauling and Testing of KCV-5504B; Regeneration Gas Inlet Tower V-5502B,	ON/OFF Valve	6"	RJ 900#	FLUICON			1		
13	Overhauling and Testing of KCV-5502A; Inlet Gas Tower V-5502A, Dehydration T-2	ON/OFF Valve	12"	RJ 900#	FLUICON			1		
14	Overhauling and Testing of KCV-5502B; Inlet Gas Tower V-5502B, Dehydration T-2	ON/OFF Valve	12"	RJ 900#	FLUICON			1		
15	Overhauling and Testing of KCV-5503A; Outlet Gas Tower V-5502A, Dehydration T-2	ON/OFF Valve	12"	RF 600#	FLUICON			1		
16	Overhauling and Testing of KCV-5503B; Outlet Gas Tower V-5502B, Dehydration T-2	ON/OFF Valve	12"	RF 600#	FLUICON			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIP MENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
17	Overhauling and Testing of KCV-9806; Cooling Water	ON/OFF Valve	4"	RF 150#	FISHER			1		
TRVs (THERMAL RELIEF VALVES) - OVERHAULING & CALIBRATION										
1	Overhauling and Calibration of TRV-6206; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE	Removal from location, Pressure testing, record "as found set" value (Psig/Bar), In case of variation from set pressure, dismantling for overhauling / machining / rectification. Calibration and re-installation. To record As-Left calibration data.Provision of soft and hard copy of assignments and certifications. Note: Blind flanges if required ratings to be arranged by contractor used for pressure testing.	All Tools , consumables, calibration & test equipment (including Pressure Test Bench), Lathe Machine will be in contractor's scope. Flange Gaskets to be provided by OGDCL	1		
2	Overhauling and Calibration of TRV-6207; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
3	Overhauling and Calibration of TRV-6208; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
4	Overhauling and Calibration of TRV-6209; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
5	Overhauling and Calibration of TRV-6211; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
6	Overhauling and Calibration of TRV-6212; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
7	Overhauling and Calibration of TRV-6213; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
8	Overhauling and Calibration of TRV-6220; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
9	Overhauling and Calibration of TRV-6224; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
10	Overhauling and Calibration of TRV-6228; Bullet Area	Thermal Relief Valve	0.75" / 1"	RF 300# / RF 150#	GE			1		
PSVs (PRESSURE SAFETY VALVES) - OVERHAULING & CALIBRATION										
1	Overhauling and Calibration of PSV-4400; Feed Gas Knock Out Drum, Amine Train-1	Pressure Safety Valve	4"/ 6"	RF 600# / RF 150#				1		
2	Overhauling and Calibration of PSV-4402; Feed Gas Filter Coalescer, Amine Train-1	Pressure Safety Valve	4"/ 6"	RF 600# / RF 150#				1		
3	Overhauling and Calibration of PSV-4404; Amine Absorber, Amine Train-1	Pressure Safety Valve	4"/ 6"	RF 600# / RF 150#				1		
4	Overhauling and Calibration of PSV-4406; Treated Gas Knock Out Drum, Amine Train-1	Pressure Safety Valve	4"/ 6"	RF 600# / RF 150#				1		
5	Overhauling and Calibration of PSV-4407; Fuel Gas Absorber, Amine Train-1	Pressure Safety Valve	6" / 10"	RF 300# / RF 150#				1		
6	Overhauling and Calibration of PSV-4410; Amine Regenerator, Amine Train-1	Pressure Safety Valve	6" / 8"	RF 150# / RF 150#				1		
7	Overhauling and Calibration of PSV-4413; Amine Regenerator Reflux Drum, Amine Train-1	Pressure Safety Valve	6" / 8"	RF 150# / RF 150#				1		
8	Overhauling and Calibration of PSV-4415; Amine Storage Tank, Amine Train-1	Pressure Safety Valve	8" / 10"	RF 150# / RF 150#				1		
9	Overhauling and Calibration of PSV-7105 CONDENSATE STABLIZER, LPG Train-1	Pressure Safety Valve	2" / 3"	RF 300# / RF 150#				1		
10	Overhauling and Calibration of PSV-4502 Molecular Sieve Inlet Scrubber, LPG Train-1	Pressure Safety Valve	3" / 4"	RF 600# / RF 150#				1		
11	Overhauling and Calibration of PSV-4503 Inlet Gas Absorber, LPG Train-1	Pressure Safety Valve	4" / 6"	RF 300# / RF 150#				1		
12	Overhauling and Calibration of PSV-4506 De-Euthanizer Column, LPG Train-1	Pressure Safety Valve	3" / 4"	RF 300# / RF 150#				1		
13	Overhauling and Calibration of PSV-4507 De-Euthanizer Reboiler, LPG Train-1	Pressure Safety Valve	2" / 3"	RF 300# / RF 150#				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIP MENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
14	Overhauling and Calibration of PSV-4512 De-Botanizer Reboiler, LPG Train-1	Pressure Safety Valve	1.5" / 3"	RF 300# / RF 150#				1		
15	Overhauling and Calibration of PSV-4513 De-Botanizer Reflux Drum, LPG Train-1	Pressure Safety Valve	3" / 4"	RF 300# / RF 150#				1		
16	Overhauling and Calibration of PSV-4501; , E-4503, Dehydration T-1	Pressure Safety Valve	0.75" / 1"	NPT 600# / NPT 300#				1		
17	Overhauling and Calibration of PSV-4502; , V-4501, Dehydration T-1	Pressure Safety Valve	1" / 2"	RF 600# / RF 300#				1		
18	Overhauling and Calibration of PSV-4504A; V-4502A, Dehydration T-1	Pressure Safety Valve	1.5" / 3"	RTJ 900# / RTJ 300#				1		
19	Overhauling and Calibration of PSV-4504B; V-4502B, Dehydration T-1	Pressure Safety Valve	1.5" / 3"	RTJ 900# / RTJ 300#				1		
20	Overhauling and Calibration of PSV-4505; F-4508A , Dehydration T-1	Pressure Safety Valve	1.5" / 3"	RF 600# / RF 300#				1		
21	Overhauling and Calibration of PSV-4507; DRY GAS FILTER, Dehydration T-1	Pressure Safety Valve	1.5" / 2"	RTJ 900# / RF 300#				1		
22	Overhauling and Calibration of PSV-4508A, F-4508A , Dehydration T-1	Pressure Safety Valve	1" / 2"	RF 600# / RF 150#				1		
23	Overhauling and Calibration of PSV-4508B; F-4508B, Dehydration T-1	Pressure Safety Valve	1" / 2"	RF 600# / RF 150#				1		
24	Overhauling and Calibration of PSV-5400; Feed Gas Knock Out Drum, Amine T-2	Pressure Safety Valve	4" / 6"	RF 600# / RF 150#				1		
25	Overhauling and Calibration of PSV-5402; Feed Gas Filter Coalescer, Amine T-2	Pressure Safety Valve	4" / 6"	RF 600# / RF 150#				1		
26	Overhauling and Calibration of PSV-5404; Amine Absorber, Amine T-2	Pressure Safety Valve	4" / 6"	RF 600# / RF 150#				1		
27	Overhauling and Calibration of PSV-5406; Treated Gas Knock Out Drum, Amine T-2	Pressure Safety Valve	4" / 6"	RF 600# / RF 150#				1		
28	Overhauling and Calibration of PSV-5407; Fuel Gas Absorber, Amine T-2	Pressure Safety Valve	6" / 10"	RF 300# / RF 150#				1		
29	Overhauling and Calibration of PSV-5410; Amine Regenerator, Amine T-2	Pressure Safety Valve	6" / 8"	RF 150# / RF 150#				1		
30	Overhauling and Calibration of PSV-5413; Amine Regenerator Reflux Drum, Amine T-2	Pressure Safety Valve	6" / 8"	RF 150# / RF 150#				1		
31	Overhauling and Calibration of PSV-5415; Amine Storage Tank, Amine T-2	Pressure Safety Valve	8" / 10"	RF 150# / RF 150#				1		
32	Overhauling and Calibration of PSV-7205; CONDENSATE STABILIZER, LPG T-2	Pressure Safety Valve	2' / 3"	RF 300# / RF 150#				1		
33	Overhauling and Calibration of PSV-5502; Molecular Sieve Inlet Scrubber, LPG T-2	Pressure Safety Valve	3" / 4"	RF 600# / RF 150#				1		
34	Overhauling and Calibration of PSV-5503; Inlet Gas Absorber, LPG T-2	Pressure Safety Valve	4" / 6"	RF 300# / RF 150#				1		
35	Overhauling and Calibration of PSV-5506; De-Euthanizer Column, LPG T-2	Pressure Safety Valve	3" / 4"	RF 300# / RF 150#				1		
36	Overhauling and Calibration of PSV-5507; De-Euthanizer Reboiler, LPG T-2	Pressure Safety Valve	2" / 3"	RF 300# / RF 150#				1		
37	Overhauling and Calibration of PSV-5512; De-Botanizer Reboiler, LPG T-2	Pressure Safety Valve	1.5" / 3"	RF 300# / RF 150#				1		
38	Overhauling and Calibration of PSV-5513; De-Botanizer Reflux Drum, LPG T-2	Pressure Safety Valve	3" / 4"	RF 300# / RF 150#				1		
39	Overhauling and Calibration of PSV-5501; E-5503, Dehydration T-2	Pressure Safety Valve	0.75" / 1"	NPT 600# / NPT 300#				1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIP MENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
40	Overhauling and Calibration of PSV-5502; V-5501, Dehydration T-2	Pressure Safety Valve	1" / 2"	RF 600# / RF 300#				1		
41	Overhauling and Calibration of PSV-5504A; V-5502A, Dehydration T-2	Pressure Safety Valve	1.5" / 3"	RTJ 900# / RTJ 300#				1		
42	Overhauling and Calibration of PSV-5504B; V-5502B, Dehydration T-2	Pressure Safety Valve	1.5" / 3"	RTJ 900# / RTJ 300#				1		
43	Overhauling and Calibration of PSV-5505; F-5508A , Dehydration T-2	Pressure Safety Valve	1.5" / 3"	RF 600# / RF 300#				1		
44	Overhauling and Calibration of PSV-5507; DRY GAS FILTER, Dehydration T-2	Pressure Safety Valve	1.5" / 2"	RTJ 900# / RF 300#				1		
45	Overhauling and Calibration of PSV-5508A; F-5508A , Dehydration T-2	Pressure Safety Valve	1" / 2"	RF 600# / RF 150#				1		
46	Overhauling and Calibration of PSV-5508B; F-5508B, Dehydration T-2	Pressure Safety Valve	1" / 2"	RF 600# / RF 150#				1		
47	Overhauling and Calibration of PSV-8001; Hp Fuel Gas Knock Out Pot	Pressure Safety Valve	4" / 6"	RF 300# / RF 150#				1		
48	Overhauling and Calibration of PSV-8002; LP Fuel Gas Knock Out Pot	Pressure Safety Valve	3" / 4"	RF150# / RF 150#				1		
49	Overhauling and Calibration of PSV-8101;	Pressure Safety Valve	1" / 2"	RF 300# / RF 150#				1		
50	Overhauling and Calibration of PSV- 4301;	Pressure Safety Valve	1.5" / 2"	RF 150# / RF 150#	GE			1		
51	Overhauling and Calibration of PSV-4100, Slug Catcher & Separator Area	Pressure Safety Valve	3" / 4"	RF 600# / RF 150#	GE			1		
52	Overhauling and Calibration of PSV-5100, Slug Catcher & Separator Area	Pressure Safety Valve	3" / 4"	RF 600# / RF 150#	GE			1		
53	Overhauling and Calibration of PSV-4200, Slug Catcher & Separator Area	Pressure Safety Valve	4" / 6"	RF 600# / RF 150#	GE			1		
54	Overhauling and Calibration of PSV-5200, Slug Catcher & Separator Area	Pressure Safety Valve	3" / 4"	RF 600# / RF 150#	GE			1		
SDVs/BDVs (TESTING & OVERHAULING)										
1	Maintenance & function testing of SDV-4504, E-4502 Dehydration T-1	Shutdown Valve	4"	RF 300#	SITINDUSTRIE	Removal from location, Pressure testing, record "as found set" value (Psig/Bar), In case of variation from set pressure, dismantling for overhauling / machining / rectification. Calibration and re-	All Tools , consumables, calibration & test equipment (including Pressure Test Bench), Lathe Machine will be in contractor's scope. Flange Gaskets to be	1		
2	Maintenance & function testing of BDV-4501, V-4502A Dehydration T-1	Shutdown Valve	4"	RTJ 900#	SITINDUSTRIE			1		
3	Maintenance & function testing of BDV-4502, F-4502A Dehydration T-1	Shutdown Valve	4"	RF 600#	SITINDUSTRIE			1		
4	Maintenance & function testing of SDV-5504, E-5502 Dehydration T-2	Shutdown Valve	4"	RF 300#	SITINDUSTRIE			1		
5	Maintenance & function testing of SDV-5501, V-5502A Dehydration T-2	Shutdown Valve	4"	RTJ 900#	SITINDUSTRIE			1		
6	Maintenance & function testing of BVDV-5502, F-5502A Dehydration T-2	Shutdown Valve	4"	RF 600#	SITINDUSTRIE			1		
PRESSURE TRANSMITTERS (CALIBRATION)										
1	Calibration of PT-4416	Pressure Transmitter			ROSEMOUNT	On Site Calibration as per provided range, tubing Cleaning/Flushing,Soft and hard copies of assignments and certifications to be	All Tools Like Hart Communicator & calibration equipment required to perform	1		
2	Calibration of PT-5416	Pressure Transmitter			ROSEMOUNT			1		
3	Calibration of PT-4508	Pressure Transmitter			ROSEMOUNT			1		
4	Calibration of PT-5508	Pressure Transmitter			ROSEMOUNT			1		
5	Calibration of PT-8406	Pressure Transmitter			ROSEMOUNT			1		
6	Calibration of PT-8407	Pressure Transmitter			ROSEMOUNT			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
7	Calibration of PT-8408	Pressure Transmitter			ROSEMOUNT	provided by Contractor.	complete job will be in contractor's scope.	1		
8	Calibration of PT-8409	Pressure Transmitter			ROSEMOUNT			1		
9	Calibration of PT-8410	Pressure Transmitter			ROSEMOUNT			1		
10	Calibration of PT-8411	Pressure Transmitter			ROSEMOUNT			1		
11	Calibration of PT-8412	Pressure Transmitter			ROSEMOUNT			1		
12	Calibration of PT06313A Sale Gas Compressor/Turbine A	Pressure Transmitter						1		
13	Calibration of PT06313B Sale Gas Compressor/Turbine B	Pressure Transmitter						1		
14	Calibration of PT06313C Sale Gas Compressor/Turbine C	Pressure Transmitter						1		
15	Calibration of PIT-4509	Pressure Transmitter						1		
16	Calibration of PIT-5509	Pressure Transmitter						1		
17	Calibration of PIT-152A Sale Gas Compressor/Turbine A	Pressure Transmitter						1		
18	Calibration of PIT-152B Sale Gas Compressor/Turbine B	Pressure Transmitter						1		
19	Calibration of PIT-152C Sale Gas Compressor/Turbine C	Pressure Transmitter						1		
20	Calibration of PIT-153A Sale Gas Compressor/Turbine A	Pressure Transmitter						1		
21	Calibration of PIT-153B Sale Gas Compressor/Turbine B	Pressure Transmitter						1		
22	Calibration of PIT-153C Sale Gas Compressor/Turbine C	Pressure Transmitter						1		
TEMPRATURE TRANSMITTERS (SERVICE & CALIBRATION)										
1	Service and Calibration of TT-4434	Temperature Transmitter			ROSEMOUNT	On Site Calibration as per provided range, tubing Cleaning/Flushing,Soft and hard copies of assignments and certifications to be provided by Contractor.	All Tools Like Hart Communicator & calibration equipment required to perform complete job will be in contractor's scope.	1		
2	Service and Calibration of TIT-4514	Temperature Transmitter			ROSEMOUNT			1		
3	Service and Calibration of TIT-4509	Temperature Transmitter			ROSEMOUNT			1		
4	Service and Calibration of TIT-4506	Temperature Transmitter			ROSEMOUNT			1		
5	Service and Calibration of TT-5434	Temperature Transmitter			ROSEMOUNT			1		
6	Service and Calibration of TIT-5506	Temperature Transmitter			ROSEMOUNT			1		
7	Service and Calibration of TIT-5514	Temperature Transmitter			ROSEMOUNT			1		
8	Service and Calibration of TIT-5509	Temperature Transmitter			ROSEMOUNT			1		
9	Service and Calibration of TT-8401	Temperature Transmitter			ROSEMOUNT			1		
10	Service and Calibration of TT-8402	Temperature Transmitter			ROSEMOUNT			1		
11	Service and Calibration of TT-8403	Temperature Transmitter			ROSEMOUNT			1		
12	Service and Calibration of TT-8404	Temperature Transmitter			ROSEMOUNT			1		
13	Service and Calibration of TT-8405	Temperature Transmitter			ROSEMOUNT			1		
14	Service and Calibration of TT-8406	Temperature Transmitter			ROSEMOUNT			1		
15	Service and Calibration of TIT-4507; Gas Temperature to Regen. Gas Pre-Heater E-4501, Dehydration T-1	Temperature Transmitter						1		
16	Service and Calibration of TIT-4513; Gas Temperature from Regeneration Gas Pre-Heater E-4502, Dehydration T-1	Temperature Transmitter						1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
17	Service and Calibration of TIT-5507; Gas Temperature to Regen. Gas Pre-Heater E-5501, Dehydration T-2	Temperature Transmitter						1		
18	Overhauling of TIT-5513; Gas Temperature from Regeneration Gas Pre-Heater E-5502, Dehydration T-2	Temperature Transmitter						1		
DP & FLOW TRANSMITTERS (SERVICE & CALIBRATION)										
1	Calibration of PDIT-5504	DP Transmitter				On Site Calibration as per provided range, Instrument Tubing Cleaning/Flushing. Soft and hard copies of assignments and certifications to be provided by Contractor.	All Tools & calibration equipment required to perform complete job will be in contractor's scope	1		
2	Calibration of PDIT-5505A	DP Transmitter						1		
3	Calibration of PDIT-5505B	DP Transmitter						1		
4	Calibration of PDIT-4504	DP Transmitter						1		
5	Calibration of PDIT-4505A	DP Transmitter						1		
6	Calibration of PDIT-4505B	DP Transmitter						1		
7	Calibration of PDIT-4506	DP Transmitter						1		
8	Calibration of PDIT-5506	DP Transmitter						1		
9	Calibration of FIT-4504	Flow Transmitter						1		
10	Calibration of FIT-5504	Flow Transmitter						1		
11	Calibration of FIT-155A Sale Gas Compressor/Turbine A	Flow Transmitter						1		
12	Calibration of FIT-155B Sale Gas Compressor/Turbine B	Flow Transmitter						1		
13	Calibration of FIT-155C Sale Gas Compressor/Turbine C	Flow Transmitter						1		
14	Calibration of FIT-156A Sale Gas Compressor/Turbine A	Flow Transmitter						1		
15	Calibration of FIT-156B Sale Gas Compressor/Turbine B	Flow Transmitter						1		
16	Calibration of FIT-156C Sale Gas Compressor/Turbine C	Flow Transmitter						1		
GAS & FLAME DETECTORS - CALIBRATION & FUNCTION TEST										
1	Function Test of FS-4510 Flame Sensor LPG Unit	Flame Detector			MSA	Functional testing using IR Test Lamp/ Test Magnet.Soft and hard copies of assignments and certifications to be provided by Contractor.	Tools including IR Test Lamp / Test Magnet, calibration equipment required to perform complete job is in contractor scope.	1		
2	Function Test of FS-7107A Flame Sensor Condensate Stabilization Unit	Flame Detector			MSA			1		
3	Function Test of FS-7107B Flame Sensor Condensate Stabilization Unit	Flame Detector			MSA			1		
4	Function Test of FD-8001 Flame Detector Fuel Gas	Flame Detector			MSA			1		
5	Function Test of FD-8101 Flame Detector Hot Oil	Flame Detector			MSA			1		
6	Function Test of FD-8102 Flame Detector Hot Oil	Flame Detector			MSA			1		
7	Function Test of FD-8103 Flame Detector Hot Oil	Flame Detector			MSA			1		
8	Function Test of FD-8201 Flame Detector Hot Oil	Flame Detector			MSA			1		
9	Function Test of FD-8202 Flame Detector Flare System	Flame Detector			MSA			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
10	Function Test of FD-4501 Flame Detector Dehydration T-1	Flame Detector			Honeywell			1		
11	Function Test of FD-4502 Flame Detector Dehydration T-1	Flame Detector			Honeywell			1		
12	Function Test of FD-4503 Flame Detector Dehydration T-1	Flame Detector			Honeywell			1		
13	Function Test of FD-4504 Flame Detector Dehydration T-1	Flame Detector			Honeywell			1		
14	Function Test of FD-4505 Flame Detector Dehydration T-1	Flame Detector			Honeywell			1		
15	Function Test of FD-4506 Flame Detector Dehydration T-1	Flame Detector			Honeywell			1		
16	Function Test of FD-5501 Flame Detector Dehydration T-2	Flame Detector			Honeywell			1		
17	Function Test of FD-5502 Flame Detector Dehydration T-2	Flame Detector			Honeywell			1		
18	Function Test of FD-5503 Flame Detector Dehydration T-2	Flame Detector			Honeywell			1		
19	Function Test of FD-5504 Flame Detector Dehydration T-2	Flame Detector			Honeywell			1		
20	Function Test of FD-5505 Flame Detector Dehydration T-2	Flame Detector			Honeywell			1		
21	Function Test of FD-5506 Flame Detector Dehydration T-2	Flame Detector			Honeywell			1		
22	Function Test of FDI-01 Flame Detector Infrared	Flame Detector			Honeywell			1		
23	Function Test of FDI-02 Flame Detector Infrared	Flame Detector			Honeywell			1		
24	Function Test of FDI-03 Flame Detector Infrared	Flame Detector			Honeywell			1		
25	Function Test of FDI-04 Flame Detector Infrared	Flame Detector			Honeywell			1		
26	Function Test of FDI-05 Flame Detector Infrared	Flame Detector			Honeywell			1		
27	Function Test of FDI-06 Flame Detector Infrared	Flame Detector			Honeywell			1		
28	Function Test of FDI-07 Flame Detector Infrared	Flame Detector			Honeywell			1		
29	Function Test of FDI-08 Flame Detector Infrared	Flame Detector			Honeywell			1		
30	Function Test of FDI-09 Flame Detector Infrared	Flame Detector			Honeywell			1		
31	Function Test of FDI-10 Flame Detector Infrared	Flame Detector			Honeywell			1		
32	Function Test of FDI-11 Flame Detector Infrared	Flame Detector			Honeywell			1		
33	Function Test of FDI-12 Flame Detector Infrared	Flame Detector			Honeywell			1		
34	Function Test of FDI-13 Flame Detector Infrared	Flame Detector			Honeywell			1		
35	Function Test of FDI-14 Flame Detector Infrared	Flame Detector			Honeywell			1		
36	Function Test of FDI-15 Flame Detector Infrared	Flame Detector			Honeywell			1		
37	Function Test of FDI-16 Flame Detector Infrared	Flame Detector			Honeywell			1		
38	Function Test of FDI-17 Flame Detector Infrared	Flame Detector			Honeywell			1		
39	Function Test of FDI-18 Flame Detector Infrared	Flame Detector			Honeywell			1		
40	Function Test of FDI-19 Flame Detector Infrared	Flame Detector			Honeywell			1		
41	Function Test of FDI-20 Flame Detector Infrared	Flame Detector			Honeywell			1		
42	Function Test of FDI-21 Flame Detector Infrared	Flame Detector			Honeywell			1		
43	Function Test of FDI-22 Flame Detector Infrared	Flame Detector			Honeywell			1		
44	Function Test of FDI-23 Flame Detector Infrared	Flame Detector			Honeywell			1		
45	Function Test of FDI-24 Flame Detector Infrared	Flame Detector			Honeywell			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
46	Function Test of FDI-25 Flame Detector Infrared	Flame Detector			Honeywell			1		
47	Function Test of FDI-26 Flame Detector Infrared	Flame Detector			Honeywell			1		
48	Function Test of FD-01 Flame Detector Sale Gas Compressor A	Flame Detector			Det-Tronics			1		
49	Function Test of FD-02 Flame Detector Sale Gas Compressor A	Flame Detector			Det-Tronics			1		
50	Function Test of FD-03 Flame Detector Sale Gas Compressor A	Flame Detector			Det-Tronics			1		
51	Function Test of FD-04 Flame Detector Sale Gas Compressor B	Flame Detector			Det-Tronics			1		
52	Function Test of FD-05 Flame Detector Sale Gas Compressor B	Flame Detector			Det-Tronics			1		
53	Function Test of FD-06 Flame Detector Sale Gas Compressor B	Flame Detector			Det-Tronics			1		
54	Function Test of FD-07 Flame Detector Sale Gas Compressor B	Flame Detector			Det-Tronics			1		
55	Function Test of FD-08 Flame Detector Sale Gas Compressor B	Flame Detector			Det-Tronics			1		
56	Function Test of FD-09 Flame Detector Sale Gas Compressor B	Flame Detector			Det-Tronics			1		
59	Calibration and Function Test of GT-4401 (F&G System for Amine T-1)	Point Type Gas Detector			MSA			1		
60	Calibration and Function Test of GT-4402 (F&G System for Amine T-1)	Point Type Gas Detector			MSA			1		
61	Calibration and Function Test of GT-4403 (F&G System for Amine T-1)	Point Type Gas Detector			MSA			1		
62	Calibration and Function Test of GT-5401 (F&G System for Amine T-2)	Point Type Gas Detector			MSA			1		
63	Calibration and Function Test of GT-5402 (F&G System for Amine T-2)	Point Type Gas Detector			MSA			1		
64	Calibration and Function Test of GT-5403 (F&G System for Amine T-2)	Point Type Gas Detector			MSA			1		
65	Calibration and Function Test of GT-4508 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
66	Calibration and Function Test of GT-4510 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
67	Calibration and Function Test of GT-4513 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
68	Calibration and Function Test of GT-4516 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
69	Calibration and Function Test of GT-4519 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
70	Calibration and Function Test of GT-4520 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
71	Calibration and Function Test of GT-5508 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
72	Calibration and Function Test of GT-5510 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
73	Calibration and Function Test of GT-5513 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
74	Calibration and Function Test of GT-5516 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
75	Calibration and Function Test of GT-5519 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
76	Calibration and Function Test of GT-5520 (F&G System for LPG T-1 & 2)	Point Type Gas Detector			MSA			1		
77	Calibration and Function Test of GT-7103 (F&G System for Condensate Stabilization)	Point Type Gas Detector			MSA			1		
78	Calibration and Function Test of GT-7107 (F&G System for Condensate Stabilization)	Point Type Gas Detector			MSA			1		
79	Calibration and Function Test of GT-7203 (F&G System for Condensate Stabilization)	Point Type Gas Detector			MSA			1		
80	Calibration and Function Test of GT-7207 (F&G System for Condensate Stabilization)	Point Type Gas Detector			MSA			1		
81	Calibration and Function Test of GT-6401 (F&G System for Sale Gas Metering)	Point Type Gas Detector			MSA			1		
82	Calibration and Function Test of GT-6402 (F&G System for Sale Gas Metering)	Point Type Gas Detector			MSA			1		
83	Calibration and Function Test of GT-8001 Fuel Gas	Point Type Gas Detector			MSA			1		
84	Calibration and Function Test of GT-8201 Flare System	Point Type Gas Detector			MSA			1		
85	Calibration and Function Test of GT-8401 F&G System for Power House	Point Type Gas Detector			MSA			1		
86	Calibration and Function Test of GT-8402 F&G System for Power House	Point Type Gas Detector			MSA			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
87	Calibration and Function Test of GT-8403 F&G System for Power House	Point Type Gas Detector			MSA	Alignment of Receivers & Transmitters for GDT/GDR. (Servicing/Calibration & Functional Testing. Soft & Hard copies of Assignment & Certification to be provided by the Contractor.	Tools & Calibration Equipment Required to perform complete job is in Contractor Scope. Calibration Gas for GD's will be provided by OGDCL	1		
88	Calibration and Function Test of GT-8404 F&G System for Power House	Point Type Gas Detector			MSA			1		
89	Calibration and Function Test of GD-4501 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
90	Calibration and Function Test of GD-4502 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
91	Calibration and Function Test of GD-4503 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
92	Calibration and Function Test of GD-4504 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
93	Calibration and Function Test of GD-4505 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
94	Calibration and Function Test of GD-4506 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
95	Calibration and Function Test of GD-4507 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
96	Calibration and Function Test of GD-4508 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
97	Calibration and Function Test of GD-5501 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
98	Calibration and Function Test of GD-5502 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
99	Calibration and Function Test of GD-5503 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
100	Calibration and Function Test of GD-5504 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
101	Calibration and Function Test of GD-5505 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
102	Calibration and Function Test of GD-5506 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
103	Calibration and Function Test of GD-5507 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
104	Calibration and Function Test of GD-5508 (F&G System for Dehydration T-1&2)	Point Type Gas Detector			Honeywell			1		
105	Calibration and Function Test of 007-GDP-01 Gas Detectors (Infrared) Point Type	Point Type Gas Detector			Honeywell			1		
106	Calibration and Function Test of 007-GDP-02 Gas Detectors (Infrared) Point Type	Point Type Gas Detector			Honeywell			1		
107	Calibration and Function Test of 007-GDP-03 Gas Detectors (Infrared) Point Type	Point Type Gas Detector			Honeywell			1		
108	Calibration and Function Test of 002-GDP-04 Gas Detectors (Infrared) Point Type	Point Type Gas Detector			Honeywell			1		
109	Calibration and Function Test of 001-GDX-01 Point Type Toxic (H2S) Gas Detector	Point Type Gas Detector			Honeywell			1		
110	Calibration and Function Test of 003-GDX-01 Point Type Toxic (H2S) Gas Detector	Point Type Gas Detector			Honeywell			1		
111	Calibration and Function Test of 004-GDX-01 Point Type Toxic (H2S) Gas Detector	Point Type Gas Detector			Honeywell			1		
112	Calibration and Function Test of GD-01 Gas Detectors Sale Gas Compressor A	Point Type Gas Detector			Det-Tronics			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
113	Calibration and Function Test of GD-02 Gas Detectors Sale Gas Compressor A	Point Type Gas Detector			Det-Tronics			1		
114	Calibration and Function Test of GD-03 Gas Detectors Sale Gas Compressor A	Point Type Gas Detector			Det-Tronics			1		
115	Calibration and Function Test of GD-04 Gas Detectors Sale Gas Compressor A	Point Type Gas Detector			Det-Tronics			1		
116	Calibration and Function Test of GD-05 Gas Detectors Sale Gas Compressor B	Point Type Gas Detector			Det-Tronics			1		
117	Calibration and Function Test of GD-06 Gas Detectors Sale Gas Compressor B	Point Type Gas Detector			Det-Tronics			1		
118	Calibration and Function Test of GD-07 Gas Detectors Sale Gas Compressor B	Point Type Gas Detector			Det-Tronics			1		
119	Calibration and Function Test of GD-08 Gas Detectors Sale Gas Compressor B	Point Type Gas Detector			Det-Tronics			1		
120	Calibration and Function Test of GD-09 Gas Detectors Sale Gas Compressor C	Point Type Gas Detector			Det-Tronics			1		
121	Calibration and Function Test of GD-10 Gas Detectors Sale Gas Compressor C	Point Type Gas Detector			Det-Tronics			1		
122	Calibration and Function Test of GD-11 Gas Detectors Sale Gas Compressor C	Point Type Gas Detector			Det-Tronics			1		
123	Calibration and Function Test of GD-12 Gas Detectors Sale Gas Compressor C	Point Type Gas Detector			Det-Tronics			1		
124	Calibration and Function Test of GDT-8401A F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
125	Calibration and Function Test of GDT-8401B F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
126	Calibration and Function Test of GDT-8402A F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
127	Calibration and Function Test of GDT-8402B F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
128	Calibration and Function Test of GDT-8403A F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
129	Calibration and Function Test of GDT-8403B F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
130	Calibration and Function Test of GDT-8404A F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
131	Calibration and Function Test of GDT-8404B F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
132	Calibration and Function Test of GDT-8405A F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
133	Calibration and Function Test of GDT-8405B F&G System for Gas Gen sets	Point Type Gas Detector			HSJ-6300			1		
134	Calibration and Function Test of GT-8401 F&G System for Power House	Point Type Gas Detector			MSA			1		
135	Calibration and Function Test of GT-8402 F&G System for Power House	Point Type Gas Detector			MSA			1		
136	Calibration and Function Test of GT-8403 F&G System for Power House	Point Type Gas Detector			MSA			1		
137	Calibration and Function Test of GT-8404 F&G System for Power House	Point Type Gas Detector			MSA			1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
138	Calibration and Function Test of 001-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
139	Calibration and Function Test of 001-GDT/GDR-02 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
140	Calibration and Function Test of 001-GDT/GDR-03 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
141	Calibration and Function Test of 002-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
142	Calibration and Function Test of 003-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
143	Calibration and Function Test of 004-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
144	Calibration and Function Test of 006-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
145	Calibration and Function Test of 009-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
146	Calibration and Function Test of 010-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
147	Calibration and Function Test of 011-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
148	Calibration and Function Test of 012-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
149	Calibration and Function Test of 013-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
150	Calibration and Function Test of 014-GDT/GDR-01 Open Path Detector (Infrared) Transmitter & Receiver	Open Path Gas Detector			Honeywell			1		
PRESSURE & TEMPERATURE SWITCHES (SERVICE & CALIBRATION)										
1	Calibration of PSHH-4100, Slug Catcher & Separator Area	Pressure Switch				On-site Servicing, Calibration & Functional Testing of Switches. To record As-Left calibration data. Provision of soft and hard copies of assignments & certificates.	All Tools & calibration equipment required to perform complete job will be in contractor's scope	1		
2	Calibration of PSHH-5100 , Slug Catcher & Separator Area	Pressure Switch						1		
3	Calibration of PSHH-4400 Amine Regenerator	Pressure Switch						1		
4	Calibration of PSLL-4400 Feed Gas Knock Out Drum	Pressure Switch						1		
5	Calibration of PSHH-5400 Amine Regenerator	Pressure Switch						1		
6	Calibration of PSLL-5400 Feed Gas Knock Out Drum	Pressure Switch						1		

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIP MENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
7	Calibration of PSHH-4510; Turbo Expander, LPG Train-1	Pressure Switch						1		
8	Calibration of PSHH-5510; Turbo Expander, LPG T-2	Pressure Switch						1		
9	Calibration of PSHH-8001; Hp Fuel Gas Knock Out Pot	Pressure Switch						1		
10	Calibration of PSHH-8002; LP Fuel Gas Knock Out Pot	Pressure Switch						1		
11	Calibration of TSSL-4500; Turbo Expander, LPG Train-1	Temperature Switch						1		
12	Calibration of TSSL-5500; Turbo Expander, LPG T-2	Temperature Switch						1		
TEMPERATURE GAUGE (SERVICE & CALIBRATION)										
1	Calibration of TI-4517; Gas Temperature to Regen. Gas Pre Heater E-4501, Dehydration T-1	Temperature Gauge				Dismantalling, Inspection, workshop calibration and re-installation. Soft and hard copies of assignments and certifications to be provided by Contractor.	All Tools & calibration equipment required to perform complete job will be in contractor's scope	1		
2	Calibration of TI-4518; Gas Temperature from Regeneration Gas Pre-Heater E-4502, Dehydration T-1	Temperature Gauge						1		
3	Calibration of TI-5517; Gas Temperature to Regen. Gas Pre Heater E-5501, Dehydration T-2	Temperature Gauge						1		
4	Calibration of TI-5518; Gas Temperature from Regeneration Gas Pre-Heater E-5502, Dehydration T-2	Temperature Gauge						1		
CABLE TERMINATION & TIGHTENING (CONTROL ROOM TO FIELD SIDE)										
4	Field Instrument to JB and Marshalling Cabinet to Control Panel Side inspection, Checking for Moisture, Cable Termination Tightening etc					Inspection, cleaning, Cable termination tightning of Field JBs to Control Panel followed by proper sealing of the JBs. The total Loops count is approx. 500 nos.		500		
Grand Total in PKR (inclusive of all taxes, duties, levies, charges etc., except Provincial Sales Tax (PST)/ Islamabad Capital Territory Sales Tax (ICT) on services)										

Sr No.	Description	Instrument Type	Size (In/Out)	End Connection & Rating (In / Out)	Make	JOB DESCRIPTION	TOOL/EQUIPMENT REQUIRED	QTY	Unit Price (inclusive of all taxes except PST/ICT)	Total Price (inclusive of all taxes except PST/ICT)
--------	-------------	-----------------	---------------	------------------------------------	------	-----------------	-------------------------	-----	--	---

Important Notes:

- 1) The billing will be done at Actual work done.
- 2) All the jobs to be carried out at site by qualified and experienced Instrument Technicians supervised by Contractors supervisors.
- 3) No spares for PSVs / TRVs shall be provided except gaskets. Contractor shall fix the issues using lapping / machining / repair etc for mentioned PSVs / TRVs.
- 4) Gaskets and Spares of Control Valve and KCVs will be provided by OGDCL Instrument Team.
- 5) Specialized teams consisting of expert Termination Technicians shall be provided by contractor for Panel and JB end termination tightning jobs. For jobs involving critical panels, OGDCL representative will be dedicated for supervision. This job also involved proper numbering / tagging of wires that are not already numbered / tagged and the material required for this job will also be arranged by contractor.
- 6) After completing the mentioned activity on each of the listed instruments, proper tagging of that particular instrument will be in contractor's scope and material required for this job will also be arranged by contractor.

- 1) The billing will be done at Actual work done.
- 2) All the jobs to be carried out at site by qualified and experienced Instrument Technicians supervised by Contractors supervisors.
- 3) No spares for PSVs / TRVs shall be provided except gaskets. Contractor shall fix the issues using lapping / machining / repair etc for mentioned PSVs / TRVs.
- 4) Gaskets and Spares of Control Valve and KCVs will be provided by OGDCL Instrument Team.
- 5) Specialized teams consisting of expert Termination Technicians shall be provided by contractor for Panel and JB end termination tightning jobs. For jobs involving critical panels, OGDCL representative will be dedicated for supervision. This job also involved proper numbering / tagging of wires that are not already numbered / tagged and the material required for this job will also be arranged by contractor.
- 6) After completing the mentioned activity on each of the listed instruments, proper tagging of that particular instrument will be in contractor's scope and material required for this job will also be arranged by contractor.