

OIL & GAS DEVELOPMENT COMPANY LIMITED

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



TENDER ENQUIRY NO: PROC-SERVICES/CB/P&P-4246/2019

HIRING OF SERVICES FOR EXECUTION OF ATA-2019 OF UCH-II 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

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

ATA-2019 MAIN CONTRACTOR WORK SCOPE EXPLANATORY NOTES

1. The Owner, **Oil & Gas Development Company Limited (OGDCL)** is interested in inviting bids for the provision of services (Mechanical, Electrical & Instrumentation) at their Uch-II Gas 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 01-04-2019 to 11-04-2019 (11 days), only 08 days should be available for maintenance activities and remaining 01 day will be required for the shutting down and 02 days for startup activities. The contractor shall develop and submit a detailed work schedule including mobilization and preparatory works prior to shutdown.
 - 1.1 Contractor must complete the desired services as per TOR within specified time mentioned above from the date of issuance of mobilization notice issued by OGDCL's P&P Department.
 - 1.2 Contractor shall be allowed to mobilize resources & manpower 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.
 - 1.3 Contractor should demobilize all resources within 07 days after completion of ATA activities & post shutdown activities.
2. The Contractor shall quote separate rate in PKR for each activity against the quantities mentioned in the scope of work.
3. 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.
4. 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.
5. 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 and modification jobs for Owner's approval.

6. The Contractor shall be responsible for ventilation 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.
7. Contractor shall undertake welding procedures qualification & welder qualification tests and all welding shall be performed by qualified Welders. The brand of electrode used for Qualification shall not be changed for Production Welding. (Contractor shall use electrodes/filler wires of reputable brands of European Origin e.g. ESAB, LINCON, etc.)
8. 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.
9. Unit rates quoted by bidder shall be firm. No extra payments on account of escalation in prices due to any reason shall be admissible.
10. 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.
11. In case the contractor fails to arrange resources (tools, tackles, consumables, skilled manpower etc.) for execution of any job, OGDCL will arrange/provide its resources to execute the job then the cost double the amount quoted by contractor against that specific job/equipment/area/group will be deducted from final invoice of the contractor.
12. 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.
13. The painting of repaired piping/stripper weld seams with primer (red oxide) and painting of piping modification jobs with primer (red oxide) & topcoat with high build high solids epoxy (off-white) as per applicable code shall be the responsibility of Contractor while OGDCL will provide the paint for mechanical scope of work only.
14. Removal/Re-installation of insulation where applicable shall be the responsibility of Contractor.
15. The contractor will arrange certified cranes and all other lifting/rigging gears for all activities to be carried out during ATA.
16. The Owner for any job will not provide any tools to contractor. Otherwise owner's representative will be liable to deduct the charges accordingly.
17. Skilled manpower should be well experienced in their respective crafts.
18. HSEQ Rules & Regulations will be strictly observed.
19. All the participating companies/contractors should have at least 5 years of similar experience especially in turnaround of Oil & Gas, Petrochemical & Fertilizers Plants.
20. The contractor will arrange the material required for the refractory repair work of incinerator & Hot Oil Heaters. The rough estimated material required for repair work of incinerator is as: Fire cement (10 no. Bags of 25kg each), Castable Refractory (30 no. Bags of 25 kg each). The actual quantities of material should be confirmed after initial inspection of incinerator and Hot Oil Heaters.
21. 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 and PWHT) will be developed by keeping in view of under-mentioned references and requirements. Furthermore contractor shall submit the welding procedure specifications with supporting PQR, method statement of repair jobs, hydro testing of

mechanical valves, hydro testing of piping involved in modification jobs at least two weeks before the commencement of ATA for Owner's approval.

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

22)- INSPECTION/REPAIR/TESTING OF VALVES:

- The Contractor shall quote separate rates for each/individual valve.
- Contractor shall submit the method statement for testing of valves with respect to the standards specified in the references above.
- For repair and build up of seats of valves low hydrogen electrodes E-7018 will be used and good brands will be used.
- All gate valves will be tested for both seat tests i.e. front and back.
- Lapping of valve seats shall be carried out on high-level precision machine.

23)- CHEMICAL CLEANING OF HEAT EXCHANGERS:

- The contractor shall arrange expert company/firm in the field of chemical cleaning as listed below.
 - 1- Multilink Engineering Services, Islamabad ([Tel:051-4499251](tel:051-4499251))
 - 2- Pakistan Associates of Industrial Engg. Lahore ([Tel:042-35321158](tel:042-35321158))
 - 3- Any other Equivalent

Chemical cleaning firm shall be responsible for the supply of chemicals & services required for chemical cleaning of heat exchangers as mentioned in SOW including manpower, chemical circulation tanks, circulation pumps, hosepipes, fittings, hand tools & PPE's as per job requirement.

TERMS & CONDITIONS FOR CONTRACTORS

UCH-II GAS PLANT ATA-2019

OGDCL'S RESPONSIBILITIES:

- 1- OGDCL will provide blind/ spades for isolation and pressure testing. However the blinds which are not available in stock, contractor may fabricate with available SS/MS sheets.
- 2- Only lodging (accommodation) will be provided to the Contractor manpower. The arrangement for 300 persons is available at site.
- 3- Only Emergency/First Aid medical coverage will be the responsibility of OGDCL.
- 4- All gaskets and direct material/spare parts will be provided.
- 5- OGDCL will provide paint for jobs wherever mentioned in scope of work.
- 6- OGDCL will provide pumps, tanks and hosepipes for in-place chemical cleaning of vessels & columns only.
- 7- Although the plant has a safe history however adequate security umbrella as provided to the Company's employees will be extended for Contractor's manpower.

CONTRACTOR'S RESPONSIBILITIES:

- 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.
- 2- Contractor will ensure mobilization of management staff, tools/equipment at least 07 days before commencement of ATA.
- 3- Locals should be given preference while hiring of skilled/unskilled manpower.
- 4- The contractor should plan ATA activities (direct/associated) using latest version of Primavera and submit their planned schedule covering all the activities for carrying out ATA of Uch-II Gas Plant successfully with high level quality within stipulated time period. (Soft copy of Primavera Plan is mandatory)
- 5- Contractor should prepare/submit daily progress report and percentage Gantt chart (planned vs actual) at end of the day.
- 6- Tools and consumables for the execution of each job including welding / fabrication consumables for all repair and modification jobs.
- 7- Painting job where ever given in the scope including painting equipment like brushers, roller, spray nozzles/guns, hosepipes etc.
- 8- Pneumatic Ejectors/Blowers for the ventilation of Columns and Vessels as per job scope requirement.
- 9- 24V Lighting arrangement inside the Column and vessels.
- 10- In case of any accident, OGDCL will provide only general first aid whereas any other medical treatment would be the responsibility of contractor.
- 11- Contractor shall arrange the standardized test bench for manual valves, control valves & PSV's pressure testing and interconnecting pipes, tubes, hoses for hydro-test and PSV's bench.

- 12- All tools, consumables and calibration equipment/tools for all instruments, control valves & PSV's should be the responsibility of contractor.
- 13- Site administration personnel with associated resources like computer, printers, photocopiers etc.
- 14- Contractor should arrange the blind flanges for PSV's, control valves and manual valves testing which will not be available at OGDCL store stock.
- 15- Contractor will arrange certified E & I calibration and testing equipments, the certificates will be submitted before execution of ATA. Original 3rd party calibration certificates will be verified by OGDCL representative upon arrival of equipment.
- 16- Nitrogen gas for PSV's and Regulators testing will be arranged by contractor.
- 17- Cranes and fork lifters suitable to carry out the activities within stipulated time frame.
- 18- Precision Lathe machines for the repair of manual valves, control valves & PSV's as per work scope requirement.
- 19- Gaskets for pressure testing/bench test of manual valves, control valves & PSV's.
- 20- Water jetting machines with all accessories up to 15000psig operating pressure for hydro-jetting of heat exchangers etc. as per job scope requirement.
- 21- Chemical cleaning of heat exchangers is the responsibility of contractor and will be carried out by expert firm/company in this field (Refer clause # 23 of explanatory notes).
- 22- Scaffolding material and services, as when and where required.
- 23- Electrical Supply Boards/Cables along with earth leakage circuit breaker as per HSE standard.
- 24- Pneumatic tools for confined spaces i.e. grinders/power brushes (Vessel and Columns).
- 25- Contractor will arrange sufficient air compressors in view of complete scope of work (ventilation/filter cleaning/pneumatic tools etc.)
- 26- Shock absorbing safety harness and respirators for contractor employees as per job requirement.
- 27- 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.
- 28- Provision of PPE'S to their manpower and each worker should display ID card (HSE concern)
- 29- Original certificates of lifting gears, cranes, crane operators, hydro-jetting machines, drivers etc. will be mandatory checked by OGDCL HSE representative. Furthermore, contractor will submit copy of these certificates to HSE representative of OGDCL (HSE Concern)
- 30- The valid certification of welders, scaffolder etc. will be mandatory. Tags should be displayed for certified scaffolding (HSE Concern).
- 31- **HSEQ manpower by contractor**
 - a. I/C HSEQ should be B.E Mech/Chemical with Nebosh certification with at least 05 Years of relevant experience.
 - b. Supervisor should Graduate/D.A.E having Safety Courses certificates with at least 5 Years of relevant experience.
 - c. HSE assistant should be at least Intermediate having Safety Courses/ certificates with at least 5 Years of relevant experience)

- d. Well-equipped First Aider & Rescuers (Trained/Certified at least 02 Nos.) e.g ropes/pulley, tri-pod, stretchers, medicines etc.
 - e. HSEQ crew will be interviewed by OGDCL HSEQ representative before commencement of ATA by OGDCL.
- 32-** Refractory work of incinerator and Hot Oil Heaters including material is responsibility of contractor and should be carried out through M/S Refra Product, Karachi or any equivalent expert firm/company in this field.
 - 33-** Contractor shall arrange Decanting pumps for CPI Pits, Slope Vessel Pit, Amine Sump Pit, Glycol Sump Pit etc. wherever mentioned in SOW.
 - 34-** Contractor shall submit WPS & PQR for welding jobs prior to execution of job no deviation will be permissible.
 - 35-** Contractor shall depute qualified quality control inspectors (Level-II, Level-III CSWIP 3.1, API certified) for the supervision of welding/modification jobs.
 - 36-** DPT of all welding jobs (Repair work/Modifications) shall be the responsibility of main execution contractor including material.
 - 37-** Submit Total no's of deployed manpower list (designation wise) for the execution of individual job.
 - 38-** Contractor shall provide adequate meals and laundry services to their employees. Local area Contractor's may be introduced to provide such services.
 - 39-** Contractor will arrange transport for the pick and drop for their manpower from Colony to Plant and back for the whole period and also from Jacobabad to field & back. Fitness certificate for vehicles and drivers will be mandatory. Vehicles deployed for said purpose will be inspected by OGDCL and will not be allowed to use if found unfit.
 - 40-** Contractor should ensure the police verification of all manpower direct and indirect and must have bio-data file of each. (Security concern)
 - 41-** Contractor manpower must have CNIC and Contractor identity card.
 - 42-** Contractor should ensure his manpower has no any kind of ammunition and narcotics. (Security concern)
 - 43-** Mobiles and photo camera are prohibited in the plant premises and contractor should be ensured. (Security concern).
 - 44-** Contractor should deploy his own fully equipped security to control the manpower's in/out movement in plant as well as at colony with the coordination of OGDCL security incharge. (Security concern).

CONTRACTOR TECHNICAL 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

Sr. No.	Evaluation Item	Description of Criteria	Max. Marks / Calculations	Maximum Marks	Minimum Qualifying Marks	Remarks
						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.
4.	Offices, Workshop, Tools, Equipment, Machinery, Infrastructure.	Contractor should have following facilities with in Pakistan. 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 &	1. 03Marks 2. 08 Marks 3. 03 Marks 4. 06 Marks (04 + 02) 5. 10 Marks.	30	15	Established workshop: 02 Marks Established Office: 01 Marks Mechanical tools: 04 Marks. Instrument tools: 02 Marks. Electrical tools: 02 Marks. 01 Marks for each main equipment / Machinery. 01 Crane (Min 25 tons). 02 Marks Max: 04 Marks 01 fork lifters (Min 3 Tons). 01 Mark Max: 02 marks Organogram: 02 Mark. Mechanical CVs: 04 Mark Electrical CVs: 02Mark

Sr. No.	Evaluation Item	Description of Criteria	Max. Marks / Calculations	Maximum Marks	Minimum Qualifying Marks	Remarks
		Electrical works.				Instrument CVs: 02Mark
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. Only minor clarification may be acquired as per OGDCL requirement with 1 to 2 days' notice as we have very close schedule for execution of ATA.

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, original JV agreement must be provided by the lead partner/bidder. However, Experience of ONLY lead partner in JV will be considered for allocation of marks in Technical Evaluation of bidders.*

FINANCIAL BID FORMAT/EVALUATION CRITERIA

UCH-II 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 (exclusive of PST/ICT)	
Note: <ol style="list-style-type: none">1. Total Price should be inclusive of all taxes (except Provincial Sales Tax/ ICT Tax on services in Pakistan), duties, levies, charges etc.2. 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.3. 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.4. Contract will be awarded to technically qualified and financially lowest evaluated bidder on complete package basis.5. There will be an estimated Amount Contract.		

6. **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')

7. **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').

8. **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.

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
Pre-shutdown Activities								
1		Connection for N2 Pumper						
2		Depressurizing and N2 purging						
3		Blinding of battery limits						
4		Installation of scaffoldings as per each equipment job access requirement						
Post-shutdown Activities								
1		Deblinding of battery limits						
2		Leak Testing and N ₂ purging						
3		Removal of all scaffoldings						
4		Overall housekeeping/Area Cleaning						
5		Skilled manpower will be deployed for startup activities for 07 days after shutdown.						
GROUP-A: COLUMNS								
MA1	300-T-101	Amine Contactor (02 Nos)				2		
1	&	Blinding	Height of Contactor : 43 ft	Strik.Spanner: 70,75,60mm	Arrangement for chem.			
2	310-T-101	Provision of connections for chemical cleaning/water flushing	I.D. of Contactor : 122 in.	Comb.Sp.16,17mm (Trays)	circulation & water flush-			
3		Opening of manways (02 Nos.)	No. of trays : 12 nos.	Socket Set,	ing is available at site.			
4		Ventilation / Safety clearance	Size of Manway : 24 in.x 600 CL	Adjustable Spanner				
5		Initial inspection						
6		Internal complete mech. cleaning of trays, demisters, vessel, LG's etc.						
7		Final Inspection						
8		Boxup						
9		Deblinding						
MA2	300-T-102	Amine Regenerator (2 Nos)				2		
1	&	Blinding	Height of Stripper : 60 ft	Strik.Spanner: 50,41 mm	Arrangement for chem.			
2	310-T-102	Provision of connections for chemical cleaning/water flushing	I.D. of Stripper : 10.5 in.	Comb.Sp.16,17mm (Trays)	circulation & water flush-			
3		Opening of manways (03 Nos.)	No's. of trays : 23 nos.	Socket Set,	ing is available at site.			
4		Ventilation / Safety clearance	Size of Manway : 24 in.x 150 CL	Adjustable Spanner				
5		Initial inspection						
6		Internal complete mech. cleaning of trays, demisters, vessel, LG's etc.						
7		Final Inspection						
8		Boxup						
9		Deblinding						
MA3	400-T-101	Glycol Contactor (02 Nos)				2		
1	&	Blinding	Height of Contactor : 52 ft	Str.Spanner: 46,50 mm				
2	410-T-101	Opening of manways (02 Nos)	I.D. of Contactor : 90 in.	Open/Ring Spanner:				
3		Ventilation / Safety clearance	No. of trays : 12 nos.	20, 22, 24, 27mm				
4		Initial inspection	Size of Manway : 24 in.x 600 CL					
5		Internal cleaning of packing, demisters, vessel, LG's etc.						
6		Final Inspection						
7		Boxup						
8		Deblinding						
MA4	350-H-101	Incinerator Unit				1		
1		Blinding	Size of Manway : 30" x 150 CL	Spanner: 32mm				

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
2		Opening of 30" manway.	Size : I.D. 16ft, Length: 46ft					
3		Ventilation / Safety clearance						
4		Initial inspection of Combustion Chamber, Refractory, Burners & Pilots etc.						
5		Repairing of Refractory if required.						
6		Final Inspection						
7		Boxup						
8		Deblinding						
MA5	900-H101-A/B/C/D	Hot Oil Heaters (04 Nos)				4		
1		Blinding	Size Manways: 24 x 18 inch					
2		Manways Opening (02)	Type: Vertical cylinder with over head conviction & stack					
3		Internal Inspection of furnace/refractory						
4		Refractory repair if required	Manufacturer : BSS, China					
5		All Burners/ Pilots tips inspection/cleaning if required						
6		Final Inspection						
7		Boxup						
8		Deblinding						
GROUP-B: VESSELS								
MB1	210-V-101	Slug Catcher Eastern				1		
1		Blinding	Horizontal Vessel	Strik.Span:65,50,41 mm				
2		Opening of manway	Size of Manway : 20" x 600 CL	Comb.Span.:27,32mm				
3		Ventilation/Safety clearance	Size of Vessel : 83" ID x 328" L	Adjustable Spanner				
4		Initial Internal Inspection of vessel and demister						
5		Cleaning of complete vessel, Demister & LG's etc.						
6		Final inspection						
7		Boxup						
8		Deblinding						
MB2	211-V-101	Slug Catcher Central				1		
1		Blinding	Horizontal Vessel	Strik.Span:65,41 mm				
2		Opening of manway	Size of Manway : 20" x 600 CL	Comb.Span.:27mm				
3		Ventilation/Safety clearance	Size of Vessel : 83" ID x 328" L	Adjustable Spanner				
4		Initial Internal Inspection of vessel and demister		Crow Bar				
5		Cleaning of complete vessel, demister & LG's etc.						
6		Final inspection						
7		Boxup						
8		Deblinding						
MB3	212-V-101	Slug Catcher Western				1		
1		Blinding	Horizontal Vessel	Strik.Span:65,41 mm				
2		Opening of manway	Size of Manway : 20" x 600 CL	Comb.Span.:27mm				
3		Ventilation/Safety clearance	Size of Vessel : 94" ID x 379" L	Adjustable Spanner				
4		Initial Internal Inspection of vessel and demister		Crow Bar				
5		Cleaning of complete vessel, demister & LG's etc.						
6		Final inspection						
7		Boxup						
8		Deblinding						
MB4	250-V-101	Condensate Water Separator				1		

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
1		Blinding	Horizontal Vessel	St.Sp.: 46 mm				
2		Opening of manway	Size of Manway : 20" x 150 CL	Comb.Sp.: 24,27mm				
3		Ventilation/Safety clearance	Size of Vessel : 59" ID x 229" L	Adjustable Spanner				
4		Initial Internal Inspection of vessel						
5		Cleaning of vessel, demisters & LG's.						
6		Final inspection						
7		Boxup						
8		Deblinding						
MB5	250-V-102	Condensate Degassing Boot				1		
1		Blinding	Vertical Vessel	St.Sp.: 46 mm				
2		Opening of manway	Size of Manway : 18" x 150 CL	Comb.Sp.: 24,27mm				
3		Ventilation/Safety clearance	Size of Vessel : 1070mm ID x 3355mm L	Adjustable Spanner				
4		Initial Internal Inspection of vessel						
5		Cleaning of vessel, demisters & LG's.						
6		Final inspection						
7		Boxup						
8		Deblinding						
MB6	300-V-101	Feed Gas K.O Drum (2 Nos)				2		
1	&	Blinding	Vertical Vessel	Strik. Span: 70,65mm				
2	310-V-101	Opening of manway	Size of Manway : 24" x 600 CL	Comb;Spanner: 27,30mm				
3		Ventilation/safety clearance	Size of Vessel : 45.27" I.D. X 100.4" L	Scaffolding Material				
4		Initial Internal Inspection of vessel		Crow Bar, Chain Blocks				
5		Internal cleaning of complete vessel, LG's/LT's etc.						
6		Final Inspection						
7		Box up						
8		Deblinding						
MB7	300-V-102	Feed Gas Filter Coalescer (02 Nos)				2		
1	&	Opening Of Top Cover	Vertical Vessel	Strik. Span: 65mm				
2	310-V-102	Inspection Of Filter Coalescer Elements	Size of Vessel : 43.3" I.D. X 185.4" TL-TL	Comb;Spanner: 27,30mm				
3		Replacement Of Filter Coalescer Elements						
4		Final Inspection						
5		Box up						
MB8	300-S101 A/B	Lean Amine Strainers (04 Nos)				4		
1	&	Opening of 28" Cover		Strik.Span: 32 mm				
2	310-S101 A/B	Initial Inspection		Hammers, Crow bar				
3		Cleaning of strainer		Scaffolding material				
4		Final Inspection						
5		Boxup						
MB9	300-S105 A/B	Rich Amine Strainers (04 Nos)				4		
1	&	Opening of 28" Cover		Strik.Span: 32 mm				
2	310-S105 A/B	Initial Inspection		Hammers, Crow bar				
3		Cleaning of strainer		Scaffolding material				
4		Final Inspection						
5		Boxup						
MB10	300-V-104	Rich Amine Flash Drum (02 Nos)				2		

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
1	&	Blinding	Horizontal Vessel	Str.Spanner: 46,50 mm	Arrangement for chem.			
2	310-V-104	Provision of connections for chemical cleaning/water flushing	Size of Manway : 24" x 150 CL	Open/Ring Sp: 20,22,24,27mm	circulation & water flush-			
3		Opening of manway	Size of Vessel : 137.8" I.D. X 511.8"L	Crow bar, Chain Blocks	ing is available at site.			
4		Ventilation/safety clearance	Material : SA-240, TP.304/304L	Scaffolding Material				
5		Initial Inspection of vessel						
6		Dismantling/removal of demisters & repair/replacement if any						
7		Internal cleaning of complete Vessel & LG's.						
8		Cleaning of demisters & re-installation						
9		Final Inspection						
10		Box up						
11		Deblinding						
MB11	300-V-105	Amine Surge Vessel (02 Nos)				2		
1	&	Blinding	Horizontal Vessel	Str.Spanner: 46 mm				
2	310-V-105	Opening of manway	Size of Manway : 24" x 150 CL	Open/Ring Sp: 20,22,24,27mm				
3		Ventilation/safety clearance	Size of Vessel : 3550mm I.D. X 12000mm L	General Tool Box				
5		Initial Inspection of vessel	Material : SA-240, TP.304/304L					
6		Internal cleaning of complete vessel, vertex breaker, LG's etc.						
7		Final Inspection						
8		Box up						
9		Deblinding						
MB12	300-V-106	Amine Reflux Drum (02 Nos)				2		
1	&	Blinding	Vertical Vessel	Strik.Spner: 46 mm				
2	310-V-106	Opening of manway	Size of Manway : 24" x 150 CL	Comb,Spner: 24,27mm				
3		Ventilation/safety clearance	Size of Vessel : 1880mm ID x 3370mm L	General Tool Box				
4		Initial Inspection	Main Material : SA-240, TP.304L					
5		Internal cleaning of complete vessel, LG's/LT's etc.						
6		Inspection, cleaning/repair of Demisters, if any						
8		Final Inspection						
9		Box up						
10		Deblinding						
MB13	300-V-107	Amine Sump Drum (02 Nos)				2		
1	&	Blinding	Horizontal Vessel	Strik.Spner: 46 mm				
2	310-V-107	Opening of manway	Size of Manway : 24" x 150 CL	Comb,Spner: 24,27,36,41mm				
3		Ventilation/safety clearance	Size of Vessel : 3150mm ID x 12000 mm L	General Tool Box				
4		Initial Inspection	Material : SA-240, TP.304L					
5		Decanting of Sump Vessel						
6		Internal cleaning of complete vessel, LG's/LT's etc.						
7		Decanting & cleaning of Sump Vessel Pit						
8		Final Inspection						
9		Box up						
10		Deblinding						
MB14	400-V-103	Glycol Flash Separator (02 Nos)				2		
1	&	Blinding	Horizontal Vessel	Strik.Spner: 50mm				
2	410-V-103	Opening of manway	Size of Manway : 24" x 150 CL	Comb,Spner: 24,27,36mm				
3		Ventilation/safety clearance	Size of Vessel : 4.43 ft ID x 12.47 ft L	General Tool Box				

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
4		Initial Inspection	Main Material : SA-240, 304/304L					
5		Internal cleaning of vessel, demisters, LG's etc.						
6		Overall cleaning/housekeeping of Skid						
7		Final Inspection						
8		Box up						
9		Deblinding						
MB15	400-V-104	Glycol Surge Vessel (02 Nos)				2		
1	&	Blinding	Horizontal Vessel	Strik.Spner: 50mm				
2	410-V-104	Opening of manway	Size of Manway : 24" x 150 CL	Comb,Spner: 24,27,36mm				
3		Ventilation/safety clearance	Size of Vessel : 4.59 ft ID x 14.76 ft L	Scaffolding Material				
4		Initial Inspection	Main Material : ASTM A516 Gr. 70N	General Tool Box				
5		Internal cleaning of vessel, demisters, LG's etc.						
6		Overall cleaning/housekeeping of Skid						
7		Final Inspection						
8		Box up						
9		Deblinding						
MB16	410-V-105	Glycol Sump Vessel (01 Nos)				1		
1		Blinding	Horizontal Vessel	Strik.Spner: 50mm				
2		Opening of manways	Size of Manway : 24" x 150 CL	Comb,Spner: 24,27,36mm				
3		Ventilation/safety clearance	Size of Vessel : 6.24 ft ID x 19.68 ft L	Scaffolding Material				
4		Initial Inspection	Main Material : ASTM A516 Gr. 70N	General Tool Box				
5		Internal cleaning of vessel, demisters, LG's etc.						
6		Decanting & cleaning of Sump Vessel Pit						
7		Final Inspection						
8		Box up						
9		Deblinding						
MB17	350-V-101	Incinerator K.O Drum				1		
1		Blinding	Vertical Vessel	Strik.Spner: 55,50mm				
2		Opening of manways	Size of Manway : 24" x 150 CL	Comb,Spner: 24,27,36,41mm				
3		Ventilation/safety clearance	Size of Vessel : 118" ID x 161" L	Scaffolding Material				
4		Initial Inspection	Main Material : SA-240, TP.304L					
5		Internal cleaning of complete vessel, LG's/LT's etc.						
6		Final Inspection						
7		Box up						
8		Deblinding						
MB18	940-V-102	Slope Vessel				1		
1		Blinding	Horizontal Vessel	Strik.Spner: 46,50mm				
2		Opening of manways	Size of Manway : 20" x 150 CL	Scaffolding Material				
3		Ventilation/safety clearance	Size of Vessel : 79 I.D. X 300" L					
4		Initial Inspection	Material : SA516-70/SA105					
5		Internal cleaning of complete vessel and its pit						
6		Cleaning of LG's/LT's						
7		Decanting & cleaning of Vessel Pit						
8		Final Inspection						
9		Box up						

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
10		Deblinding						
MB19	940-V-101	Blow Case Vessel				1		
1		Blinding	Horizontal Vessel	Strik.Spner: 46,50mm				
2		Opening of manways	Size of Manway : 18" x 300 CL	Comb,Spner: 24,27,30,32mm				
3		Ventilation/safety clearance	Size of Vessel : 1220 mm ID x 3660mm L					
4		Initial Inspection	Main Material : SA-516-70					
5		Internal cleaning of complete vessel, LG's/LT's etc.						
6		Inspection						
7		Box up						
8		Deblinding						
MB20	990-V-101	Flare K.O Drum				1		
1		Blinding	Horizontal Vessel	Strik.Spanner:46mm				
2		Opening of manways	Size of Manway : 24" x 150 CL	Comb,Spner:24,27mm				
3		Ventilation/safety clearance	Size of Vessel : 118" ID x 446" L					
4		Initial Inspection	Material : SA-516 Gr.70					
5		Internal cleaning of complete vessel, LG's/LT's etc.						
6		Final Inspection						
7		Box up						
8		Deblinding						
MB21	960-V-102	Fuel Gas Knock Out				1		
1		Blinding	Vertical Vessel	Strik.Spanner:46mm				
2		Opening of manways	Size of Manway : 20" x 150 CL	Comb,Spner:24,27mm				
3		Ventilation/safety clearance	Size of Vessel : 1375mm ID x 3965mm L					
4		Initial Inspection	Material : SA-516 Gr.70					
5		Internal cleaning of complete vessel, LG's/LT's etc.						
6		Final Inspection						
7		Box up						
8		Deblinding						
MB22	300-CT-101	Cooling Tower				2		
1		& Basin Cleaning	Type: Induced Draft Counterflow	General Tool Box				
2	310-CT-101	Inspection/Cleaning/Re-arrangement of Drift Eliminators/Fills	Design Water Circulation: 8769.2 US gpm					
3		Inspection/Cleaning/Replacement of Water distribution Nozzles	No. of Modules: 08 No of Cells per Module: 02					
4		Cleaning of Air intake Panels/Louvers	Basin Size(LxWxD): 144x48x4 ft.					
5		Cleaning of Fan Blades & adjustment of blade angle, if requird	By: Ilmed I,Pianti Italy					
6		Final Inspection						
MB23	950-TK-102-	CPI (Oily Water Treatment System)				3		
1	A/B/C	Initial Inspection of all pits.	Inlet Pit, Oil Chamber, Water Pit					
2		Decanting / Cleaning of all pits	Size: 51360mm L x 4080mm W x 4228mm H					
3		Final Inspection						
MB24		Hot Oil Fuel Gas Strainer A/B/C/D				4		
1		Strainer Inspection / Cleaning and repair if any		General Tool Box				
2		Boxup						
MB25	900-S101-A	Hot Oil Main Strainer				1		
1		Opening of Cover		Strik.Span: 41, G. Tool Box				
2		Initial Inspection						

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
3		Cleaning of strainer						
4		Final Inspection						
5		Boxup		Crane-45Ton,				
MB26	900-F101-A/B	Hot Oil Side Filters				2		
1		Strainer Inspection / Cleaning and repair if any		Strik.Span: 60, G.Tool Box				
2		Boxup		Crane-45Ton,				
GROUP-C: HEAT EXCHANGERS								
MC1	300-E-111	Feed Gas Cooler (02Nos.)				2		
1	&	Blinding/Isolation	Type: BFU, U-Tube Bundle	Crane-45Ton, Chain Blocks,				
2	310-E-111	Initial Inspection	No.of Tubes : 1278, Two Pass	Strik.Span: 65,50 mm				
3		Arrangement/connections for chemical cleaning	Tube Size: 0.75"(OD) x 0.065"(thk)x 12.3ft (L)	Comb. Span: 27,36mm				
4		Chemical Cleaning of Shell Side	Tube Bundle Weight : 3.89t	Jetting machine				
5		Pressure Testing	Shell Side Medium : Cooling Water	Sling, Shackles, etc.				
6		Final Inspection	Tube Side Medium : Raw/Feed Gas					
7		Deblinding						
8		Housekeeping / Area cleaning						
MC2	300-E-113	Lean Amine Trim Cooler (02 Nos)				2		
1	&	Blinding/Isolation	Type : BFM, No. of Tubes = 2224	Channel head weight = 2 ton				
2	310-E-113	Initial Inspection	Tube Size = 25.4(OD)x1.651 (thk.)x5850 (L)mm	Strik.Span: 1.8125" (46mm)				
3		Arrangement/connections for chemical cleaning	No. of Passes: Shell Side= 2 & Tube Side= 8	Chain Blocks: 5 ton				
4		Chemical Cleaning of Shell Side	Bundle Weight = 28331 lb	Crow bar				
5		Pressure Testing	Overall Dim= 1820 (I.D.) x 7626 (TL-TL) mm					
6		Final Inspection	Shell Side Medium : Cooling Water					
7		Deblinding	Tube Side Medium : Lean Amine					
8		Housekeeping / Area cleaning						
MC3	300-E-114	Amine Regenerator Condenser (02 Nos)				2		
1	&	Blinding/Isolation	Type: BEM, No. of Tubes: 1319	Crane-45Ton, Chain Blocks,				
2	310-E-114	Initial Inspection	Tube Size: 1"(OD) x 0.065"(thk)x 29.53 ft (L)	Strik.Span: 50 mm				
3		Arrangement/connections for chemical cleaning	No. of Passes: Shell Side=01 Tube Side=01	Comb. Span: 27,36, 41mm				
4		Chemical Cleaning of Shell Side	Bundle Weight = 25860 lb	Scaffolding material				
5		Pressure Testing	Channel head O.D.= 1640 mm	Jetting machine				
6		Final Inspection		Sling, Shackles				
7		Deblinding						
8		Housekeeping / Area cleaning						
MC4	300-EA-103	Lean Amine Fin-Fan Cooler (02 Nos.)				2		
1	&	Inspection of Finned Tube Bundles	No. of tubes : 192	Chain Block: 10 ton				
2	310-EA-103	External Chemical cleaning of Finned Tubes	Tube O.D. : 1 in.	Strik.Span: 27,30,32mm				
3		Cleaning of Fan Blades	Length : 540 in. or 45 ft	Comb. Span: 27,32mm				
4		Verification / Adjustment of Fan blade angle	No. of passes : Three	Crow bar				
5		Alignment of Fan						
6		Final Inspection						
7		Housekeeping / Area cleaning						
MC5	300-E-112 A/B	Treated Gas Cooler (04 Nos.)				4		
1	&	Blinding/Isolation	No. of tubes : 532	Chain Block: 10 ton				
2	310-E-112 A/B	Initial Inspection	Tube O.D. : 1 in.	Strik.Span: 55 mm				

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
3		Arrangement/connections for chemical cleaning	Tube Length : 230 in. or 19 ft	Comb. Span: 55mm				
4		Chemical Cleaning of Shell Side	No. of passes : One	Crow bar				
5		Pressure Testing						
6		Final Inspection						
7		Deblinding						
8		Housekeeping / Area cleaning						
GROUP-D: ROTARY								
MD1	SGT-100-1/2/3	Gas Turbines (03 Nos)				3		
1		Enclosure Inspection & Cleaning	SIEMENS GAS TURBINE	General Tool Box				
2		Cleaning of mist. Eliminator panels of Air-Intake Hood	MAKE: SIEMENS-UK					
3		Cleaning & Replacement of Air Intake Filters (Pulse (24 Nos +24) + Hepa 15 Nos)	MODEL: SGT-100 -1S					
4		External Cleaning of Lube Oil Fin Fan Coolers Tubes/Fins						
5		Overall cleaning of Turbine enclosure						
6		Inspection/replacement of Fuel Gas skid K/O Filter Coalescer Elements.						
7		Cleaning of fuel gas and liquid fuel skids						
8		Ventilation air inlet Filter/duct cleaning						
9		Final Inspection						
10		Area cleaning						
MD2	300-P104A/B	Lean Amine Booster Pump (04 Nos)				4		
1		Decoupling of Pump & Motor	Single-stage Centrifugal pump	Strik.Span. 32,36mm				
2		Initial Alignment check	Capacity=1970 gpm.	General Tool Box				
3		Inspection/Dismantling of Pump casing, if required	Pressure= 79.49 psig	Comb.Spanner 16,17mm				
4		Service of Mechanical Seal if any having leakage problem.	Suc.x Disch. = 8 x 6 in	Millwright Special Tools				
5		Replacement of bearings if required.	Make: RUHRPUMPEN, GERMANY					
6		Assembly of pump						
7		Cleaning of suction & seal flush line strainers						
8		Alignment						
9		Housekeeping / Area cleaning						
MD3	300-P105A/B	Lean Amine Circulation Pump (04 Nos)				4		
1		Decoupling of Pump & Motor	7-stage Centrifugal pump	Striking Spanner 46mm,				
2		Initial Alignment check	Capacity=1960 gpm.	55,46 mm.				
3		Dismantling of bearing housings	Dis.Pressure= 922.2 psig	General Tool Box				
4		Removal of bearings for inspection	Suc.x Disch. = 8 x 6 in	Millwright Special Tools				
5		Cleaning / Repair / repl. of damage parts, if any	Make: RUHRPUMPEN, Germany					
6		Service of Mechanical Seal (Dismantling, cleaning/lapping & re-assembly)						
7		Assembling of bearing housing						
8		Cleaning of suction & seal flush line strainers						
9		Alignment						
10		Housekeeping / Area cleaning						
MD4	300-P106A/B	Regenerator Reflux Pump (04 Nos)				4		
1		Dismantling of pump	Magnetic Drive Centrifugal pump	Comb.Spner:24,27mm				
2		Inspection of casing	Capacity=106.9 gpm.	General Tool Box				
3		Cleaning / Repair / repl. of damage parts, if any	Dis.Pressure= 64.5 psig	Millwright Special Tools				
4		Assembling of pump	Suc.x Disch. = 3 x 1-1/2 in					

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
5		Cleaning of suction & seal flush line strainer	Make: RUHRPUMPEN, Germany					
6		Housekeeping / Area cleaning						
MD5	900-P-102	Hot Oil Circulation Pumps (10 Nos)				10		
1	A/B/C/D/E/F/G/H/I/J	Decoupling of Pump & Motor	Single-stage Centrifugal pump	General Tool Box				
2		Service of Mechanical Seal if any having leakage problem.	Capacity=2496 gpm.	Millwright Special Tools				
3		Replacement of bearings if required.	Pressure= 132 psig					
4		Alignment	Suc.x Disch. = 10 x 8 in					
5		Cleaning of suction & seal flush line strainers	Make: SULZER Pumps & Compressor. Italy					
6		Blue epoxy paint to outer surface of pump						
7		Area cleaning						
MD6	900-C52-A/B/C/D	Hot Oil Heater FD Fans (04 Nos)				4		
1		Opening of FD Fan inspection windows.	Centrifugal Fan	Strik.Span. 30 mm				
2		Inspection/cleaning of Fan duct/dampers.	Flow rate = 38893 m3/h	Comb.Spanner 24mm				
3		Inspection/Replacement of bearings of FD Fans	RPM = 1450	General Tool Box				
4		Alignment		Millwright Special Tools				
5		Housekeeping / Area cleaning						
MD7	300-P-111 A/B	Cooling Water Pump (04 Nos)				4		
1	&	Decoupling of Pump & Motor	Centrifugal Pump	General Tool Box				
2	310-P-111 A/B	Service of Sealing system if any having leakage problem.	Capacity= 2915 gpm.	Millwright Special Tools				
3		Replacement of bearings if required.	Pressure= 30 psig					
4		Alignment	Suc.x Disch. = 20 x 24 in					
5		Cleaning of suction & seal flush line strainers	Make: STERLING Fluid System, ITALY					
6		Blue epoxy paint to outer surface of pump						
7		Area cleaning						
MD8	350-C101 A/B	Combustion Air Primary Blower (Incinerator)				2		
1		Opening of FD Fan inspection windows.	Centrifugal Fan	General Tool Box				
2		Inspection of dampers.	Make: PBN, Italy	Millwright Special Tools				
3		Greasing of bearings	MODEL: RAW1402/8G/RD315°-355SMA6					
4		Alignment	Flow Rate: 30cu.m/sec					

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
GROUP-E: MANUAL VALVES:-								
ME1	Gathering Area	Manual Valves Gathering Area (34 Nos.)			Valves list attached	34		
1		Dismantling of Valves from location						
2		Shifting of valves to workshop						
3		Initial Testing/Inspection of valves						
4		Repair of defected valves						
5		Pressure Testing						
6		Painting of Valves if required.						
7		Shifting of valves at Location						
8		Installation of valves at location						
ME2	Amine Train-300	Manual Valves of Amine Train-I (24 Nos.)	Onsite Service & Greasing: 16 out of 25		Valves list attached	24		
1		Dismantling of Valves from location						
2		Shifting of valves to workshop						
3		Testing/Inspection of valves						
4		Repair of defected valves						
5		Pressure Testing						
6		Painting of Valves if required.						
7		Shifting of valves at Location						
8		Installation of valves at location						
ME3	Amine Train-310	Manual Valves of Amine Train-II (23 Nos.)	Onsite Service & Greasing: 16 out of 25		Valves list attached	23		
1		Dismantling of Valves from location						
2		Shifting of valves to workshop						
3		Testing/Inspection of valves						
4		Repair of defected valves						
5		Pressure Testing						
6		Painting of Valves if required.						
7		Shifting of valves at Location						
8		Installation of valves at location						

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019
MECHANICAL SCOPE OF WORK

Act #	Tag #.	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/ICT)	Total in PKR (exclusive of PST/ICT)
ME4	Hot Oil/Utility	Manual Valves of Hot Oil Pumps & Utility Area (12 Nos.)			Valves list attached	12		
1		Dismantling of Valves from location						
2		Shifting of valves to workshop						
3		Testing/Inspection of valves						
4		Repair of defected valves						
5		Pressure Testing						
6		Painting of Valves if required.						
7		Shifting of valves at Location						
8		Installation of valves at location						
Grand Total in PKR (exclusive of PST/ICT)								

UCH-II ATA-2019 MANUAL VALVES LIST

S.#	VALVE	SIZE	CLASS	Mat./Const.	DESCRIPTION/LOCATION	QTY	Remarks
ME1: GAS GATHERING AREA VALVES							
Well no. 19, 20, 26, 27							
1	Ball Valve	4"	600	SS / Flanged	PSV's by pass valves	3	Well 19,20,27
2	Ball Valve	6"x4"	600	SS / Flanged	PSV's by pass valves	1	Well 26
3	Globe Valve	4"	600	CS / Flanged	PSV's by pass valves	3	Well 19,20,27
210-V101 Eastern Slug Catcher:							
1	Gate Valve	3"	600	SS / Flanged	Liquid H/C at 210-LCV-001 Isolation	3	
2	Gate Valve	1.5"	600	SS / Flanged	Liquid H/C outlet line LCV bypass	1	
3	Globe Valve	1.5"	600	SS / Flanged	Liquid H/C outlet line LCV bypass	1	
4	Ball Valve	2"	600	SS / Flanged	Liquid H/C outlet line to closed drain	1	
5	Globe Valve	2"	600	SS / Flanged	Liquid H/C outlet line to closed drain	1	
6	NRV	3"	600	SS / WAFER	Liquid H/C outlet line to C/W Sep.	1	
7	NRV	2"	600	SS / WAFER	Liquid H/C outlet line to closed drain	1	
211-V101 Central Slug Catcher:							
1	Gate Valve	3"	600	SS / Flanged	Liquid H/C at 211-LCV-001 Isolation	3	
2	Ball Valve	2"	600	SS / Flanged	Liquid H/C outlet line LCV bypass	1	
3	Globe Valve	2"	600	SS / Flanged	Liquid H/C outlet line LCV bypass	1	
4	Gate Valve	2"	600	SS / Flanged	Liquid H/C outlet line to closed drain	1	
5	Globe Valve	2"	600	SS / Flanged	Liquid H/C outlet line to closed drain	1	
6	NRV	3"	600	SS / WAFER	Liquid H/C outlet line to C/W Sep.	1	
7	NRV	2"	600	SS / WAFER	Liquid H/C outlet line to closed drain	1	
212-V101 Western Slug Catcher:							
1	Gate Valve	3"	600	SS / Flanged	Liquid H/C at 212-LCV-001 ISOLATION	3	
2	Gate Valve	1"	800	SS / Welded	Liquid H/C outlet line LCV bypass	1	
3	Globe Valve	1"	800	SS / Welded	Liquid H/C outlet line LCV bypass	1	
4	Ball Valve	2"	600	SS / Flanged	Liquid H/C outlet line to closed drain	1	
5	Globe Valve	2"	600	SS / Flanged	Liquid H/C outlet line to closed drain	1	
6	NRV	3"	600	SS / WAFER	Liquid H/C outlet line to C/W Sep.	1	
7	NRV	2"	600	SS / WAFER	Liquid H/C outlet line to closed drain	1	
Total Valves of Gas Gathering Area						34	
ME2: AMINE TRAIN-I (300) VALVES							
300-E-103A Amine Regenerator Reboiler:-							
1	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler FCV-036A Isolation	2	Only onsite service & greasing
2	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
3	Globe Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
4	Gate Valve	16"	300	CS / Flanged	Hot Oil Inlet Reboiler Isolation	1	
5	Gate Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	2	
6	Check Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	1	
300-E-103B Amine Regenerator Reboiler:-							
1	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler FCV-036B Isolation	2	Only onsite service & greasing
2	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
3	Globe Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
4	Gate Valve	16"	300	CS / Flanged	Hot Oil Inlet Reboiler Isolation	1	
5	Gate Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	2	
6	Check Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	1	
300-V-101 Feed Gas K/O Vessel:-							
1	Globe valve	1"	600	SS / Flanged	H/C Outlet 300-LCV-002 bypass valve	1	RTJ
2	Ball valve	1"	600	SS / Flanged	H/C Outlet 300-LCV-002 bypass valve	1	RTJ

UCH-II ATA-2019 MANUAL VALVES LIST							
S.#	VALVE	SIZE	CLASS	Mat./Const.	DESCRIPTION/LOCATION	QTY	Remarks
300-P-105A/B Amine Circulation Pump							
1	Check Valve	10"	900	SS / Flanged	Lean Amine ACP Discharge line NRV's	4	
300-P-111A/B Cooling Water Pump:-							
1	Check Valve	24"	150	CS / Flanged	Cooling water Pump discharge NRV's	2	
Total AMINE TRAIN-I VALVES:-						24	
ME3: AMINE TRAIN-II (310) VALVES:-							
310-E-103A Amine Regenerator Reboiler:-							
1	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler FCV-036A Isolation	2	Only onsite service & greasing
2	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
3	Globe Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
4	Gate Valve	16"	300	CS / Flanged	Hot Oil Inlet Reboiler Isolation	1	
5	Gate Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	2	
6	Check Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	1	
310-E-103B Amine Regenerator Reboiler:-							
1	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler FCV-036B Isolation	2	Only onsite service & greasing
2	Gate Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
3	Globe Valve	16"	300	CS / Flanged	Hot Oil to Reboiler (FCV Bypass)	1	
4	Gate Valve	16"	300	CS / Flanged	Hot Oil Inlet Reboiler Isolation	1	
5	Gate Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	2	
6	Check Valve	16"	150	CS / Flanged	Return/Out let line from reboiler	1	
310-V-101 Feed Gas KO Vessel:-							
1	Globe valve	1"	600	SS / Flanged	H/C Outlet 310-LCV-002 bypass valve	1	RTJ
310-P-105A/B Amine Circulation Pump 14-12-2018-							
1	Check Valve	10"	900	SS / Flanged	Lean Amine ACP Discharge line NRV's	4	
310-P-111A/B Cooling Water Pump:-							
1	Check Valve	24"	150	CS / Flanged	Cooling water Pump discharge NRV's	2	
Total AMINE TRAIN-II VALVES:-						23	
ME4: HOT OIL/UTILITY AREA VALVES							
900-P-102A to J Hot Oil Circulation Pump:-							
1	Gate Valve	12"	150	CS / Flanged	Suction / discharge line of pump	10	
960-PCV-005 Raw Fuel Gas:-							
2	Ball Valve	4"	600	SS / Flanged	Fuel Gas K/O PCV005 Isolating valves	2	Replace
Total HOT OIL/UTILITY AREA VALVES						12	
Grand Total						93	

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH-II GAS PROCESSING PLANT - ATA 2019 (INSTRUMENT SCOPE OF WORK)

Act #	Tag #	Job Description	Specifications	Tools Required	Remarks	Quantity	Unit Rate in PKR (exclusive of PST/CT)	Total in PKR (exclusive of PST/CT)
PSVs Gas Gathering Section						Location		
1	100-PSV-002	Removing from location, testing in workshop/bench and record "as found set" value (Psig/Bar), disassembling for Lapping trim and overhauling completely (if required), assembling, setting (provided by OGDCL) cold set points and reinstallation.	Size: 3", Make: Broady	Crane, Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Hex Key Set, Pressure Source 2000PSI, Other calibration equipment. PSV Test Bench. Consumables.	Gas Gathering Area (Well # 19)	1		
2	101-PSV-003		Size: 3", Make: Broady		Gas Gathering Area (Well # 27)	1		
3	105-PSV-004		Size: 3", Make: Broady		Gas Gathering Area (Well # 32)	1		
4	114-PSV-006		Size: 3", Make: Broady		Gas Gathering Area (Well # 20)	1		
5	107-PSV-007		Size: 3", Make: Broady		Gas Gathering Area (Well # 21)	1		
6	102-PSV-008		Size: 3", Make: Broady		Gas Gathering Area (Well # 25)	1		
7	104-PSV-009		Size: 3", Make: Broady		Gas Gathering Area (Well # 26)	1		
8	108-PSV-010		Size: 3", Make: Broady		Gas Gathering Area (Well # 33)	1		
9	113-PSV-012		Size: 3", Make: Broady		Gas Gathering Area (Well # 22)	1		
10	103-PSV-013		Size: 3", Make: Broady		Gas Gathering Area (Well # 23)	1		
11	106-PSV-014		Size: 3", Make: Broady		Gas Gathering Area (Well # 24)	1		
12	111-PSV-015		Size: 3", Make: Broady		Gas Gathering Area (Well # 29)	1		
13	112-PSV-016		Size: 3", Make: Broady		Gas Gathering Area (Well # 30)	1		
14	109-PSV-017		Size: 3", Make: Broady		Gas Gathering Area (Well # 31)	1		
15	110-PSV-019		Size: 3", Make: Broady		Gas Gathering Area (Well # 28)	1		
PSVs Slug Catchers Section						Location		
1	211-PSV-001	Removing from location, testing in workshop/bench and record "as found set" value (Psig/Bar), disassembling for Lapping trim and overhauling completely (if required), assembling, setting (provided by OGDCL) cold set points and reinstallation.	Size: 2", Make: Broady	Crane, Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Hex Key Set, Pressure Source 2000PSI, Other calibration equipment. PSV Test Bench. Consumables.	Western Slug Catcher	1		
2	211-PSV-002		Size: 2", Make: Broady		Western Slug Catcher	1		
3	210-PSV-001		Size: 2", Make: Broady		Eastern Slug Catcher	1		
4	210-PSV-002		Size: 2", Make: Broady		Eastern Slug Catcher	1		
5	212-PSV-001		Size: 2", Make: Broady		Central Slug Catcher	1		
6	212-PSV-002		Size: 2", Make: Broady		Central Slug Catcher	1		
7	250-PSV-001		Size: 2", Make: Broady		Cond/water separator	1		
8	250-PSV-002		Size: 2", Make: Broady		Cond/water separator	1		
PSVs Amine Section						Location		
1	310-PSV-022	Removing from location, testing in workshop/bench and record "as found set" value (Psig/Bar), disassembling for Lapping trim and overhauling completely (if required), assembling, setting (provided by OGDCL) cold set points and reinstallation.	Size: 1", Make: Tai Milano	Crane, Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Hex Key Set, Pressure Source 2000PSI, Other calibration equipment. PSV Test Bench. Consumables.	Feed gas cooler	1		
2	310-PSE-070		Size: 12", Make: Continental Disc Corporation		Feed gas cooler	1		
3	310-PSV-001A		Size: 1.5", Make: Tai Milano		Feed gas Knockout	1		
4	310-PSV-003A		Size: 1", Make: Tai Milano		Feed gas Filter coalescer	1		
5	310-PSV-004B		Size: 1", Make: Tai Milano		Amine Contactor	1		
6	310-PSE-071		Size: 16", Make: Continental Disc Corporation		Treated Gas Cooler	1		
7	310-PSV-005A		Size: 1", Make: Tai Milano		Treated gas Knock out	1		
8	310-PSV-006A		Size: 8", Make: Tai Milano		Flash Drum	1		
9	310-PSV-006B		Size: 8", Make: Tai Milano		Flash Drum	1		
10	310-PSV-021A		Size: 2", Make: Tai Milano		Lean Amine Cooler	1		
11	310-PSV-24		Size: 1", Make: Tai Milano		Lean Amine Cooler	1		
12	310-PSV-007A		Size: 1.5", Make: Tai Milano		Rich Amine Strainer	1		
13	310-PSV-007B		Size: 1.5", Make: Tai Milano		Rich Amine Strainer	1		
14	310-PSV-019A		Size: 1.5", Make: Tai Milano		Lean Amine Cartridge filter	1		
15	310-PSV-019B		Size: 1.5", Make: Tai Milano		Lean Amine Cartridge filter	1		
16	310-PSV-018		Size: 1.5", Make: Tai Milano		Charcoal filter	1		
17	310-PSV-011A		Size: 10", Make: Tai Milano		Amine stripper	1		

18	310-PSV-012B		Size: 1.5", Make: Tai Milano		XHE	1			
19	310-PSV-009A		Size: 1.5", Make: Tai Milano		Lean Amine Strainer	1			
20	310-PSV-008A		Size: 4", Make: Tai Milano		Surge drum	1			
21	310-PSV-25		Size: 1", Make: Tai Milano		Over head condenser	1			
22	310-PSV-015A		Size: 4", Make: Tai Milano		Reflux drum	1			
23	310-PSV-014		Size: 1", Make: Tai Milano		Amine sump filter	1			
24	310-PSV-016A		Size: 1", Make: Tai Milano		Amine inventory tanks	1			
25	310-PSV-016B		Size: 1", Make: Tai Milano		Amine inventory tanks	1			
26	310-PSV-010B		Size: 6", Make: Tai Milano		Amine Fin fan cooler	1			
27	310-PSV-030B		Size: 1.5", Make: Tai Milano		Antifoam pump	1			
Control Valves Slug Catchers & Amine						Location			
1	210-LCV-001	Dismantling, shifting to W/S, body & trim inspection, lapping of plug/seat (if reqd.), replacement of kits, actuator integrity testing, , Functional Test, Reassembling, reinstallation and onsite Calibration.	1.5"/600	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools.	Eastern Slug Catcher	1			
2	211-LCV-001		1.5"/600		Central Slug Catcher	1			
3	212-LCV-001		1.5"/600		Western Slug Catcher	1			
4	300-PCV-033		6"/300		Gas to Flare	1			
5	310-PCV-033		6"/300		Gas to Flare	1			
6	350-PCV-001		8"/150		Incinerator Inlet Gas	1			
7	960-PCV-005		4"/600		Glycol Contactor	1			
8	960-PCV-003		4"/150		Flash Drum	1			
Flow Transmitters De-Hydration & Amine						Location			
1	300/310 FIT-003	Dismantling, shifting to W/S, inspection, replacement of kits, , Functional Test, reinstallation and onsite Verification through System.	Annubar Flow Transmitters	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools.	Feed Gas	2			
2	300/310 FIT-002				Treated gas	2			
3	400/410 FIT-006				Dehy Inlet gas	2			
4	400/410 FIT-003				Dehy Outlet gas	2			
ESDVs Amine & Hot Oil Section						Location			
1	900-ESDV-001A	Onsite Servicing, Cleaning, Greasing and functional testing and loop verification through CCR	Shutdown Valves	Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Multimeter, consumables	Hot oil heater A/B/C/D inlet	4			
2	900-ESDV-002A				Hot oil heater A/B/C/D outlet	4			
3	310/300-ESDVs				Amine unit 310/300	26			
Transmitters & Switches Slug Catchers Section						Location			
1	210-LT-001	On Site internal Cleaning of level Trol and switches. Sensor cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.	Transmitter & Switches	Spanners Set (In/mm) Screw Drivers Set, Hex Key set, Multi-meter, Pipe Wrench 18", 12", Transparent nylon tube of 1" dia, 10 meter, length, HART Communicator	Eastern Slug catcher	1			
2	210-LSL-002					1			
3	210-LSHH-002					1			
4	211-LT-001				Central Slug catcher	1			
5	211-LSLL-002					1			
6	211-LSHH-002					1			
7	212-LT-001				Western Slug catcher	1			
8	212-LSLL-002					1			
9	212-LSHH-002					1			
10	250-LT-001				Cond. Water Sep	1			
11	250-LT-002					1			
12	250-LSLL-001					1			
13	250-LSHH-001					1			
14	250-LSLL-002					1			
15	250-LSHH-002					1			
16	250-LT-003				Cond. Degassing Boot	1			
17	250-LSLL-003					1			
18	212-LSHH-003					1			
Transmitters & Switches Amine Section						Location			
1	310/300-LT-002				Feed Gas Knockout	2			
2	310/300-LSLL-002					2			
3	310/300-LSHH-002					2			
4	310/300-LT-003					2			

5	310/300-LSLL-003	On Site internal Cleaning of level Troll and switches, Sensor cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.	Transmitter & Switches	Spanners Set (In/mm) Screw Drivers Set, Hex Key set, Multi-meter, Pipe Wrench 18", 12", Transparent nylon tube of 1" dia, 10 meter, length, HART Communicator	Filter Coalescer	2					
6	310/300-LSHH-003				2						
7	310/300-LSLL-014				Amine Contactor	2					
8	310/300-LSHH-014				2						
9	310/300-LT-008 A/B				Reboiler A/B	2					
10	310/300-LSLL-008A/B				2						
11	310/300-LSHH-008A/B				2						
12	310/300-LT-004				2						
13	310/300-LSLL-004				Surge Vessel	2					
14	310/300-LSHH-004				2						
15	990-LT-001				Flare Knockout Vessel	1					
16	990-LSLL-001				1						
17	990-LSHH-001				1						
18	310/300-LT-006				2						
19	310/300-LT-005				2						
20	310/300-LSHH-005				Amine Flash Vessel	2					
21	310/300-LSHH-006				2						
22	310/300-LSLL-005				2						
23	310/300-LSLL-006				2						
24	310/30-LIT-011				2						
25	310/300-LSHH-011				Amine Reflux Vessel	2					
26	310/300-LSLL-011				2						
27	310/300-LIT-009				Amine Stripper	2					
Transmitters & Switches De-hydration Section					Location						
1	410/400 LSLL-001				On Site internal Cleaning of level Troll and switches, Sensor cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.	Transmitter & Switches	Spanners Set (In/mm) Screw Drivers Set, Hex Key set, Multi-meter, Pipe Wrench 18", 12", Transparent nylon tube of 1" dia, 10 meter, length, HART Communicator	Glycol contactor T-101	2		
2	410/400 LSHH-001							2			
3	410/400 LSLL-002							2			
4	410/400LSHH-002	2									
5	410/400 LSLL-005	Flash drum V-103	2								
6	410/400 LSHH-005	2									
7	410/400 LIT-005	2									
8	410/400 LSLL-006	Surge Vessel V-104	2								
9	410/400 LSHH-006	2									
10	410/400 LIT-006	2									
11	410/400 LSLL-003	Over head separator V-102	2								
12	410/400 LSHH-003	2									
13	410-400-LIT-003	2									
14	410/400 LSLL-007	Re boiler E-103	2								
15	410/400 LSHH-007	2									
16	410/400 LIT-007	2									
17	400 LIT-009	Glycol Storage Tank TK-101	1								
Transmitters & Switches Hot Oil Section					Location						
1	900 LSLL-004	On Site internal Cleaning of level Troll and switches, Sensor cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.	Transmitter & Switches	Spanners Set (In/mm) Screw Drivers Set, Hex Key set, Multi-meter, Pipe Wrench 18", 12", Transparent nylon tube of 1" dia, 10 meter, length, HART Communicator	Expansion Vessel V-102	1					
2	900 LSHH-004				1						
3	900 LIT-004				1						
4	900-LSLL-001				1						
5	900 FI-11.01A				1						
6	900 FI-11.01B				Fuel Gas to Heaters	1					
7	900 FI-11.01C				1						
8	900 FI-11.01D				1						
9	900 LIT-002				Sump Vessel V-101	1					

10	900 FI-014A							
11	900 FI-014B							
12	900 FI-014C							
13	900 FI-014D							
Miscellaneous Jobs						Location		
1	Flash Drum 310 FT-005	Replacement of Faulty FT	Blowers, Dampers, O2 Analyzers	Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Multimeter, consumables, HART Communicator	Hot Oil Flow	1		
2	Incinrerator primary blowers actuators calibration/feedback	On Site internal Cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.			Amine T-310	1		
3	All Heaters Blower damper and top damper actuator calibration/servicing at Hot Oil	On Site internal Cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.			Incinrerator	2		
4	All O2 analyzers, conductivity meters calibration/servicing at Hot Oil	On Site internal Cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.			Hot oil	8		
						Amine T300/310/Hot oil	10	
Grand Total in PKR (exclusive of PST/ICT)								

OIL & GAS DEVELOPMENT COMPANY LIMITED
UCH GAS PROCESSING PLANT UCH-II - ATA 2019 (ELECTRICAL SCOPE OF WORK)

Act #	Tag #	Job Description	Specifications	Location	Quantity	Unit Rate in PKR (exclusive of PST/ICT)		
SWITCHGEAR ROOM:								
HT SWITCH GEAR (SIEMENS)								
1	VCB GEN-01	H.T.Modules Inspection, Servicing, Cleaning of VCB's, greasing of moving parts, Tightening of Power Points & all control connections.	Incomer of GT 1	MCC ROOM SIEMENS HT SWITCH GEAR	1			
2	VCB GEN-02		Incomer of GT 2		1			
3	VCB GEN-03		Incomer of GT 3		1			
HT SWITCH GEAR (BUS BAR)								
4	HT-BB	General Inspection, nut bolt Torqueing / servicing and cleaning of Bus Bars.	HT Bus Bar A (6.6 KV, 3150 Amps, 40 KAIC, 50 HZ)	MCC ROOM SCHNIEDER ELECTRIC HT SWITCH GEAR	1			
HT SWITCH GEAR (SCHNEIDER)								
5	300-P105-A	H.T.Modules Inspection, Servicing, Cleaning of VCB's, greasing of moving parts, Tightening of Power Points & all control connections.	AMINE CIRCULATION PUMP MOTOR A (HT Bus B L22)	MCC ROOM SCHNIEDER ELECTRIC HT SWITCH GEAR	1			
6	300-P105-B		AMINE CIRCULATION PUMP MOTOR B (HT Bus B L23)		1			
7	310-P105-A		AMINE CIRCULATION PUMP MOTOR A (HT Bus A L08)		1			
8	310-P105-B		AMINE CIRCULATION PUMP MOTOR B (HT Bus A L09)		1			
9	900-P102-A		HOT OIL PUMP MOTOR A (HT Bus A L06)		1			
10	900-P102-B		HOT OIL PUMP MOTOR B (HT Bus A L05)		1			
11	900-P102-C		HOT OIL PUMP MOTOR C (HT Bus A L04)		1			
12	900-P102-D		HOT OIL PUMP MOTOR D (HT Bus A L03)		1			
13	900-P102-E		HOT OIL PUMP MOTOR E (HT Bus B L24)		1			
14	900-P102-F		HOT OIL PUMP MOTOR F (HT Bus B L25)		1			
15	900-P102-G		HOT OIL PUMP MOTOR G (HT Bus B L26)		1			
16	900-P102-H		HOT OIL PUMP MOTOR H (HT Bus B L27)		1			
17	900-P102-I		HOT OIL PUMP MOTOR I (HT Bus A L02)		1			
18	900-P102-J		HOT OIL PUMP MOTOR J (HT Bus B L28)		1			
19	VCB-UCH-I		Incomer Feeder from UCH-I (HT Bus A L11)		1			
20	VCB-TRAFO 1		Outgoing Feeder of Transformer 1 (HT Bus A L10)		1			
21	VCB-TRAFO 2		Outgoing Feeder of Transformer 2 (HT Bus B L21)		1			
22	HT-SP-FD-03		Uch Resedential Colony Feeder 220 KW (HT Bus A L01)		1			
23	HT-BC-01		Bus Coupler 1 (HT Bus A L13)		1			
24	HT-BC-02		Bus Coupler 2 (HT Bus B L19)		1			
25	300-MVSS-A		Soft Starter AMINE CIRCULATION PUMP MOTOR A (HT Bus B)		1			
26	300-MVSS-B		Soft Starter AMINE CIRCULATION PUMP MOTOR B (HT Bus B)		1			
27	310-MVSS-A		SOFT STARTER AMINE CIRCULATION PUMP MOTOR A (HT Bus A)		1			
28	310-MVSS-B		SOFT STARTER AMINE CIRCULATION PUMP MOTOR B (HT Bus A)		1			
ACB's								
29	BUSB-6300A- ACB		Servicing/greasing of moving parts/general cleaning, Function testing of ACBs		LT Main Incomer ACB of Transformer B (LT Bus B R1-P19)	MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR	1	
30	BUSA-6300A- ACB				LT Main Incomer ACB of Transformer A (LT Bus A R1-P16)		1	
31	LT-BC-A/B				LT ACB 6300 Amps, Bus Coupler A/B (R1-P17)		1	
32	LT-BC-B/C	LT ACB 4000 Amp, Bus Coupler B/C (R4-P12)		1				
33	ATS-PNL-01	ACB 1600 Amp ATS Incomer and Controller (LT Bus C R4-P05)		1				
LT SWITCH GEAR (BUS BAR)								
34	LT-BB	General Inspection, nut bolt Torqueing / servicing and cleaning of Bus Bars.	LT Bus Bar (0.4 KV, 6300 Amps, 100 KAIC, 50 HZ)	MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR	1			
AMINE TRAIN-I								
35	300-C101-1A to 2H		AIR COOLER FAN MOTOR PANELS (11KW VFD)		16			
36	300-C103-A		LEAN AMINE COOLER FAN MOTOR A (37KW VFD LT Bus A R1-P12)		1			
37	300-C103-B		LEAN AMINE COOLER FAN MOTOR B (37KW VFD LT Bus A R1-P11)		1			

38	300-C103-C	<p>L.T. Modules Inspection, Servicing, Cleaning of Thermal Relays, Aux. Contactors and Power Points, Tightening of all connections.</p>	LEAN AMINE COOLER FAN MOTOR C (37KW VFD LT Bus A R1-P10)	<p>MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR</p>	1	
39	300-C103-D		LEAN AMINE COOLER FAN MOTOR D (37KW VFD LT Bus A R1-P09)		1	
40	300-P104-A		AMINE BOOSTER PUMP MOTOR A (ASD LT Bus B R1-P23)		1	
41	300-P104-B		AMINE BOOSTER PUMP MOTOR B (ASD LT Bus B R1-P25)		1	
42	300-P106-A		REGENERATOR REFLEX PUMP MOTOR A (LT Bus B R1-P24)		1	
43	300-P106-B		REGENERATOR REFLEX PUMP MOTOR B (LT Bus B R1-P26)		1	
44	300-P107-A		AMINE TRANSFER PUMP MOTOR A (LT Bus A R4-P02)		1	
45	300-P107-B		AMINE TRANSFER PUMP MOTOR B (LT Bus A R3-P15)		1	
46	300-P109		AMINE SUMP PUMP MOTOR (LT Bus B R1-P20)		1	
47	300-P110-A		ANTI FOAM INJECTION PUMP MOTOR		1	
48	300-P110-B		ANTI FOAM INJECTION PUMP MOTOR		1	
49	300-P111-A	COOLING WATER PUMP MOTOR A (185KW VFD LT Bus B R3-P17)	1			
50	300-P111-B	COOLING WATER PUMP MOTOR B (185KW VFD LT Bus B R1-P21)	1			
AMINE TRAIN-II						
51	310-C101-1A to 2H	<p>L.T. Modules Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors, Power Points, Tightening of all connections.</p>	AIR COOLER FAN MOTOR 1A (11KW VFD)	<p>MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR</p>	16	
52	310-C103-A		LEAN AMINE COOLER FAN MOTOR A (37KW VFD LT Bus A R1-P08)		1	
53	310-C103-B		LEAN AMINE COOLER FAN MOTOR B (37KW VFD LT Bus A R1-P05)		1	
54	310-C103-C		LEAN AMINE COOLER FAN MOTOR C (37KW VFD LT Bus A R1-P02)		1	
55	310-C103-D		LEAN AMINE COOLER FAN MOTOR D (37KW VFD LT Bus A R1-P03)		1	
56	310-P104-A		AMINE BOOSTER PUMP MOTOR A (ASD LT Bus A R2-P03)		1	
57	310-P104-B		AMINE BOOSTER PUMP MOTOR B (ASD LT Bus A R3-P11)		1	
58	310-P106-A		REGENERATOR REFLEX PUMP MOTOR A (LT Bus A R3-P15)		1	
59	310-P106-B		REGENERATOR REFLEX PUMP MOTOR B (LT Bus A R3-P14)		1	
60	310-P107-A		AMINE TRANSFER PUMP MOTOR A (LT Bus A R3-P13)		1	
61	310-P107-B		AMINE TRANSFER PUMP MOTOR B (LT Bus A R3-P12)		1	
62	310-P109		AMINE SUMP PUMP MOTOR (LT Bus A R3-P12)		1	
63	300-P110-A		ANTI FOAM INJECTION PUMP MOTOR		1	
64	300-P110-B		ANTI FOAM INJECTION PUMP MOTOR		1	
65	310-P111-A	COOLING WATER PUMP MOTOR A (185KW VFD LT Bus A R1-P01)	1			
66	310-P111-B	COOLING WATER PUMP MOTOR B (185KW VFD LT Bus A R2-P01)	1			
INCINERATOR MODULES						
67	350-C101-A	<p>L.T. Modules Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors, Power Points, Tightening of all connections.</p>	INCINERATOR PRIMARY BLOWER MOTOR A (132 kW S.S LT Bus A R1-P15)	<p>MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR</p>	1	
68	350-C101-B		INCINERATOR PRIMARY BLOWER MOTOR B (132 kW S.S LT Bus A R1-P13)		1	
69	350-C102-A		INCINERATOR SECONDARY BLOWER MOTOR A (55 KW S.S LT Bus A R2-		1	
70	350-C102-B		INCINERATOR SECONDARY BLOWER MOTOR B (55 KW S.S LT Bus A R2-		1	
71	350-C102-C		INCINERATOR SECONDARY BLOWER MOTOR C (55 KW S.S LT Bus A R2-		1	
72	350-C103-A		INCINERATOR PILOT BLOWER A (LT Bus A R2-P16)		1	
73	350-C103-B		INCINERATOR PILOT BLOWER B (LT Bus A R2-P16)		1	
DEHY-1 & 2						
74	400-P101-A	<p>L.T. Modules Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors, Power Points, Tightening of all connections.</p>	GLYCOL CIRCULATION PUMP MOTOR A (LT Bus A R3-P14)	<p>MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR</p>	1	
75	400-P101-B		GLYCOL CIRCULATION PUMP MOTOR B (LT Bus A R3-P13)		1	
76	400-P104		GLYCOL MAKE-UP PUMP MOTOR (LT Bus B R1-P26)		1	
77	410-P101-A		GLYCOL CIRCULATION PUMP MOTOR A (LT Bus A R3-P08)		1	
78	410-P101-B		GLYCOL CIRCULATION PUMP MOTOR B (LT Bus B R1-P27)		1	
79	410-P102		GLYCOL SUMP PUMP MOTOR (LT Bus B R1-P25)		1	
HOT OIL LV MODULES						
80	900-C52-A	<p>L.T. Modules Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors, Power Points, Tightening of all connections.</p>	Hot Oil FD Blower Fan Motor A (LT Bus A R3-P13)	<p>MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR</p>	1	
81	900-C52-B		Hot Oil FD Blower Fan Motor B (LT Bus A R3-P08)		1	
82	900-C52-C		Hot Oil FD Blower Fan Motor C (LT Bus A R3-P07)		1	
83	900-C52-D		Hot Oil FD Blower Fan Motor D (LT Bus B R1-P20)		1	
84	900-P101		Hot Oil Make-up Pump Motor (LT Bus B R4-P15)		1	
CPI & FLARE KNOCKOUT LV MODULES						
85	940-P101-A	<p>L.T. Modules Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors,</p>	Slop Pump Motor A (LT Bus A R3-P11)	<p>MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GFAR</p>	1	
86	940-P101-B		Slop Pump Motor B (LT Bus B R1-P20)		1	
87	990-P101-A		Flare Knock Out Drum Pump Motor A (LT Bus A R3-P08)		1	

88	990-P101-B	Power Points, Tightening of all connections.	Flare Knock Out Drum Pump Motor B (LT Bus A R3-P07)		1	
UTILITY AREA MODULES						
89	920-P102-A	L.T. Modules Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors, Power Points, Tightening of all connections.	RAW WATER PUMP MOTOR A (LT Bus A R2-P11)	MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR	1	
90	930-P102-B		RAW WATER PUMP MOTOR B (LT Bus A R2-P16)		1	
91	930-P103-A		UTILITY WATER PUMP MOTOR A (LT Bus A R2-P08)		1	
92	930-P103-B		UTILITY WATER PUMP MOTOR B (LT Bus A R3-P12)		1	
93	930-P104-A		DIMIN WATER PUMP MOTOR A (LT Bus A R3-P15)		1	
94	930-P104-B		DIMIN WATER PUMP MOTOR B (LT Bus A R3-P14)		1	
CONDENSATE & HSD MODULES						
95	250-P101-A	L.T. Modules Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors, Power Points, Tightening of all connections.	Condensate Transfer Pump Motor A (LT Bus B R1-P26)	MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR	1	
96	250-P101-B		Condensate Transfer Pump Motor B (LT Bus A R3-P14)		1	
97	800-P101-A		HSD Pump Motor A (LT Bus A R2-P03)		1	
98	800-P101-B		HSD Pump Motor B (LT Bus A R4-P02)		1	
LV FEEDERS						
99	FD-LT-01	L.T. Modules Inspection, Cleaning and Tightening of all connections.	16 A Flood Lighting Feeder	MCC ROOM SCHNIEDER ELECTRIC LT SWITCH GEAR	1	
100	410-HT-002-FD		Feeder Self Regulating Cable (LT Bus B R2-P19)		1	
101	410-HT-001-FD		Feeder Self Regulating Cable (LT Bus B R2-P19)		1	
102	DB-GR1		Feeder Guard Room-1 (LT Bus B R2-P19)		1	
103	FD-IS-05		Industrial Socket 63A Feeder (LT Bus B R2-P20)		1	
104	FD-IS-03		Industrial Socket 63A Feeder (LT Bus B R2-P20)		1	
105	DB-GR2 FEEDER		Guard room-2 Feeder (LT Bus B R2-P21)		1	
106	DB-OPR-FD-01		Operator Room 50.52 A Feeder (LT Bus B R2-P21)		1	
107	FD-IS-06		Industrial Socket 63A Feeder (LT Bus B R2-P21)		1	
108	FD-IS-04		Industrial Socket 63A Feeder (LT Bus B R2-P21)		1	
109	DB-ADM-FD-01		Admin Building 252.6A Feeder (LT Bus B R2-P21)		1	
110	DB-GR3 FEEDER		Guard Room-3 Feeder (LT Bus B R2-P22)		1	
111	FD-IS-08		Industrial Socket 63A Feeder (LT Bus B R2-P22)		1	
112	DB-ADM-FD-02		Admin Building 252.6A Feeder (LT Bus B R2-P22)		1	
113	300-LCP-104-FD		Control Injection Station LCP Feeder (LT Bus A R4-P03)		1	
114	310-LCP-104-FD		Control Injection Station LCP Feeder (LT Bus A R4-P03)		1	
115	920-P-102-B-FD		Diesel Engine Driven Pump Controller Feeder (LT Bus A R4-P03)		1	
116	LTDB-1 FEEDER		MCC Room Lighting Distribution Board 200A Feeder (LT Bus C R4-P06)		1	
117	980-C101-FD		Nitrogen Package, 122 KW Feeder (LT Bus C R4-P06)		1	
118	WHRU-MCC-FD		WHRU-MCC Feeder, 250 KW Feeder (LT Bus C R4-P06)		1	
119	LTDB-3 FEEDER		MCC Room Lighting Distribution No.3, 75 A Feeder (LT Bus C R4-P07)		1	
120	LTDB-2 FEEDER		CCR Room Lighting Distribution Board 2, 200 A Feeder (LT Bus C R4-P07)		1	
121	UPS-01-FD		UPS Supply, 80 KW Feeder (LT Bus C R4-P07)		1	
122	CPI 1 FEEDER		6KW Feeder (LT Bus C R4-P09)		1	
123	CPI 2 FEEDER		6 KW Feeder (LT Bus C R4-P09)		1	
124	970-C101-FD		Instrument Air Package 185 KW Feeder (LT Bus C R4-P09)		1	
125	310-RCT-401-FD		HSS Rectifier 5 KW Feeder (LT Bus A R4-P02)		1	
126	300-LCP-102-FD		Biocide and Injection Station LCP 2 KW Feeder (LT Bus A R4-P02)		1	
127	920-P102-A-FD		Diesel Engine Driven Pump Controller 4.6 KW Feeder (LT Bus A R4-P02)		1	
128	920-P103-A-FD		Electric Motor Driven Jockey Pump Controller 25 KW Feeder (LT Bus A R4-P02)		1	
129	MV-CNTRL-SS-01		Control Supply of MV Soft Starters 25KW Feeder (LT Bus A R3-P03)		1	
130	400-HT-002-FD		Self Regulating Cable 1.5 KW Feeder (LT Bus A R3-P04)		1	
131	E-103A		Electric Heater 3 KW Feeder (LT Bus A R3-P04)		1	
132	FGS-SKD-01		Foam Generating Skid Motor 22 KW Feeder (LT Bus A R3-P04)		1	
133	400-HT-001-FD		Self Regulating Cables 1.5 KW Feeder (LT Bus A R3-P05)		1	
134	950-P101-FD		Oily Water Package 25 KW Feeder (LT Bus A R3-P05)		1	
135	950-P102-FD		Raw Water Treatment Multimedia Filter Package 130 KW Feeder (LT Bus A R3-P05)		1	
136	LDB-INCOM-01		Main Lighting Distribution Board 630 A (LT Bus B R2-P19)		1	
137	300-RCT-401-FD		HSS Rectifier 5 KW Feeder (LT Bus A R3-P06)		1	
138	4 TON A/C'S SUPPL	Power Supply of Floor Standing A/C Units 25 KW Feeder (LT Bus A R3-P06)	1			
139	920-P101-A-FD	Electric Motor Driven Fire Water Pump Controller 160 KW Feeder (LT Bus A R3-P06)	1			

140	DB-WT4 FEEDER	Watch Tower 4, 25 A Feeder (LT Bus B R3-P22)	1	
141	FD-IS-01	Industrial Socket 63A Feeder (LT Bus B R3-P22)	1	
142	FD-IS-02	Industrial Socket 63A Feeder (LT Bus B R3-P22)	1	
143	FD-IS-09	Industrial Socket 63A Feeder (LT Bus B R3-P22)	1	
144	SGT 1-MCC-FD	555 KW Feeder of SGT MCC-1 (LT Bus C R4-P10)	1	
145	SGT 2 MCC-FD	555 KW Feeder of SGT MCC-2 (LT Bus C R4-P10)	1	
146	SGT 3-MCC-FD	555 KW Feeder of SGT MCC-3 (LT Bus C R4-P11)	1	
147	900-HT-01-FD	Hot Oil Heat Trace Supply of Hot Oil,186KW Amp Feeder (LT Bus A R3-P04)	1	
148	900-HT-02-FD	Hot Oil Heat Trace Supply, 200 Amp Feeder (LT Bus B R3-P22)	1	
149	FD-IS-07	Industrial Socket 63A Feeder (LT Bus B R2-P22)	1	
150	LDB-INCOM-01	Main Lighting Distribution Board 630 A (LT Bus B R2-P19)	1	
151	LDB-A-FD	LDB-A 100 Amp (Lighting Bus R4)	1	
152	LDB-B-FD	LDB-B 125 Amp (Lighting Bus R4)	1	
153	LDB-C-FD	LDB-C 160 Amp (Lighting Bus R4)	1	
154	LDB-D-FD	LDB-D 125 Amp (Lighting Bus R4)	1	
155	MLDB-MCC	Main Lighting Distribution Board (Incomer 630 Amp)	1	
156	300-HT-101-FD	Heat Tracing Power Supply 1.5 KW Feeder (LT Bus A R3-P06)	1	
SGT 1,2 & 3 MCC LV MODULES				
157	XM1-SGT1	Auxiliary Lube Oil Pump Motor (SGT-1 MCC)	1	
158	XM1-SGT2	Auxiliary Lube Oil Pump Motor (SGT-2 MCC)	1	
159	XM1-SGT3	Auxiliary Lube Oil Pump Motor (SGT-3 MCC)	1	
160	XM105-SGT1	Liquid fuel Treatment Skid Motor (SGT-1 MCC)	1	
161	XM105-SGT2	Liquid fuel Treatment Skid Motor (SGT-2 MCC)	1	
162	XM105-SGT3	Liquid fuel Treatment Skid Motor (SGT-3 MCC)	1	
163	XM11-SGT1	Air Blast Lube Oil Cooler Fan Motor A (SGT-1 MCC)	1	
164	XM11-SGT2	Air Blast Lube Oil Cooler Fan Motor A (SGT-2 MCC)	1	
165	XM11-SGT3	Air Blast Lube Oil Cooler Fan Motor A (SGT-3 MCC)	1	
166	XM19-SGT1	Secondary Air Fan Motor(SGT-1 MCC)	1	
167	XM19-SGT2	Secondary Air Fan Motor (SGT-2 MCC)	1	
168	XM19-SGT3	Secondary Air Fan Motor (SGT-3 MCC)	1	
169	XM24-SGT1	Liquid Fuel Treatment Forwarding Skid Motor (SGT-1 MCC)	1	
170	XM24-SGT2	Liquid Fuel Treatment Forwarding Skid Motor (SGT-2 MCC)	1	
171	XM24-SGT3	Liquid Fuel Treatment Forwarding Skid Motor (SGT-3 MCC)	1	
172	XM3-SGT1	Hydraulic Start System Pump Motor (SGT-1 MCC)	1	
173	XM3-SGT2	Hydraulic Start System Pump Motor (SGT-2 MCC)	1	
174	XM3-SGT3	Hydraulic Start System Pump Motor (SGT-3 MCC)	1	
175	XM33-SGT1	Air Blast Lube Oil Cooler Fan Motor B (SGT-1 MCC)	1	
176	XM33-SGT2	Air Blast Lube Oil Cooler Fan Motor B (SGT-2 MCC)	1	
177	XM33-SGT3	Air Blast Lube Oil Cooler Fan Motor B (SGT-3 MCC)	1	
178	XM42-SGT1	Vent Filter Bleed Fan Motor (SGT-1 MCC)	1	
179	XM42-SGT2	Vent Filter Bleed Fan Motor (SGT-2 MCC)	1	
180	XM42-SGT3	Vent Filter Bleed Fan Motor (SGT-3 MCC)	1	
181	XM5-SGT1	Liquid Fuel Pump Motor (SGT-1 MCC)	1	
182	XM5-SGT2	Liquid Fuel Pump Motor (SGT-2 MCC)	1	
183	XM5-SGT3	Liquid Fuel Pump Motor (SGT-3 MCC)	1	
184	XM52-SGT1	Generator CACA Fan A (SGT-1 MCC)	1	
185	XM52-SGT2	Generator CACA Fan A (SGT-2 MCC)	1	
186	XM52-SGT3	Generator CACA Fan A (SGT-3 MCC)	1	
187	XM53-SGT1	Generator CACA Fan B (SGT-1 MCC)	1	
188	XM53-SGT2	Generator CACA Fan B (SGT-2 MCC)	1	
189	XM53-SGT3	Generator CACA Fan B (SGT-3 MCC)	1	
190	XM6-SGT1	Main Enclosure Vent Fan (SGT-1 MCC)	1	
191	XM6-SGT2	Main Enclosure Vent Fan (SGT-2 MCC)	1	
192	XM6-SGT3	Main Enclosure Vent Fan (SGT-3 MCC)	1	
193	XM7-SGT1	Standby Enclosure Vent Fan (SGT-1 MCC)	1	

L.T. Modules
 Inspection, Servicing, Cleaning, Testing of
 Contactors, Thermal Relays, Aux. Contactors,
 Power Points, Tightening of all connections.

MCC ROOM
SIEMENS LV MCC PANEL

194	XM7-SGT2		Standby Enclosure Vent Fan (SGT-2 MCC)		1	
195	XM7-SGT3		Standby Enclosure Vent Fan (SGT-3 MCC)		1	
196	XM70-SGT1		Air Blast Lube Oil Cooler Fan Motor C (SGT-1 MCC)		1	
197	XM70-SGT2		Air Blast Lube Oil Cooler Fan Motor C (SGT-2 MCC)		1	
198	XM70-SGT3		Air Blast Lube Oil Cooler Fan Motor C (SGT-3 MCC)		1	
WHRU MCC LV MODULES						
199	WHRU-05		GT 1 Seal Air Fan Main Motor (4 KW)		1	
200	WHRU-06		GT 1 Seal Air Fan Stand By Motor (4 KW)		1	
201	WHRU-07		GT 2 Seal Air Fan Main Motor (4 KW)		1	
202	WHRU-08		GT 2 Seal Air Fan Stand By Motor (4 KW)		1	
203	WHRU-09		GT 3 Seal Air Fan Main Motor (4 KW)		1	
204	WHRU-10		GT 3 Seal Air Fan Stand By Motor (4 KW)		1	
SIEMENS GAS TURBINES						
205	PMG-SGT1	Checking of Generators' connections, Exciters, & PMGs. Inspection and removal of dust and webs. Cleaning & Washing of Generator's Iner/outer body.	PMG Exciter of SGT Generator 1	POWER GENERATION AREA	1	
206	PMG-SGT2		PMG Exciter of SGT Generator 2		1	
207	PMG-SGT3		PMG Exciter of SGT Generator 3		1	
208	SGT-GEN1		SGT-1 Generator		1	
209	SGT-GEN2		SGT-2 Generator		1	
210	SGT-GEN3		SGT-3 Generator		1	
Battery Charger and Battery Bank						
211		Inspection, Cleaning, Checking And Tightening of connections, Chargers & Battery bank Cabinets. Batteries Inspection, load testing, tightening, greasing of connections & Servicing.	24 VDC Battery Chargers and Battery Banks Of SGTs	UPS/Battery Room	3	
212			110 VDC Battery Charger and Battery Bank (SIEMENS)		1	
213			110 VDC Battery Charger and Battery Bank (SCHNEIDER)		1	
UPS and Battery Bank						
214		Inspection/ Preventive maintenance on by pass mode and general cleaning. Batteries Inspection, load testing, tightening, greasing of connections & Servicing.	80 KVA UPS & Battery Bank.	UPS Room	1	
DB's						
215	LDB-A	Inspection, Servicing, Cleaning, Testing of Contactors, Thermal Relays, Aux. Contactors, Power Points, Tightening of all connections.	LDB-A (Oily Water Area)	PLANT AREA	1	
216	LDB-B		LDB-B (Admin Building Area)		1	
217	LDB-C		LDB-C (Gas Gathering Area)		1	
218	LDB-D		LDB-D (Dehydration 2 Area)		1	
219	ADMIN2-LTDB 01		Distribution Board 01 (Admin Building Area)	UCH-II ADMIN BUILDING	1	
220	ADMIN2-LTDB 02		Distribution Board 01 (Admin Building Area)		1	
221	LCP-920-P101 A		Local Control Panel of Fire Water Pump A (Utility Area)	UTILITY AREA	1	
222	LCP-920-P101 B		Local Control Panel of Fire Water Pump B (Utility Area)		1	
223	LCP-920-P103 A		Local Control Panel of Jockey Pump A (Utility Area)		1	
224	LCP-920-P103-B		Local Control Panel of Jockey Pump B (Utility Area)		1	
225	LCP-950-P102		Local Control Panel of RO Plant (Utility Area)		1	
226	LCP-MMF-LCP-001		Local Control Panel of Multi Media Filter System (Utility Area)		1	
227	LCP-950-P101/ 102		Local Control Panel of Oily Water Package (CPI Area)	CPI AREA	1	
228	OPR-PDB-4		Operator Change Room Distribution Board (Operator Change Room)	Operator Change Room	1	
229	DCP-970-C101		Distribution Control Panel of Instrument Air Compressors (Compressor Area)	COMPRESSOR AREA	1	
230	LCP-970-C101-A		Local Control Panel of Insrument Air Compressors A (Compressor Area)		1	
231	LCP-970-C101-B		Local Control Panel of Insrument Air Compressor B (Compressor Area)		1	
232	DCP-980-C101		Distribution Control Panel of Nitrogen Compressors (Compressor Area)		1	
233	LCP-980-C101 A		Local Control Panel of Nitrogen Compressor A (Compressor Area)		1	
234	LCP-980-C101 B		Local Control Panel of Nitrogen Compressor B (Compressor Area)		1	
235	HCP-980-C101		Heater Control Panel of Nitrogen Compressors (Compressor Area)	HOT OIL AREA	1	
236	LCP-900-HTP-001		Heat Trace Distribution Panel 1 Exd for Hot Oil Package (Hot Oil Area)		1	
237	LCP-900-HTP-002		Heat Tracing Power Supply Distribution Board (Hot Oil Area)		1	

IGNITORS						
238	IG-SGT1	Inspection, Servicing, Cleaning and Tightening of all connections.	AC Ignitor SGT1	POWER GENERATION AREA	2	
239	IG-SGT2		AC Ignitor SGT2		2	
240	IG-SGT3		AC Ignitor SGT3		2	
241	350-H101-IG1		Incinerator Ignitor-1	INCINERATOR AREA	1	
242	350-H101-IG2		Incinerator Ignitor-2		1	
243	350-H101-IG3		Incinerator Ignitor-3		1	
244	900-H101A-IG1		Hot Oil Fired Heater A Ignitor-1	HOT OIL AREA	1	
245	900-H101A-IG2		Hot Oil Fired Heater A Ignitor-2		1	
246	900-H101A-IG3		Hot Oil Fired Heater A Ignitor-3		1	
247	900-H101A-IG4		Hot Oil Fired Heater A Ignitor-4		1	
248	900-H101B-IG1		Hot Oil Fired Heater B Ignitor-1		1	
249	900-H101B-IG2		Hot Oil Fired Heater B Ignitor-2		1	
250	900-H101B-IG3		Hot Oil Fired Heater B Ignitor-3		1	
251	900-H101B-IG4		Hot Oil Fired Heater B Ignitor-4		1	
252	900-H101C-IG1		Hot Oil Fired Heater C Ignitor-1		1	
253	900-H101C-IG2		Hot Oil Fired Heater C Ignitor-2		1	
254	900-H101C-IG3		Hot Oil Fired Heater C Ignitor-3		1	
255	900-H101C-IG4		Hot Oil Fired Heater C Ignitor-4		1	
256	900-H101D-IG1		Hot Oil Fired Heater D Ignitor-1		1	
257	900-H101D-IG2		Hot Oil Fired Heater D Ignitor-2		1	
258	900-H101D-IG3		Hot Oil Fired Heater D Ignitor-3		1	
259	900-H101D-IG4		Hot Oil Fired Heater D Ignitor-4		1	
260			Flare Ignition Panel	FLARE AREA	1	
TRANSFORMERS						
261	TRAFO-1		Inspection, servicing and general cleaning of BT/D, Power/ control connections of HT/ LT side and calibration/ testing of instruments of	4000 KVA Transformer A (6.6 KV/ 415 Vac, 50 HZ KNAN type)	TRANSFORMER AREA	1
262	TRAFO-2			4000 KVA Transformer B (6.6 KV/ 415 Vac, 50 HZ KNAN type)		1
263	TRAFO-3	Inspection, servicing and general cleaning , Power connections tightening of HT/ LT side of transformer.		500 KVA Transformer (11 KV/ 415 Vac, 50 HZ ONAN type)		1
MISC. SERVICES						
264		Maintenance , cleaning, refurbishment, replacement (if required) of skid and ploe lights	Job on Skid and Pole lights	Whole Plant	50	
265		Cleaning, testing and resistivity measurement of Earth pits & watering of earth pits	Earth Resistance Measurement		153	
266		Allied Services for Electric Supply At Different Locations of Plant.	Allied Services		01 Job	
AMINE-I & II, PLANT AREA MOTORS						
267	300-P105 A	H.T (6.6KV) MOTORS Cleaning of motor and heat exchanger, Meggering Of Windings, Inspection, Tightening Of Connections In JBs, And Earth connections. Replacement of Bearings Not Required	Amine Circulation P. Motor, 6.6kv, 121.4 A, 1200 kw	AMINE-I	1	
268	300-P105 B				1	
269	310-P105 A				AMINE-II	1
270	310-P105 B		Amine Circulation P. Motor, 6.6kv, 121.4 A, 1200 kw		1	
271	300-P104 A	L.T (400V) MOTORS	Amine Booster P. Motor, 400V, 158A, 90 KW	AMINE-I	1	
272	300-P104 B				1	
273	310-P104 A			Amine Booster P. Motor, 400V, 158A, 90 KW	AMINE-II	1
274	310-P104 B					1
275	300-P106 A			Amine Reg. Reflux P. Motor, 400V, 13.5A, 7.5 KW	AMINE-I	1
276	300-P106 B					1
277	310-P106 A			Amine Reg. Reflux P. Motor, 400V, 13.5A, 7.5 KW	AMINE-II	1
278	310-P106 B					1
279	300-P107 A			Amine Transfer P. Motor, 400V, 3.9A, 1.5 KW	AMINE-I	1
280	300-P107 B					1
281	310-P107 A			Amine Transfer P. Motor, 400V, 3.9A, 1.5 KW	AMINE-II	1

282	310-P107 B	LT (400V) MOTORS Cleaning, Greasing & Replacement Of Bearings (If Required), Meggering Of Windings, Inspection, Tightening Of Connections In JB's, And Earth connections.	AMINE Transfer P. Motor, 400V, 23A, 11KW	AMINE-II	1					
283	300-P109		Amine Sump P. Motor, 400V, 21 A, 11KW	AMINE-I	1					
284	310-P109			AMINE-II	1					
285	300-P110 A		Anti foam Injection P. Motor,400V, 1.72A, 0.55 KW	AMINE-I	1					
286	300-P110 B				1					
287	310-P110 A		Anti foam Injection P. Motor,400V, 1.72A, 0.55 KW	AMINE-II	1					
288	310-P110 B				1					
289	300-C103 A				1					
290	300-C103 B			AMINE-I	1					
291	300-C103 C				1					
292	300-C103 D				1					
293	310-C103 A		AMINE Cooler Fans, 400V, 70.5A, 37KW		1					
294	310-C103 B			AMINE-II	1					
295	310-C103 C			1						
296	300-C103 D			1						
COOLING TOWER 1 & 2 AREA MOTORS										
297	300-P111 A	LT (400V) MOTORS Cleaning, Greasing & Replacement Of Bearings (If Required), Meggering Of Windings, Inspection, Tightening Of Connections in JB's and Earth connections.	Cooling Water Pump Motor, 400V, 330A,185KW	AMINE-I, Cooling Tower-1	1					
298	300-P111 B					1				
299	300-C101 1A to 2H		Cooling Water Air Fan Motor, 400V, 23A, 11KW			16				
300	310-P111 A		Cooling Water Pump Motor, 400V, 330A,185KW	AMINE-II, Cooling Tower-2	1					
301	310-P111 B					1				
302	310-C101 1A to 2H		Cooling Water Air Fan Motor, 400V, 23A, 11KW			16				
DEHYDRATION 1 & 2 AREA MOTORS										
303	400-P101 A	LT (400V) MOTORS Cleaning, Greasing & Replacement Of Bearings (If Required), Meggering Of Windings, Inspection, Tightening Of Connections in JB's and Earth connections.	Glycol Circulation Pump Motor, 400V, 45.9A, 25.5KW	DHY-1	1					
304	400-P101 B					1				
305	410-P101 A			DHY-2	1					
306	410-P101 B				1					
307	400-P104		Glycol Makeup Pump Motor, 400V, 3.9A, 1.5KW	DHY-1	1					
308	400-P105 A		Anti Foam Injection Pump Motor, 400V, 1.72A, 0.55KW			1				
309	400-P105 B					1				
310	400-P106 A		PH Controller Injection Pump Motor, 400V, 1.72A, 0.55KW			1				
311	400-P106 B			DHY-2	1					
312	410-P102		Glycol Sump Pump Motor, 400V, 10.2A, 5.5KW			1				
313	410-P105 A		Anti Foam Injection Pump Motor, 400V, 1.72A, 0.55KW			1				
314	410-P105 B					1				
315	410-P106 A		PH Controller Injection Pump Motor, 400V, 1.72A, 0.55KW			1				
316	410-P106 B					1				
HOT OIL SYSTEM AREA MOTORS										
317	900-P102 A		M.V (6.6KV) MOTORS Cleaning of motor, Meggering Of Windings, Inspection, Tightening Of Connections In JB's and Earth connections. Replacement of Bearings if required	Hot Oil Circulation pump Motor, 6.6 KV, 22.3 A, 220 KW	HOT OIL AREA	1				
318	900-P102 B						1			
319	900-P102 C						1			
320	900-P102 D						1			
321	900-P102 E						1			
322	900-P102 F						1			
323	900-P102 G						1			
324	900-P102 H						1			
325	900-P102 I						1			
326	900-P102 J						1			
327	900-C520 A	LT (400V) MOTORS Cleaning, Greasing & Replacement Of Bearings (If Required), Meggering Of Windings, Inspection, Tightening Of Connections in JB's and Earth connections.				Hot Oil F.D Fan Motor, 400 V, 53 A, 30 KW		1		
328	900-C520 B								1	
329	900-C520 C								1	
330	900-C520 D								1	
331	900-P101		Hot Oil Make up (ump Motor, 400 V, 14.7A, 7.5 KW		1					
POWER GENERATION (TURBINE) AREA MOTORS										
332	XM 11	ABLOC Fan Motor 400V, 12.3A, 5.5KW			3					

333	XM 33				3	
334	XM 70				3	
335	XM 52			Gen: CACA Fan Motor 400V. 13.75A, 7kw	2	
336	XM 53				2	
337	XM 54				2	
338	XM 1	LT (400V) MOTORS	Auxiliary Lube Oil Pump Motor, 400V, 18.6A, 9.5KW		3	
339	XM 2	Cleaning, Greasing & Replacement Of Bearings	Emergency DC Lube Oil Pump Motor, 24Vdc, (32, 2.4)A, 0.46KW		3	
340	XM 3	(If Required), Meggering Of Windings, Inspection,	Hydraulic Start Motor		3	
341	XM 5	Tightening Of Connections In Jbs and Earth	Liquid Fuel Pump Motor, 400V, 24.5A, 13KW	SIEMENS Gas Turbines-1,2&3	3	
342	XM 6	connections.	Enclosure Vent Fan Main Motor 400V, 53A, 36KW		3	
343	XM 7		Enclosure Vent Standby Motor 400V, 53A, 36KW		3	
344	XM-105		Liquid Fuel Treatment Skid Motor, 400V, A, KW		3	
345	XM-24		Liquid Fuel Treatment Forwarding Skid Motor, 400V, A, KW		3	
346	XM-42		Vent Filter Bleed Fan Motor, 400V, 2.2A, 1.10KW		3	
347	XM-19		Secondary Air Fan Motor, 400V, 3.0A, 1.5KW		3	
348			Seal Air Fan Motor (Main)		3	
349			Seal Air Fan Motor (Standby)		3	
INCINERATOR AREA MOTORS						
350	350-C101 A		Incinerator Primary Blower Motor, 400V, 233A, 132KW		1	
351	350-C101 B	LT (400V) MOTORS			1	
352	350-C102 A	Cleaning, Greasing & Replacement Of Bearings	Incinerator Secondary Blower Motor, 400V, 98.9A, 55KW	Incinerator	1	
353	350-C102 B	(If Required), Meggering Of Windings, Inspection,			1	
354	350-C102 C	Tightening Of Connections In Jbs and Earth			1	
355	350-C103 A	connections.	Incinerator Pilot Blower Motor, 400V, 11.5A, 5.5KW		1	
356	350-C103 B				1	
R.O PLANT, AREA MOTORS						
357	930-P102 A-P1 A		R.O Feed Water Pump Motor, 400V, 19.8A, 11KW		1	
358	930-P102 A-P1 B	LT (400V) MOTORS			1	
359	930-P-102A-P2	Cleaning, Greasing & Replacement Of Bearings	R.O High Pressure Pump Motor, 400V, 32.5A, 18.5KW	R.O PLANT	1	
360	930-P-102A-P3	(If Required), Meggering Of Windings, Inspection,	CIP Pump Motor, 400V, 11A, 5.5KW		1	
360	930-P-102A-P3	Tightening Of Connections In Jbs, And Earth				
360	930-P-102A-P3	connections.				
UTILITIES, AREA MOTORS						
361	930-P102 A		Raw Water Pump Motor, 400V, 54.4 A, 30KW		1	
362	930-P102 B				1	
363	930-P103 A		Utility Water Pump Motor, 400V, 65A, 37KW		1	
364	930-P103 B				1	
365	930-P104 A		Demin Water Pump Motor, 400V, 27A, 15KW		1	
366	930-P104 B				1	
367	800-P101 A	LT (400V) MOTORS	Diesel Storage Tank Pump Motor, 400V, 7.6A, 4KW		1	
368	800-P101 B	Cleaning, Greasing & Replacement Of Bearings			1	
369	990-P-101 A	(If Required), Meggering Of Windings, Inspection,	Flare Knockout Drum Pump Motor, 400V, 10 A, 5.5KW	UTILITY AREA	1	
370	990-P-101 B	Tightening Of Connections In Jbs, And Earth			1	
371	250-P101 A	connections.	Condensate Transfer Pump Motor, 400V, 10 A, 5.5KW		1	
372	250-P101 B				1	
373	940-P101 A		Slop Pump Motor, 400V, 4.95A, 2.2 KW		1	
374	940-P101 B				1	
375	950-P102A		Treated Water Disposal Pump Motor, 400V, 18.7 A, 11 KW		1	
376	950-P102B				1	
377	950-P101 A		Condensate Recovery Pump Motor, 400V, 3A, 1.5 KW		1	
378	950-P101 B				1	
COMPRESSOR AREA MOTORS						
379	970-C101A		Inst. Air Comp. Main Motor, 400V, 171A, 90KW		1	
380	970-C101B	LT (400V) MOTORS			1	
381	970-C101 A	Cleaning, Greasing & Replacement Of Bearings	Inst. Air Comp. Fan Motor,		1	
382	970-C101 B	(If Required), Meggering Of Windings, Inspection,	400v, 7.7A, 4KW	Compressor Area	1	

383	980-C101 A	Tightening Of Connections In Jbs, And Earth connections.	Nitrogen Comp. Main Motor, 400V, 137A, 75KW	Compressor Area	1	
384	980-C101 B				1	
385	980-C101 A		Nitrogen Comp. Fan Motor, 400V, 4.5 A, 2.2 KW		1	
386	980-C101 B				1	
FIRE WATER SYSTEM AREA MOTORS						
387	920-P-103 A	LT (400V) MOTORS Cleaning, Greasing & Replacement Of Bearings (If Required), Meggering Of Windings, Inspection, Tightening Of Connections In JB's, And Earth connections.	Jockey Pump Motor, 400V, 40A, 22KW	Fire Water System Area	1	
388	920-P-103 B				1	
389	920-P-101 A		Fire Water Pump Motor, 400V, 233A, 132KW		1	
390	920-P-101 B				1	
Grand Total in PKR (exclusive of PST/ICT)						