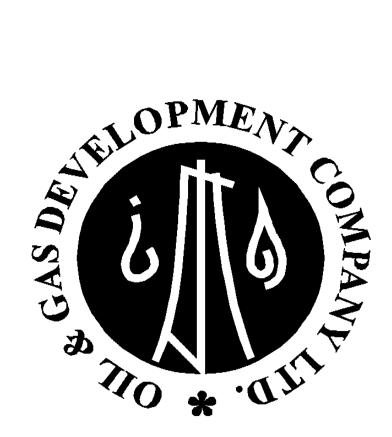
#### OIL & GAS DEVELOPMENT COMPANY LIMITED



#### TENDER ENQUIRY NO. PROC-SERVICES/CB/P&P-4940/2021

## HIRING OF SERVICES FOR EXECUTION OF ATA-2021 JOBS AT UCH-II

### Note:

Bid bond of PKR 800,000/- (Pak Rupees Eight Hundred Thousand Only) must be submitted with the technical bid. Please see tender documents for further detail.

The master set of tender documents (services) uploaded on OGDCL website (<a href="www.ogdcl.com">www.ogdcl.com</a>) is the integral part of this TOR.







#### **ATA-2021 MAIN EXECUTION CONTRACTOR**

#### **EXPLANATORY NOTES**

- 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 Processing Plant for the execution of the Annual Turnaround (ATA) 2021 maintenance activities from reputable companies in this field.
- 2. The tentative schedule of annual shutdown of UCH-II Gas Plant is from 15-03-2021 to 31-03-2021 (17 days), only 14 days should be available for maintenance activities and remaining 01 day will be required for the shutting down and 02 days for startup activities.
- 3. The contractor shall develop and submit a detailed work schedule including mobilization and preparatory works prior to shut down.
- 4. The Contractor shall quote separate rate in PKR for each activity against the quantities mentioned in the scope of work.
- 5. 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.
- 6. 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.
- 7. 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.
- 8. The successful contractor will be required to submit detailed procedures for undertaking shutdown jobs especially repair works and modification jobs for Owner's approval.
- 9. 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, insulation etc., shall be the Contractor's responsibility.
- 10. Contractor shall undertake welding procedures qualification & welder qualification 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.)
- 11. The works are to be carried out on a fast track basis and it is, therefore, essential that the Contractor shall be prepared to execute the work on a round the clock basis (day & night shift) including on holidays.
- 12. Unit rates quoted by bidder shall be firm. No extra payments on account of escalation in prices due to any reason shall be admissible.

- 13. Contractor must quote unit rate per dia. inch of pipe welding (separate rate for CS & SS material) & per Kg of structure welding that will also be applicable for any additional job during ATA.
- 14. 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.
- 15. In case the contractor fails to arrange resources (tools, tackles, consumables, skilled manpower etc.) for execution of any job mentioned in scope of work, 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.
- 16. 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.
- 17. The Contractor shall ensure deployment of skilled painters for painting jobs and proper surface preparation and application of primer and top coat, as per applicable industrial standards.
- 18. Removal/Re-installation of insulation where required/applicable shall be the responsibility of Contractor.
- 19. The contractor will arrange cranes and all other lifting/rigging gears for all activities to be carried out during ATA.
- 20. The Owner for any job will not provide any tools to contractor. Otherwise owner's representative will be liable to deduct the charges accordingly.
- 21. The contractor manpower should be well experienced/skilled in their respective crafts.
- 22. HSEQ Rules & Regulations will be strictly observed.
- 23. All the participating companies/contractors should have at least 5 years of similar experience especially in turnaround of Oil & Gas, Petrochemical & Fertilizers Plant.

#### 24. <u>REFRACTORY WORK:</u>

The contractor will arrange the material required for the refractory repair work of Incinerator (UCH-II) & Hot Oil Heaters (UCH-II). The rough estimated material required for repair work is given as below:

i. Fire Cement (25 Kg Bag)

Qty: 10 Nos.

ii. Castable (25 kg Bag)

Qty: 30 Nos.

The actual quantities of material should be confirmed after initial inspection of equipments and it is the responsibility of contractor to arrange the material accordingly.

#### 25. Stress Relieving for modification jobs piping and strippers

All repair welds shall be stress relieved.
Stress Relieving of existing welds shall be undertaken where weld quality is acceptable as per NDT results.
Local Heat Treatment may be carried out using electric heaters (Bands) covered by insulation. Temperature shall be noted by thermocouples and recorded by automatic recorders. Detailed procedures shall be prepared and submitted by the Contractor for Owner's approval.

☐ Following procedure may be adopted for stress relieving of welds:

Page 3 of 73 OGDCL Tender Enquiry No. PROC-SERVICES/CB/P&P-4940/2021

☐ Heat up to 600 – 620 °C @ 100 °C per hour
$\square$ Hold at 600 – 610 $^{\rm o}$ C for 1-hour minimum.
$\square$ Slow cool @ 100 $^{ m o}$ C per hour from 600 to 300 $^{ m o}$ C.
$\square$ Still air cool by removing insulation, from 300 $^{ m O}$ C to atm. temp.
Take hardness profile of each weld to check if it is < 22 HRC.  The above procedures have only been provided as guidelines. Contractor shall develop and submit detailed procedures for Owner's approval for mod / fabrication jobs and other repair works.

#### 26. <u>INSPECTION/REPAIR/TESTING OF VALVES:</u>

- The Contractor shall quote separate rates for each/individual valve.
- Individual tags (include Asset Tag & Sr. # as per SOW) shall be installed on each valve for identification of location before dismantling of valve from site.
- Contractor shall submit the method statement for testing of valves with respect to the standards specified in the references below.
- For repair and build up of seats of valves contractor shall use electrodes/filler wires of reputable brands of European Origin e.g. ESAB, LINCON, etc.
- All gate valves will be tested from both sides i.e. front and back.
- Pressure testing of valves will be carried out as per applicable ASME Code.
- Lapping of valve seats shall be carried out on high-level precision machine.

#### 27. 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)
  - 2- Pakistan Associates of Industrial Engg. Lahore (Tel:042-35321158)
  - 3- MAXON Industrial Chemicals (Pvt.) Ltd., Lahore (<u>Tel:042-35155441-3</u>) 4- 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.
- 28. 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 of Amine Stripper, 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)
   Page 4 of 73 OGDCL Tender Enquiry No. PROC-SERVICES/CB/P&P-4940/2021

- 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 & HSEQ Manual

## TERMS & CONDITIONS FOR CONTRACTORS UCH-II GAS PROCESSING PLANT ATA-2021

#### **OGDCL'S RESPONSIBILITIES:**

- 1- OGDCL will provide blind/spades for isolation and pressure testing. However the blinds which are not available in stock, contactor 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 plate type heat exchangers, 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 all manpower and resources at least two weeks before commencement of ATA.
- 3- Skilled manpower will be deployed for seven days after completion of shutdown for testing/startup activities. Moreover, Rotary Team shall remain at site until satisfactory operation/testing of all rotary equipment. (Approximately 7-10 days after plant startup).
- 4- Locals should be given preference while hiring of skilled/unskilled manpower. 5- 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 with summarized plan and a detailed

plan indicating critical path activities, equipment wise resource planning and deployment)

- 6- Contractor should prepare/submit daily progress report and percentage Gantt chart (planned vs actual) at end of the day.
- 7- Tools and consumables for the execution of each job including welding / fabrication consumables for all repair and modification jobs.
- 8- Painting job where ever given in the scope including painting equipment/tool like brushes, rollers, spray nozzles/guns, hosepipes etc.
- 9- Pneumatic Ejectors/Blowers for the ventilation of Columns and Vessels as per job scope requirement.
- 10-24V Lighting arrangement for confined space jobs, i.e. inside the columns and vessels.
- 11- In case of any accident, OGDCL will provide only general first aid whereas any other medical treatment would be the responsibility of contractor.
- 12- Contractor shall arrange the standardized test bench for manual valves, control valves & PSV's pressure testing and interconnecting pipes, tubes, hoses for hydrotest and PSV's bench.
- 13- All tools, consumables and calibration equipment/tools for all instruments, control valves & PSV's should be the responsibility of contractor.
- 14- Site administration personnel with associated resources like computer, printers, photocopiers etc.
- 15- Contractor should arrange the blind flanges for PSV's, control valves and manual valves testing which will not be available at OGDCL store stock.
- 16- Contractor will arrange certified E & I calibration and testing equipments, the certificates will be submitted before execution of ATA. Original 3<sup>rd</sup> party calibration certificates will be verified by OGDCL representative upon arrival of equipment.
- 17- Nitrogen gas for PSV's and Regulators testing will be arranged by contractor. 18-Certified 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 PSV calibration certificate and all other 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 # 27 of explanatory notes).
- 22- Refractory work of Incinerators and Hot Oil Heaters including material is responsibility of contractor and should be carried out through M/S Refra Product, Karachi or any other local expert firm/company in this field (Refer clause # 24 of explanatory notes).
- 23- Scaffolding material and services, as when and where required.
- 24- Electrical Supply Boards/Cables along with earth leakage circuit breaker as per HSE standard.
- 25- Pneumatic/24V tools for confined spaces i.e. grinders/power brushes (Vessel and Columns).
- 26- Contractor will arrange sufficient air compressors in view of complete scope of work (ventilation/filter cleaning/pneumatic tools etc.)
- 27- Shock absorbing safety harness and respirators for contractor employees as per job requirement.
- 28- 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 insuranceetc.
- 29- Provision of PPE'S to their manpower and each worker should display ID card (HSE concern)
- 30- Provision of Standard Covid related PPE's to their manpower. (FMO Concern) 32-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)
- 31- The valid certification of welders, scaffolder etc. will be mandatory. Tags should be displayed for certified scaffolding (HSEConcern).

#### 32- HSEQ manpower by contractor:

- a. I/C HSEQ should be B.E Mech/Chemical with Nebosh certification with at least05 Years of relevant experience.
- b. Supervisors 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.
- 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 Engineer having Level-II, Level-III CSWIP 3.1, API certification 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 identitycard.
- 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).

#### OIL & GAS DEVELOPMENT COMPANY LIMITED **UCH-II GAS PROCESSING PLANT - ATA 2021 MECHANICAL SCOPE OF WORK** Job Specification Remark Total Qua Unit **Tools Required** Act # Tag #. **Description** ntity Rate Rate **Pre-shutdown Activities** Connection for N2 1 Pumper Depressurizing 2 and N2 purging Blinding of battery 3 limits Installation of scaffoldings as per each 4 equipment iob access requirement **Post-shutdown Activities** Deblinding of 1 battery limits Leak Testing and 2 N2 purging Removal of all 3 scaffoldings Overall housekeeping of 4 skids/Area Cleaning Skilled manpower will be deployed for startup 5 activities for 07 davs after shutdown. **GROUP-A: COLUMNS Amine** MA1 Contactor (02 2 No's) Height of Strik.Spanner: 1 Blinding Contactor: 43 ft 70,75,60mm Arrangem Provision of ent for connections for I.D. of Contactor Comb.Sp.16,17mm chem. 2 chemical : 122 in. (Trays) circulation 300-T-101 cleaning/water & water flushing & flushing is Opening of 310-T-101 No. of trays: 12 available manways (02 Socket Set, 3 at site. nos. Nos.) Ventilation / Size of Manway: 4 Adjustable Spanner 24 in.x 600 CL Safety clearance Initial inspection 5 Internal complete mech. cleaning of 6 trays, demisters, vessel, LG's etc. 7 Final Inspection 8 Box up

		Date the street	T	1	T	1		
9		Deblinding						
MA2		Amine Regenerator (2 No's)				2		
1		Blinding	Height of Stripper : 60 ft	Strik.Spanner: 50,41 mm	Arrangem			
2		cleaning/water flushing	I.D. of Stripper : 10.5 in.	Comb.Sp.16,17m (Trays)	ent for chem. circulation & water flushing is			
3	300-T-102 & 310-T-102	Opening of manways (03 Nos.)	No's. of trays : 23 nos.	Socket Set,	available at site.			
4	010 1 102	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		Access arrangment for NDT by 3rd Party of Regenerator Outlet line						
8		Final Inspection						
9 10		Box up Deblinding					+	
10		Glycol						
МАЗ		Contactor (02 No's)				2		
1		billiding	Height of Contactor : 52 ft	Str.Spanner: 46,50 mm				
2	400-T-101 &	Manways (02 No's)	I.D. of Contactor : 90 in.	Open/Ring Spanner:20, 22, 24, 27mm				
3	410-T-101		No. of trays : 12 nos.					
4		Initial inspection	Size of Manway : 24 in.x 600 CL					
5		Internal cleaning of packing, demisters, vessel, LG's etc.						
6		Final Inspection						<u> </u>
7		Box up					-	
8		Deblinding					+	
MA4		Incinerator Unit				1		
1		Blinding	Size of Manway : 30" x 150 CL	Spanner: 32mm				
2	350-H-101		Size : I.D. 16ft, Length: 46ft					
۱ ۵		Ventilation /						
3		Safety clearance Initial inspection of				<b>-</b>	<del>                                     </del>	-

Page 11 of 73 OGDCL Tender Enquiry No. PROC-SERVICES/CB/P&P-4940/2021

		Burners & Pilots						
		etc.						
		Repairing of						
5		Refractory if						
	-	required.						
6	-	Final Inspection						
7	-	Box up						
8		Deblinding						
		Hot Oil						
MA5		Heaters (04				4		
		No's)						
		<b>,</b>	Size Manways:			+		
1		Blinding	24 x 18inch					
_	1	Manways				+	+	
2		Opening (02)	Type: Vertical					
	-	Internal Inspection	cylinder with					
3	900-H101-	of	overhead					
		furnace/refractory	conviction & tack					
1			Manufacturer:			1	1	
4		required	BSS, China		<u> </u>			<u> </u>
		All Burners/ Pilots						
5	900-H101- A/B/C/D	tips						
3	AIBICID	inspection/cleanin						
		g if required						
		Ball valve (1" dia)						
		installation on						
6		individual pilots						
		line, (total 16						
	-	nos.)(cold work)			1	+		-
7	-	Final Inspection			+	+		
8	-	Box up				+		
9		Deblinding				+		
MA6		Flare Stack				1		
		D	EL (' ' 00"	Crane with cherry	Work at			
1		Blinding	Flare tip size: 36"	picker	Height			
	-	Flare Tip			Job	+		
			1			1	1	
2		Inspection,	Height of Stack :					
2		Inspection, Cleaning and	Height of Stack : 110ft					
2		Inspection, Cleaning and repairing if						
2	990-ST101	Inspection, Cleaning and repairing if required						
2	990-ST101	Inspection, Cleaning and repairing if required Flare Pilots						
3	- 990-ST101	Inspection, Cleaning and repairing if required Flare Pilots Inspection,						
	- 990-ST101	Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and						
	990-ST101	Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required						
3	990-ST101	Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack						
3	990-ST101	Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting						
3 4 5		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection						
3 4 5	990-ST101 P-B: VESSEL	Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection						
3 4 5 <b>GROU</b>		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection						
3 4 5		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  Slug Catcher				1		
3 4 5 <b>GROU</b> MB1		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  Slug Catcher Eastern	110ft	Strik Span:65 50 //1		1		
3 4 5 <b>GROU</b>		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  Slug Catcher		Strik.Span:65,50,41		1		
3  4 5  GROU  MB1  1		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  Slug Catcher Eastern  Blinding	Horizontal Vessel	mm		1		
3 4 5 <b>GROU</b> MB1		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  Slug Catcher Eastern  Blinding Opening of	Horizontal Vessel Size of Manway :	mm Comb.Span.:27,32		1		
3 4 5 GROU MB1 1 2		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  Slug Catcher Eastern  Blinding Opening of manway	Horizontal Vessel Size of Manway: 20" x 600 CL	mm Comb.Span.:27,32 mm		1		
3  4 5  GROU  MB1  1		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  Slug Catcher Eastern  Blinding Opening of	Horizontal Vessel Size of Manway :	mm Comb.Span.:27,32		1		
3 4 5 GROU MB1 1 2		Inspection, Cleaning and repairing if required Flare Pilots Inspection, Cleaning and repairing if required Complete Stack Painting Final Inspection  SIug Catcher Eastern  Blinding Opening of manway Ventilation/Safety	Horizontal Vessel Size of Manway: 20" x 600 CL Size of Vessel:	mm Comb.Span.:27,32 mm		1		

		vessel and				
		demister				
		Cleaning of				
_		complete vessel,				
5		Demister & LG's				
		etc.				
6		Final inspection				
7		Box up				
8		Deblinding				
		Slug Catcher				
MB2		Central			1	
				Strik.Span:65,41	+	+ +
1		Blinding	Horizontal Vessel	mm		
		Opening of	Size of Manway			1
2		manway	: 20" x 600 CL	Comb.Span.:27mm		
		Ventilation/Safety	Size of Vessel			
3		clearance	: 83" ID x 328" L	Adjustable Spanner		
		Initial Internal				1 1
4	044 V 404	Inspection of		Crow Bor		
4	211-V-101	vessel and		Crow Bar		
		demister				
		Cleaning of			<u></u>	
5		complete vessel,				
		demister & LG's				
		etc.			<del> </del>	
6		Final inspection				
7		Box up				
8		Deblinding				
MB3		Slug Catcher			1	
IVIDS		Western				
		Duran	11-2	Strik.Span:65,41		
1		Blinding	Horizontal Vessel	mm		
2		Opening of	Size of Manway:	Comb Coop (27mm		
2		manway	20" x 600 CL	Comb.Span.:27mm		
3		Ventilation/Safety	Size of Vessel	Adjustable Spanner		
3		clearance	:94" ID x 379" L	Aujustable Sparifiel		
	212-V-101	Initial Internal				
4	212 7 101	Inspection of		Crow Bar		
1 ' 1		vessel and		Olow Bai		
		demister				+
		Cleaning of				
5		complete vessel,				
		demister & LG's etc.				
6		Final inspection			+ + -	+ + -
7		Box up				+ + -
8		Deblinding			+ +	+ +
		Condensate			+	+ + + -
NAD 4						
MB4		Water			1	
<u> </u>		Separator			<del>                                     </del>	++-
1		Blinding	Horizontal Vessel		<del>                                     </del>	+
2		Opening of	Size of Manway:	Comb.Sp.:		
_		manway	20" x 50 CL	24,27mm	<del>                                     </del>	+
3		Ventilation/Safety	Size of Vessel :	Adjustable Spanner		
		clearance	59" ID x 229" L	, , , , , , , , , , , , , , , , , , , ,	<del>                                     </del>	+
_		Initial Internal				
4		Inspection of				
<u> </u>	250-V-101	vessel Cleaning of			+ + -	+
1	230-4-101	Clearing of				
5		MACCAL damictore				
5		vessel, demisters & LG's.				

		Relocation of 2"						
		150# gate valve						
		downstream						
6		condensate water						
		separator to uch-						
		1(cold work)						
7	-	Final inspection					-	
8	-							
	1	Box up						
9		Deblinding						
		Condensate						
MB5		Degassing				1		
		Boot						
1		Blinding	Vertical Vessel	St.Sp.: 46 mm				
<u>'</u>	-	Opening of	Size of Manway :	Comb.Sp.:			-	
2		manway	18" x 150 CL	24,27mm				
	-	Illaliway	Size of Vessel :	24,2711111				
		Ventilation/Safety	1070mm ID x	A divistable Change				
3		clearance		Adjustable Spanner				
-	-	Indial at the second	3355mm L				-	
1 .	050 1/ /00	Initial Internal						
4	250-V-102	Inspection of						
<b></b>		vessel			<u> </u>			
1		Cleaning of						
5		vessel, demisters						
		& LG's.						
6		Final inspection						
7		Box up						
8		Deblinding						
		Feed Gas K.O						
MB6		Drum (2 Nos)				2		
		Drain (2 1103)		Ctrile Chang				
1	300-V-101	Blinding	Vertical Vessel	Strik. Span:				
	&		0' - (14	70,65mm				
2	310-V-101	Opening of	Size of Manway:	Comb;Spanner:				
		manway	24" x 600 CL	27,30mm				
		Ventilation/safety	Size of Vessel:					
3		clearance	45.27" I.D. X	Scaffolding Material				
			100.4" L					
4		Initial Internal		Crow Bar, Chain				
		Inspection of		Crow Bar, Chain Blocks				
		Inspection of vessel		Crow Bar, Chain Blocks				
		Inspection of vessel Internal cleaning						
5		Inspection of vessel Internal cleaning of complete						
5		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's						
		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc.						
6		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection						
6 7		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up						
6		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection						
6 7		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up						
6 7 8		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas						
6 7		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter				2		
6 7 8		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02				2		
6 7 8		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos)				2		
6 7 8 <b>MB7</b>		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top	Vertical Vessel	Blocks		2		
6 7 8		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover	Vertical Vessel			2		
6 7 8 <b>MB7</b>	300-V-102	Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of	Size of Vessel:	Strik. Span: 65mm		2		
6 7 8 <b>MB7</b>	&	Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of Filter Coalescer	Size of Vessel : 43.3" I.D. X	Strik. Span: 65mm Comb; Spanner:		2		
6 7 8 <b>MB7</b>		Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of Filter Coalescer Elements	Size of Vessel:	Strik. Span: 65mm		2		
6 7 8 <b>MB7</b>	&	Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of Filter Coalescer Elements Replacement Of	Size of Vessel : 43.3" I.D. X	Strik. Span: 65mm Comb; Spanner:		2		
6 7 8 <b>MB7</b>	&	Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of Filter Coalescer Elements	Size of Vessel : 43.3" I.D. X	Strik. Span: 65mm Comb; Spanner:		2		
6 7 8 <b>MB7</b>	&	Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of Filter Coalescer Elements Replacement Of	Size of Vessel : 43.3" I.D. X	Strik. Span: 65mm Comb; Spanner:		2		
6 7 8 <b>MB7</b> 1 2	&	Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of Filter Coalescer Elements Replacement Of Filter Coalescer Elements	Size of Vessel : 43.3" I.D. X	Strik. Span: 65mm Comb; Spanner:		2		
6 7 8 <b>MB7</b>	&	Inspection of vessel Internal cleaning of complete vessel, LG's/LT's etc. Final Inspection Box up Deblinding Feed Gas Filter Coalescer (02 Nos) Opening Of Top Cover Inspection Of Filter Coalescer Elements Replacement Of Filter Coalescer	Size of Vessel : 43.3" I.D. X	Strik. Span: 65mm Comb; Spanner:		2		

		_			1		
		Treated Gas					
MB8		K.O Drum (02				2	
		No's)					
1		Blinding	Vertical Vessel	Strik. Span:			
ı				70,75mm			
2		Opening of	Size of Manway:	Comb; Spanner:			
	-	manway	24" x 600 CL	32,36mm			
3		Ventilation/safety clearance	Size: 1150 ID, 2550 L				
	300-V-103	Initial Internal	2550 L				
4	&	Inspection of					
	310-V-103	vessel					
	1	Internal cleaning					
5		of complete					
		vessel, LG's/LT's					
	-	etc.					
<u>6</u> 7	1	Final Inspection			1		
8	•	Box up Deblinding					
ا ا		Lean Amine					
MB9		Strainers (04				4	
11109		No's)				7	
		Opening of 28"					
1	300-S101 A/B	Cover		Strik.Span: 32 mm			
2	&	Initial Inspection		Hammers, Crow bar			
	310-S101 A/B	Cleaning of					
3		strainer		Scaffolding material			
4		Final Inspection					
5		Box up					
		Rich Amine					
MR1	ĺ						
MB1 0		Strainers (04				4	
MB1 0		Strainers (04 No's)				4	
0		Strainers (04 No's) Opening of 28"		Strik Span: 32 mm		4	
<b>0</b>	200 S405 A/D	Strainers (04 No's) Opening of 28" Cover		Strik.Span: 32 mm		4	
0		Strainers (04 No's) Opening of 28" Cover Initial Inspection		Hammers, Crow bar		4	
<b>0</b>	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of		•		4	
1 2 3		Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer		Hammers, Crow bar		4	
1 2 3 4	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection		Hammers, Crow bar		4	
1 2 3	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up		Hammers, Crow bar		4	
0 1 2 3 4 5	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine		Hammers, Crow bar			
1 2 3 4	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up  Rich Amine Flash Drum		Hammers, Crow bar		2	
0 1 2 3 4 5 MB1	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine		Hammers, Crow bar Scaffolding material			
1 2 3 4 5 MB1 1	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's)	Horizontal Vessel	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50			
0 1 2 3 4 5 MB1	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding	Horizontal Vessel	Hammers, Crow bar Scaffolding material	Arrangem		
1 2 3 4 5 MB1 1	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of	Horizontal Vessel	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50	ent for		
0 1 2 3 4 5 MB1 1	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for	Size of Manway :	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp:	ent for chem.circ		
1 2 3 4 5 MB1 1	&	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for chemical		Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm	ent for chem.circ ulation &		
0 1 2 3 4 5 MB1 1	& 310-S105 A/B	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for	Size of Manway :	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp:	ent for chem.circ		
0 1 2 3 4 5 MB1 1	& 310-S105 A/B	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for chemical cleaning/water flushing	Size of Manway : 24" x 150 CL Size of Vessel	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm	ent for chem.circ ulation & water flushing is available		
0 1 2 3 4 5 MB1 1	& 310-S105 A/B	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for chemical cleaning/water flushing Opening of	Size of Manway : 24" x 150 CL Size of Vessel :137.8" I.D. X	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm Crow bar, Chain	ent for chem.circ ulation & water flushing is		
0 1 2 3 4 5 MB1 1	& 310-S105 A/B	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for chemical cleaning/water flushing	Size of Manway: 24" x 150 CL Size of Vessel: 137.8" I.D. X 511.8"L	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm	ent for chem.circ ulation & water flushing is available		
0 1 2 3 4 5 MB1 1 1	& 310-S105 A/B	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for chemical cleaning/water flushing Opening of	Size of Manway : 24" x 150 CL Size of Vessel :137.8" I.D. X 511.8"L Material : SA-	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm Crow bar, Chain Blocks	ent for chem.circ ulation & water flushing is available		
0 1 2 3 4 5 MB1 1	& 310-S105 A/B	Strainers (04 No's)  Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up  Rich Amine Flash Drum (02 No's)  Blinding  Provision of connections for chemical cleaning/water flushing Opening of manway	Size of Manway: 24" x 150 CL Size of Vessel: 137.8" I.D. X 511.8"L Material: SA- 240,	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm Crow bar, Chain	ent for chem.circ ulation & water flushing is available		
0 1 2 3 4 5 MB1 1 1	& 310-S105 A/B	Strainers (04 No's) Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up Rich Amine Flash Drum (02 No's) Blinding Provision of connections for chemical cleaning/water flushing Opening of manway Ventilation/safety clearance	Size of Manway : 24" x 150 CL Size of Vessel :137.8" I.D. X 511.8"L Material : SA-	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm Crow bar, Chain Blocks	ent for chem.circ ulation & water flushing is available		
0 1 2 3 4 5 MB1 1 1	& 310-S105 A/B	Strainers (04 No's)  Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up  Rich Amine Flash Drum (02 No's)  Blinding  Provision of connections for chemical cleaning/water flushing Opening of manway  Ventilation/safety	Size of Manway: 24" x 150 CL Size of Vessel: 137.8" I.D. X 511.8"L Material: SA- 240,	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm Crow bar, Chain Blocks	ent for chem.circ ulation & water flushing is available		
0 1 2 3 4 5 MB1 1 1	& 310-S105 A/B	Strainers (04 No's)  Opening of 28" Cover Initial Inspection Cleaning of strainer Final Inspection Box up  Rich Amine Flash Drum (02 No's)  Blinding  Provision of connections for chemical cleaning/water flushing Opening of manway  Ventilation/safety clearance Initial Inspection	Size of Manway: 24" x 150 CL Size of Vessel: 137.8" I.D. X 511.8"L Material: SA- 240,	Hammers, Crow bar Scaffolding material Str.Spanner: 46,50 mm Open/Ring Sp: 20,22,24,27mm Crow bar, Chain Blocks	ent for chem.circ ulation & water flushing is available		

		repair/replacemen						
		t if any						
		Internal cleaning						
7		of complete						
		Vessel & LG's.						
		Internal inspection						
		of vessel for errosion / cracks,			DPT if			
8		NDT and			required			
		repair/buildup, if			required			
		any required.						
		Cleaning of						
9		demisters & re-						
		installation						
		Installation of LG						
10		of Vessel of train-						
		310-V104 (cold						
11		work)						
12		Final Inspection Box up					-	
13		Deblinding						
13		Amine Surge						1
MB1		Vessel (02				2		
2						_		
4	200 V 405	No's)	Horizontal Massal	Ctr Channer 40 m				
1	300-V-105 &	Blinding Opening of	Size of Manway :	Str.Spanner: 46 mm Open/Ring Sp:			1	1
2	310-V-105	manway	24" x 150 CL	20,22,24,27mm				
	0.000		Size of Vessel	20,22,21,2111111				
3		Ventilation/safety	:3550mm I.D. X	General Tool Box				
		clearance	12000mm L					
		Initial Inspection	Material : SA-					
5		of vessel	240,					
			TP.304/304L					
		Internal cleaning						
6		of complete vessel, vertex						
		breaker, LG's etc.						
7		Final Inspection						
8		Box up						
9		Deblinding						
		Amine Reflux						
MB1		Drum (02				2		
3		No's)						
1		Blinding	Vertical Vessel	Strik.Spner: 46 mm				
		Opening of	Size of Manway	Comb,Spner:				
2		manway	: 24" x 150 CL	24,27mm			<u> </u>	<u> </u>
		Ventilation/safety	Size of Vessel:					
3		clearance	1880mm ID x	General Tool Box				
			3370mm L					
		Internal cleaning	Main Matarial					
4		of complete vessel, LG's/LT's	Main Material : SA-240, TP.304L					
	300-V-106&	etc.	OA-240, 17.304L					
	310-V-106	Internal inspection						
		of vessel for						
5		errosion / cracks,			DPT if			
,		NDT and			required			
		repair/buildup, if						
		any required.						
6		Inspection,						
6		cleaning/repair of Demisters, if any						
		וו מוווסיםן, וו מוווא	1	1	1	1	ĺ	Ī

						_
8		Final Inspection				
9		Box up				
10		Deblinding				
MB1 4		Amine Sump Drum (02 No's)			2	
1		Blinding	Horizontal Vessel	Strik.Spner: 46 mm		
2		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	300-V-107	Initial Inspection	Material : SA- 240, TP.304L			
5	& 310-V-107	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				
MB1 5		Amine Sump Filter (02			2	
1		No's)	Horizontal Vessel	Strik.Spner: 27 mm		
2		Blinding Opening of manway / top cover	Size of Manway : 18" x 150 CL	Comb,Spner: 24,27mm		
3		Ventilation/ safety clearance	Size of Vessel : 443mm ID x 2704 mm L	General Tool Box		
4	300-S-104 &	Initial Inspection of filters	Material : SA- 240, TP.304L			
5	310-S-104	Replacement of fliter if req				
6		Internal cleaning of complete vessel, LG's/LT's etc.				
8		Final Inspection				
9		Box up				
10		Deblinding				
MB1 6		Lean Amine Cartridge Filter (04 No's)			4	
1		Blinding	Vertical Vessel	Strik.Spner: 32 mm		
2		Opening of manway / top cover	Size of Manway : 24" x 150 CL	Comb,Spner: 30,32mm		
3	300-S-103	Ventilation/ safety clearance	Size of Vessel : 318mm ID x 2318 mm L	General Tool Box		
4	& 310-S-103	Initial Inspection of filters (10 and 15 micron filter)				

_		Replacement of				
5		fliter if req				
		Internal cleaning				
		of complete				
6		vessel, LG's/LT's				
		etc.				
7		Final Inspection				
8		Box up				
9		Deblinding				
		Glycol Flash				
MB1		Drum (02			2	
7					_	
	100 1/ 100	No's)	11 ' (1) (	0. " 0 50		
1	400-V-103	Blinding		Strik.Spner: 50mm		
2	& 410-V-103	Opening of	Size of Manway	Comb,Spner:		
	410-7-103	manway	: 24" x 150 CL	24,27,36mm		
2		Ventilation/safety	Size of Vessel: 4.43 ft ID x 12.47	General Tool Box		
3		clearance		General 1001 box		
	-		ft L Main Material :			
4		Initial Inspection	SA-240,			
"		miliai mapecilon	304/304L			
	1	Internal cleaning	00-700-TE			
		of vessel,				
5		demisters, LG's				
		etc.				
		Overall				
6		cleaning/houseke				
		eping of Skid				
7		Final Inspection				
8		Box up				
9		Deblinding				
MB1		Glycol Surge			2	
		Glycol Surge Vessel (02			2	
MB1 8		Glycol Surge Vessel (02 No's)		Chrille Commerce 50 and	2	
MB1		Glycol Surge Vessel (02 No's) Blinding		Strik.Spner: 50mm	2	
MB1 8		Glycol Surge Vessel (02 No's) Blinding Opening of	Size of Manway:	Comb,Spner:	2	
MB1 8		Glycol Surge Vessel (02 No's) Blinding	Size of Manway : 24" x 150 CL		2	
MB1 8		Glycol Surge Vessel (02 No's) Blinding Opening of	Size of Manway : 24" x 150 CL Size of Vessel :	Comb,Spner: 24,27,36mm	2	
MB1 8		Glycol Surge Vessel (02 No's) Blinding Opening of manway	Size of Manway : 24" x 150 CL Size of Vessel : 4.59 ft ID x 14.76	Comb,Spner:	2	
MB1 8		Glycol Surge Vessel (02 No's) Blinding Opening of manway Ventilation/safety	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L	Comb,Spner: 24,27,36mm	2	
MB1 8 1 2	400-V-104	Glycol Surge Vessel (02 No's) Blinding Opening of manway Ventilation/safety clearance	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material:	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8	400-V-104 &	Glycol Surge Vessel (02 No's) Blinding Opening of manway Ventilation/safety	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm	2	
MB1 8 1 2	400-V-104 & 410-V-104	Glycol Surge Vessel (02 No's) Blinding Opening of manway Ventilation/safety clearance Initial Inspection	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material:	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3	&	Glycol Surge Vessel (02 No's) Blinding Opening of manway Ventilation/safety clearance Initial Inspection Internal cleaning	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2	&	Glycol Surge Vessel (02 No's) Blinding Opening of manway Ventilation/safety clearance Initial Inspection	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3	&	Glycol Surge Vessel (02 No's) Blinding Opening of manway Ventilation/safety clearance Initial Inspection Internal cleaning of vessel,	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3 4 5	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3 4 5	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3 4 5 6 7 8	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection  Box up	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3 4 5	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection  Box up Deblinding	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3 4 5 6 7 8 9	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection  Box up	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	2	
MB1 8 1 2 3 4 5 6 7 8 9 MB1	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection  Box up Deblinding	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material	1	
MB1 8 1 2 3 4 5 6 7 8 9	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection  Box up Deblinding  Glycol Sump Vessel (01	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr.	Comb,Spner: 24,27,36mm Scaffolding Material		
MB1 8 1 2 3 4 5 6 7 8 9 MB1 9	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection Box up Deblinding  Glycol Sump Vessel (01 No's)	Size of Manway : 24" x 150 CL Size of Vessel : 4.59 ft ID x 14.76 ft L Main Material : ASTM A516 Gr. 70N	Comb, Spner: 24,27,36mm  Scaffolding Material  General Tool Box		
MB1 8 1 2 3 4 5 6 7 8 9 MB1 9 1	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection Box up Deblinding  Glycol Sump Vessel (01 No's)  Blinding	Size of Manway: 24" x 150 CL Size of Vessel: 4.59 ft ID x 14.76 ft L Main Material: ASTM A516 Gr. 70N  Horizontal Vessel	Comb,Spner: 24,27,36mm  Scaffolding Material  General Tool Box  Strik.Spner: 50mm		
MB1 8 1 2 3 4 5 6 7 8 9 MB1 9	&	Glycol Surge Vessel (02 No's)  Blinding Opening of manway  Ventilation/safety clearance  Initial Inspection  Internal cleaning of vessel, demisters, LG's etc.  Overall cleaning/houseke eping of Skid Final Inspection Box up Deblinding  Glycol Sump Vessel (01 No's)	Size of Manway : 24" x 150 CL Size of Vessel : 4.59 ft ID x 14.76 ft L Main Material : ASTM A516 Gr. 70N	Comb, Spner: 24,27,36mm  Scaffolding Material  General Tool Box		

3	410-V-105	Ventilation/safety clearance	Size of Vessel : 6.24 ft ID x 19.68 ft L	Scaffolding Material		
4	410-1-103	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				
MB2 0		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	350-V-101	Ventilation/safety clearance	Size of Vessel : 118" ID x 161" L	Scaffolding Material		
4		Internal cleaning of complete vessel, LG's/LT's etc.	Main Material : SA-240, TP.304L			
6		Final Inspection				
7		Box up				
8		Deblinding				
MB2 1		Slope Vessel			1	
		Blinding	Horizontal Vessel	Strik.Spner: 46,50mm	1	
1		Blinding Opening of manways	Size of Manway : 20" x 150 CL		1	
1		Blinding Opening of	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L	46,50mm	1	
1 2	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection	Size of Manway : 20" x 150 CL Size of Vessel :	46,50mm	1	
1 2 3	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm	1	
1 1 2 3	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of LG's/LT's	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm	1	
1 1 2 3 4	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm	1	
1 1 2 3 4 5	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of LG's/LT's Decanting & cleaning of Vessel	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm	1	
1 2 3 4 5 6 7 8 9	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of LG's/LT's Decanting & cleaning of Vessel Pit Final Inspection Box up	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm	1	
1 2 3 4 5 6 7	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of LG's/LT's Decanting & cleaning of Vessel Pit Final Inspection Box up Deblinding	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm	1	
1 2 3 4 5 6 7 8 9	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of LG's/LT's Decanting & cleaning of Vessel Pit Final Inspection Box up	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm	1	
1 1 2 3 4 5 6 7 8 9 10 MB2	940-V-102	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of LG's/LT's Decanting & cleaning of Vessel Pit Final Inspection Box up Deblinding  Blow Case	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516-	46,50mm		
1 1 2 3 4 5 6 7 8 9 10 MB2 2	940-V-102 940-V-101	Blinding Opening of manways Ventilation/safety clearance Initial Inspection Internal cleaning of complete vessel and its pit Cleaning of LG's/LT's Decanting & cleaning of Vessel Pit Final Inspection Box up Deblinding Blow Case Vessel	Size of Manway : 20" x 150 CL Size of Vessel : 79 I.D. X 300" L Material : SA516- 70/SA105	Scaffolding Material  Strik.Spner:		

4		Initial Inspection	Main Material:					
4		initial inspection	SA-516-70					
		Internal cleaning						
_		of complete						
5		vessel, LG's/LT's						
		etc.						
6		Inspection						
7		Box up						
8		Deblinding						
MB2		Flare K.O				_		
3		Drum				1		
1		Blinding	Horizontal Vessel	Strik.Spanner:46mm				
'		Opening of	Size of Manway:	Comb,Spner:24,27				
2		manways	24" x 150 CL	mm				
		Ventilation/safety	Size of Vessel :	111111				
3		clearance	118" ID x 446" L					
			Material : SA-516					
4	990-V-101	Initial Inspection	Gr.70					
		Internal cleaning	-					
_		of complete						
5		vessel, LG's/LT's						
		etc.						
6		Final Inspection						
7		Box up						
8		Deblinding						
MB2		Fuel Gas						
4		Knock Out				1		
1		Blinding	Vertical Vessel	Strik.Spanner:46mm				
		Opening of	Size of Manway :	Comb,Spner:24,27				
2		manways	20" x 150 CL	mm				
			Size of Vessel :					
3		Ventilation/safety	1375mm ID x					
		clearance	3965mm L					
	000 1/ 400	1.22.11	Material : SA-516					-
4	960-V-102	Initial Inspection	Gr.70					
		Internal cleaning						
_		of complete						
5		vessel, LG's/LT's						
		etc.						
6		Final Inspection						
7		Box up						
8		Deblinding						
MB2		Cooling				2		
5		Tower				4		
			Type: Induced					
1		Basin Cleaning	Draft Counter-	General Tool Box				
<u></u>			flow					
		Inspection/Cleanin					,	
		g/Re-	Design Water					
2	300-CT-101	arrangement/Repl	Circulation:					
	&	acement of Drift	8769.2 US gpm					
	310-CT-101	Eliminators/Fills	<b>.</b>					
3		g/Replacement of	08					
		Water distribution	No of Cells per					
-		Nozzles	Module: 02 Basin				<del></del>	
4		Cleaning of Air intake	Size(LxWxD):					
"		Panels/Louvers	144x48x4 ft.					
-		Cleaning of Fan	By: Ilmed I,Pianti			-	<b></b>	
5		Blades &	Italy					
L	1	aaoo	ر.⊶. ا		ı			

		adjustment of					
		blade angle, if					
		required					
6		Final Inspection					
		CPI (Oily	Γ			T	
MB2		Water				_	
6		Treatment				3	
		System)					
			Inlet Pit, Oil				
1		Initial Inspection	Chamber, Water				
		of all pits.	Pit				
	1				Decanting		
					pump(s)		
	950-TK-102-		Size: 51360mm L		with		
2	A/B/C	Decanting /	x 4080mm W x		explosion		
		Cleaning of all pits	4228mm H		proof motor will		
					be		
					required		
3	1	Final Inspection	1		. oquirou		
		Hot Oil Fuel					
MB2		Gas Strainer				4	
7		A/B/C/D				~	
		Strainer					
		Inspection /					
1		Cleaning and		General Tool Box			
		repair if any					
2	1	Box up					
MB2		Hot Oil Main				_	
8		Strainer				1	
		i	i .	•			
1		Opening of Cover		Strik.Span: 41, G.			
1		Opening of Cover		Tool Box			
1 2	000 0454	Initial Inspection					
	900-S101-A	Initial Inspection Cleaning of		Tool Box			
3	900-S101-A	Initial Inspection Cleaning of strainer		Tool Box			
3 4	900-S101-A	Initial Inspection Cleaning of strainer Final Inspection		Tool Box			
3	900-S101-A	Initial Inspection Cleaning of strainer		Tool Box			
3 4	900-S101-A	Initial Inspection Cleaning of strainer Final Inspection		Tool Box			
2 3 4 5	900-S101-A	Initial Inspection Cleaning of strainer Final Inspection Box up		Tool Box		2	
2 3 4 5 MB2	900-S101-A	Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters		Tool Box		2	
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side		Tool Box		2	
2 3 4 5 MB2		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and		Tool Box Crane-45Ton,		2	
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any		Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box		2	
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and		Tool Box Crane-45Ton,  Strik.Span: 60,		2	
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up		Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box		2	
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up Glycol		Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box		2	
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up		Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box			
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge		Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box		<b>2</b>	
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04		Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box			
2 3 4 5 MB2 9 1 2 MB3 0		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's)		Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			
2 3 4 5 MB2 9		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04	Vertical Vessel	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box			
2 3 4 5 MB2 9 1 2 MB3 0		Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's) Opening of top cover	Size of Vessel :	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			
2 3 4 5 MB2 9 1 2 MB3 0	900-F101-A/B 400-F-101 A/B	Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's) Opening of top	Size of Vessel : 219mm ID x	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			
2 3 4 5 MB2 9 1 2 MB3 0	900-F101-A/B 400-F-101 A/B &	Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's) Opening of top cover Inspection of filter	Size of Vessel :	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			
2 3 4 5 MB2 9 1 2 MB3 0	900-F101-A/B 400-F-101 A/B & 410-F-101	Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's) Opening of top cover Inspection of filter Replacement of	Size of Vessel : 219mm ID x 1600mm L	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			
2 3 4 5 MB2 9 1 2 MB3 0	900-F101-A/B 400-F-101 A/B &	Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's) Opening of top cover Inspection of filter Replacement of filter elements if	Size of Vessel : 219mm ID x	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			
2 3 4 5 MB2 9 1 2 MB3 0	900-F101-A/B 400-F-101 A/B & 410-F-101	Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's) Opening of top cover Inspection of filter Replacement of filter elements if required	Size of Vessel : 219mm ID x 1600mm L	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			
2 3 4 5 MB2 9 1 2 MB3 0	900-F101-A/B 400-F-101 A/B & 410-F-101	Initial Inspection Cleaning of strainer Final Inspection Box up Hot Oil Side Filters Strainer Inspection / Cleaning and repair if any Box up  Glycol Cartridge Filter (04 No's) Opening of top cover Inspection of filter Replacement of filter elements if	Size of Vessel : 219mm ID x 1600mm L	Tool Box Crane-45Ton,  Strik.Span: 60, G.Tool Box  Crane-45Ton,			

	I		1	T		
		Glycol				
MB3		Contactor			2	
1		Over Head				
		Separator				
1		Opening of top cover	Vertical Vessel	Strik.Spanner:60mm		
2	400-V-102 &	Inspection of filter	Size of Vessel : 915mm ID x 4700mm L			
3	410-V-102	Replacement of filter elements if required	Material: SS-304			
4		Final Inspection				
5		Box up				
MB3 2		Glycol Striping Column			2	
1		Opening of top cover	Vertical Vessel	Strik.Spanner:40,36 mm		
2	400-T-103 &	Inspection of chimney trays	Size of Manway: 12" x 150 CL			
3	410-T-103	Removal, cleaning and reinstallation of packing	Size of Vessel : 460mm ID x 4080mm L			
4		Final Inspection	Material : SA- 240, TP=304			
5		Box up				
MB3 3		Glycol Still Column			2	
1		Blinding	Vertical Vessel	Strik.Spanner:36,46 mm		
2		Opening of manways	Size of Manway : 20" x 150 CL	Comb,Spner:32mm		
3		Ventilation/safety clearance	Size of Vessel : 508mm ID x 4180mm L			
4	400-T-102 & 410-T-102	Internal packing / bundle removal, cleaning and reinstallation	Material : SA- 240, TP 304			
5		Vapors vent line diversion to vertical position (cold work)				
6		Final Inspection				
7		Box up				
MB3 4		Multimedia Filter (MMF)			4	
1	020	Opening of manways	Vertical Vessel	Strik.Spanner:41mm		
2	930- PU101A/B/C/ D	Ventilation/safety clearance	Size of Vessel : 3000mm ID x 4000mm L	Comb,Spner:32mm		
3		Cleaning/ Bed removal/addition (if required)	Material : Carbon Steel			
4		Initial Inspection				
5		Box up	Î.	i	1	

		E 10	4		1		
MC1		Feed Gas Cooler (02Nos)				2	
1		Blinding/Isolation	Type: BFU, U- Tube Bundle	Crane-45Ton, Chain Blocks,			
2		Initial Inspection	No.of Tubes : 1278, Two Pass	Strik.Span: 65,50 mm			
3		Arrangement/conn ections for chemical cleaning	Tube Size: 0.75"(OD) x 0.065"(thk)x 12.3ft (L)	Comb. Span: 27,36mm			
4	300-E-111 & 310-E-111	Chemical Cleaning of Shell Side (by 3rd Party)	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		Lean Amine Trim Cooler (02 No's)				2	
1		Blinding/Isolation	Type : BFM, No. of Tubes = 2224	Channel head weight = 2 ton			
2		Initial Inspection	Tube Size = 25.4(OD)x1.651 (thk.)x5850 (L)mm	Strik.Span: 1.8125" (46mm)			
3		ections for chemical cleaning	No. of Passes: Shell Side= 2 & Tube Side= 8	Chain Blocks: 5 ton			
4	300-E-113& 310-E-113	Chemical Cleaning of Shell Side (by 3rd Party)	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					
МСЗ		Amine Regenerator Condenser (02 No's)				2	
1		Blinding/Isolation	Type: BEM, No. of Tubes: 1319	Crane-45Ton, Chain Blocks,			
2	300-E-114	Initial Inspection	Tube Size:1"(OD) x 0.065"(thk)x 29.53 ft (L)	Strik.Span: 50 mm			

	&	Arrangement/conn	No. of Passes:	C		
3	310-E-114	ections for	Shell Side=01	Comb. Span: 27,36,		
	0.0 =	chemical cleaning	Tube Side=01	41mm		
		Chemical	Tube olde=01			
			Dunalla Waialat			
4		Cleaning of Shell	Bundle Weight =	Scaffolding material		
		Side (by 3rd	25860 lb	3		
		Party)				
5		Pressure Testing	Channel head	Jetting machine		
			O.D.= 1640 mm			
6		Final Inspection		Sling, Shackles		
7		Deblinding				
		Housekeeping /				
8		Area cleaning				
		Lean Amine				
		Fin-Fan				
MC4					2	
		Cooler (02				
		Nos.)				
		Inspection of	NI. CC.			
1		Finned Tube	No. of tubes :	Chain Block: 10 ton		
		Bundles	192			
	1	External Chemical				
		cleaning of Finned	Tube O .D. :	Strik.Span:		
2		Tubes (by 3rd	1 in.	27,30,32mm		
	300-EA-103	party)		27,30,3211111		
	&	Cleaning of Fan	Length :	Comb. Span:		
3	310-EA-103	Blades	540 in. or 45 ft	27,32mm		
	310-LA-103	Verification /	540 III. 01 45 It	27,3211111		
4		Adjustment of Fan	No. of passes:	Crow bar		
4			Three	Clow bai		
		blade angle				
5		Alignment of Fan				
6		Final Inspection				
	1	III I				
7		Housekeeping /				
7		Area cleaning				
		Area cleaning  Treated Gas				
7 MC5		Area cleaning			4	
		Area cleaning  Treated Gas Cooler (04			4	
MC5		Treated Gas Cooler (04 Nos.)	No of tubes:		4	
		Area cleaning  Treated Gas Cooler (04	No. of tubes :	Chain Block: 10 ton	4	
<b>MC5</b>		Treated Gas Cooler (04 Nos.) Blinding/Isolation	532		4	
MC5	300-E-112	Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection	532 Tube O .D. :1 in.	Chain Block: 10 ton Strik.Span: 55 mm	4	
MC5 1 2	A/B	Area cleaning Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection Arrangement/conn	532 Tube O .D. :1 in. Tube Length :	Strik.Span: 55 mm	4	
<b>MC5</b>	A/B &	Area cleaning Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection Arrangement/connections for	532 Tube O .D. :1 in.		4	
MC5 1 2	A/B & 310-E-112	Area cleaning  Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning	532 Tube O .D. :1 in. Tube Length :	Strik.Span: 55 mm	4	
MC5 1 2	A/B &	Area cleaning  Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5 1 2	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm	4	
1 2 3	A/B & 310-E-112	Area cleaning  Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3	A/B & 310-E-112	Area cleaning  Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party)	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4 5 6	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/connections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4 5 6	A/B & 310-E-112	Area cleaning  Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping /	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4 5 6 7	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4 5 6 7	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning Amine	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4 5 6 7 8	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.) Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm		
MC5  1 2 3 4 5 6 7	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/connections for chemical cleaning Chemical Cleaning Of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning Amine Regenerator	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm	4	
MC5  1 2 3 4 5 6 7 8	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning  Amine Regenerator Reboiler (04	Tube O .D. :1 in. Tube Length: 230 in. or 19 ft No. of passes:	Strik.Span: 55 mm Comb. Span: 55mm		
MC5  1 2 3 4 5 6 7 8	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/connections for chemical cleaning Chemical Cleaning Of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning Amine Regenerator	Tube O .D. :1 in. Tube Length : 230 in. or 19 ft  No. of passes : One	Strik.Span: 55 mm  Comb. Span: 55mm  Crow bar		
MC5  1 2 3 4 5 6 7 8	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning  Amine Regenerator Reboiler (04	Tube O .D. :1 in. Tube Length : 230 in. or 19 ft  No. of passes : One  Type: BKU, U-	Strik.Span: 55 mm  Comb. Span: 55mm  Crow bar  Sling, Shackles,		
MC5  1 2 3 4 5 6 7 8  MC6	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/connections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning Amine Regenerator Reboiler (04 No's)  Blinding/Isolation	Tube O .D. :1 in. Tube Length : 230 in. or 19 ft  No. of passes : One	Strik.Span: 55 mm  Comb. Span: 55mm  Crow bar		
1 2 3 4 5 6 7 8 MC6	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/conn ections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning Amine Regenerator Reboiler (04 No's)  Blinding/Isolation Arrangement/conn	Tube O .D. :1 in. Tube Length : 230 in. or 19 ft  No. of passes : One  Type: BKU, U-	Strik.Span: 55 mm  Comb. Span: 55mm  Crow bar  Sling, Shackles, Chain Blocks		
MC5  1 2 3 4 5 6 7 8  MC6	A/B & 310-E-112	Area cleaning Treated Gas Cooler (04 Nos.)  Blinding/Isolation Initial Inspection Arrangement/connections for chemical cleaning Chemical Cleaning of Shell Side (by 3rd Party) Pressure Testing Final Inspection Deblinding Housekeeping / Area cleaning Amine Regenerator Reboiler (04 No's)  Blinding/Isolation	Tube O .D. :1 in. Tube Length : 230 in. or 19 ft  No. of passes : One  Type: BKU, U- Tube	Strik.Span: 55 mm  Comb. Span: 55mm  Crow bar  Sling, Shackles,		

I i			]c:	Ĭ	1 1	Ī	Ī	
3	300-E-103	Head cover dismantling	Size: 0.75"(OD)x.065"( Thk)x14.92 ft (L)	Hammers, Crow bar				
	A/B	On-site drilling of	111K/X17.02 K (=/		†			
4	& 310-E-103 A/B	3/4" hole in tube sheet for Eye bolt for bundle removal	Thickness of Tube sheet: 3"	Scaffolding material				
5		Removal of Tube bundle	Tube Bundle Weight : 7.6t	Crane-35 Ton.				
6		Cleaning of shell and tube bundle	4-Four passes					
7		Tube bundle Insertion						
8		Head cover installation						
9		Pressure Testing and final Inspection						
10		Deblinding						
11		Housekeeping / Area cleaning						
мс7		Glycol Reboiler (02 No's)				2		
1		Blinding/Isolation	Type : BKU, No. of Tubes = 328	Crane-45Ton, Chain Blocks,				
2		Initial Inspection	Tube Size = 19(OD)x1.65 (thk.)x3291 (L)mm	Strik.Span: 36mm				
3		Arrangement/conn ections for water/ chemical cleaning	No. of Passes: Tube Side= 8					
4	400-E-103 & 410-E-103	Bonnet opening and Tube bundle removal	Bundle Weight = 2482 lb					
5		Inspection and cleaning	Overall Dim= 609 (I.D.) x 4684 L mm					
6		Tube bundle Insertion and box up						
7		Deblinding		_				
8		Housekeeping / Area cleaning						
		Lube Oil						
MC8		FinFan Cooler				3		
		(03)					$\longrightarrow$	
1		Inspection of Finned Tube Bundles	No. of tubes : 66					
2	SGT- 1/2/3A/B/C	External Chemical cleaning of Finned Tubes (by 3rd party)	Tube O.D.: 42mm .					
3		Cleaning of Fan Blades	Make: UK					
4		Verification / Adjustment of Fan blade angle						
5		Alignment of Fan						
	Page	e 25 of 73 OGDCL 7	Γender Enquiry N	o. PROC-SERVICES	/CB/P&P-49	940/202	21	

6	1	Final Inspection		1	1 1		
	P-D: ROTARY						
MD1	I D. KOTAK	Gas Turbines					
ויטואו		(03 No's)			3		
1		Enclosure Inspection & Cleaning	SIEMENS GAS TURBINE	General Tool Box			
2		of Air-Intake Hood	MAKE: SIEMENS-UK				
3		(Pulse (24 No's +24) + Hepa 15 No's)	MODEL: SGT- 100 -1S				
4	SGT-100- 1/2/3	Overall cleaning of Turbine enclosure					
5		Inspection/replace ment of Fuel Gas skid K/O Filter Coalescer Elements.					
6		Cleaning of fuel gas and liquid fuel skids					
7		Ventilation air inlet Filter/duct cleaning					
8		Final Inspection					
9		Area cleaning  Lean Amine					
MD2		Booster Pump			4		
		(04 No's)					
1		Decoupling of Pump & Motor	Single-stage Centrifugal pump	Strik.Span. 32,36mm			
2		check	Capacity=1970 gpm.	General Tool Box			
3	300-P104A/B & 310-P104A/B	casing, if required	Pressure= 79.49 psig	Comb. Spanner 16,17mm			
4		leakage problem.	x 6 in	Millwright Special Tools			
5		bearings if required.	Make: RUHRPUMPEN, GERMANY				
6		Assembly of pump				1	
7		Cleaning of suction & seal flush line strainers					
8		Alignment					
9		Housekeeping / Area cleaning					
		Lean Amine Circulation					
MD3		Pump (04 No's)			4		

		Decoupling of	7-stage	Striking Spanner		1	
1		Pump & Motor	Centrifugal pump	46mm,			
	1	Initial Alignment	Capacity=1960				
2		check	gpm.	55,46 mm.			
	1	Dismantling of	Dis.Pressure=				
3		bearing housings	922.2 psig	General Tool Box			
	-	Removal of	ozz.z poig				
4		bearings for	Suc.x Disch. = 8	Millwright Special			
4		inspection	x 6 in	Tools			
	-		Make:				
_		Cleaning / Repair					
5	300-P105A/B	/ repl. of damage	RUHRPUMPEN,				
	&	parts, if any	Germany				
	310-P105A/B	Service of					
_		Mechanical Seal					
6		(Dismantling,					
		cleaning/lapping &					
		re-assembly)					
7		Assembling of					
	]	bearing housing					
		Cleaning of					
8		suction & seal					
		flush line strainers			<u> </u>		<u> </u>
9	]	Alignment					
	1	Housekeeping /					
10		Area cleaning					
		Regenerator					
MD4		Reflux Pump					
IVID4		•			"	•	
		(04 No's)					
1		Dismantling of	Magnetic Drive	Comb,Spner:24,27			
		pump	Centrifugal pump	mm			
2		Inspection of	Capacity=106.9	General Tool Box			
		casing	gpm.	Ochiciai 100i Box			
		Cleaning / Repair	Dis.Pressure=	Millwright Special			
3	300-P106A/B	/ repl. of damage	64.5 psig	Tools			
	&	parts, if any	04.5 psig	10013			
4	310-P106A/B	Assembling of	Suc.x Disch. = 3				
4		pump	x 1-1/2 in				
		Cleaning of	Make:				
5		suction & seal	RUHRPUMPEN,				
		flush line strainer	Germany				
6		Housekeeping /					
		Area cleaning					
		<u> </u>					
<u></u>							
		Glycol					
		Glycol Circulation					
MD5		Circulation				ı	
MD5		Circulation Pumps (04			4	ı	
MD5		Circulation				ı	
MD5		Circulation Pumps (04 No's)	5-Stage		4	ı	
<b>MD5</b>		Circulation Pumps (04 No's) Decoupling of	Reciprocating	General Tool Box	4	1	
		Circulation Pumps (04 No's) Decoupling of Pump & Motor	Reciprocating pump		2	1	
1		Circulation Pumps (04 No's) Decoupling of Pump & Motor Initial Inspection	Reciprocating pump Capacity= 6.6	Millwright Special	4	<b>I</b>	
		Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump	Reciprocating pump			<b>I</b>	
1		Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block	Reciprocating pump Capacity= 6.6	Millwright Special		<b>I</b>	
1		Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block gasket, plunger	Reciprocating pump Capacity= 6.6	Millwright Special		ļ	
1 2	400-P-101	Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block gasket, plunger packing/bushing,	Reciprocating pump Capacity= 6.6 m3/h.  Pressure=	Millwright Special		ı	
1	A/B	Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block gasket, plunger packing/bushing, crankcase or any	Reciprocating pump Capacity= 6.6 m3/h.	Millwright Special		ı	
1 2	A/B &	Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block gasket, plunger packing/bushing,	Reciprocating pump Capacity= 6.6 m3/h.  Pressure=	Millwright Special		<b>1</b>	
1 2	A/B & 410-P-101	Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block gasket, plunger packing/bushing, crankcase or any other component if required	Reciprocating pump Capacity= 6.6 m3/h.  Pressure=	Millwright Special		<b>1</b>	
1 2	A/B &	Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block gasket, plunger packing/bushing, crankcase or any other component if required Dismantling of	Reciprocating pump Capacity= 6.6 m3/h.  Pressure= 59.7bars/ 850 psi	Millwright Special		<b>1</b>	
1 2	A/B & 410-P-101	Circulation Pumps (04 No's)  Decoupling of Pump & Motor  Initial Inspection of over all pump Cleaning of block gasket, plunger packing/bushing, crankcase or any other component if required	Reciprocating pump Capacity= 6.6 m3/h.  Pressure=	Millwright Special		<b>I</b>	

		parts for wear &					
		tear, maintenance					
		replace if					
		required.					
		Cleaning of pump	Make: OFFICINE				
5		strainers & other	MECCANICHE				
		piping	GALLARATESI -				
		Inspection and	S.p.A			+ +	
		cleaning of					
6		crankcase					
		breather					
		Inspection of gear					
		box, cleaning,					
7		reparing/					
		maintenance if					
		any					
		External cleaning					
8		of pump body and overall skid					
		Housekeeping /					
9		Area cleaning					
		Hot Oil					
		Circulation					
MD6		Pumps (10			10		
		No's)					
			Cinale store				
1		Decoupling of Pump & Motor	Single-stage Centrifugal pump	General Tool Box			
		Service of	Continugai punip		+ + + + + + + + + + + + + + + + + + + +		
			Capacity=2496	Millwright Special			
2		any having	gpm.	Tools			
		leakage problem.					
		Replacement of	Pressure= 132				
3	900-P-	bearings if	psig				
	102A/B/C/D/E	required.					
4	/F/G/H/I/J	Alignment	Suc.x Disch. =				
-			10 x 8 in		+ + + + + + + + + + + + + + + + + + + +	+ +	
		Cleaning of	Make: SULZER Pumps &				
5		suction & seal	Compressor.				
		flush line strainers	Italy				
		Blue epoxy paint	,				
6		to outer surface of					
		pump					
7		Area cleaning					
		Hot Oil Heater					
MD7		FD Fans (04			4		
		No's)					
		Opening of FD					
1	900-C52-	Fan inspection	Centrifugal Fan	Strik.Span. 30 mm			
	A/B/C/D	windows.					
	. 45,575	Inspection/cleanin	Flow rate =	Comb. Spanner			
2		g of Fan	38893 m3/h	24mm			
		duct/dampers.					
3		Inspection/Replac	RPM = 1450	General Tool Box			
		ement of bearings of FD Fans	1450	Octicial 1001 DUX			
				Millwright Special	+ + + + + + + + + + + + + + + + + + + +		
4		Alignment		Tools			
5		Housekeeping /					
Ι ο		Area cleaning					

	1		1	T.			
		Cooling Water					
MD8		Pump (04				4	
		No's)					
1		Decoupling of	Centrifugal Pump	General Tool Box			
'	-	Pump & Motor	Ochthiagai i amp	Ocheral Tool Box			
		Service of Sealing	Composite 2015	Millowials Cassial			
2		system if any having leakage	Capacity= 2915 gpm.	Millwright Special Tools			
		problem.	дрии.	10013			
	300-P-111	Replacement of	Pressure= 30				
3	A/B	bearings if	psig				
}	&	required.					
4	310-P-111 A/B	Alignment	Suc.x Disch. = 20 x 24 in				
	7,5	Cleaning of	Make:				
5		suction & seal	STERLING Fluid				
		flush line strainers	System, ITALY				
		Blue epoxy paint					
6		to outer surface of					
7	-	pump Area cleaning					
		Combustion					
MDO		Air Primary				_	
MD9		Blower			'	2	
		(Incinerator)					
		(02 No's)					
1		Opening of FD	Contrifugal Fon	General Tool Box			
1		Fan inspection windows.	Centrifugal Fan	General 1001 box			
	1	Inspection of		Millwright Special	+		
2	350-C101 A/B	dampers.	Make: PBN, Italy	Tools			
	330-C101 A/B	Greasing of	MODEL:				
3		bearings	RAW1402/8G/R				
	-		D315°-355SMA6				
4		Alignment	Flow Rate: 30cu.m/sec				
		Secondary	0000.111/000				
MD1		Blower					
0		(Incinerator)				3	
		(03 No's)					
		Opening of FD					
1		Fan inspection	Centrifugal Fan	General Tool Box			
	250 0402	windows.					
2	350-C102 A/B/C	Inspection of	Make: f.lli.farrari.	Millwright Special			
	7,5,0	dampers.	Italy	Tools			
3		Greasing of					
4	1	bearings Alignment					
7		Pilot Air					
MD1		Blower					
МD1 1		(Incinerator)				3	
•		(02 No's)					
		Opening of FD					
1		Fan inspection	Centrifugal Fan	General Tool Box			
	350-C103	windows.					
2	A/B	Inspection of	Make: f.lli.farrari.	Millwright Special			
		dampers.	Italy	Tools			
3		Greasing of	Power: 550kw				
		bearings					
4	1	Alignment		I			1

Flare Knockout Pump (02 No's)   Single Stage Centrifugal   Single Stage Centrifugal   General Tool Box   Single Stage   Centrifugal   Tools	
Page	
Sepairing if required   Check lube oil   Capacity: 4.5   Check lube oil   Check Right   Check Righ	
Section   Sect	
MD1 3   Nitrogen   Compressor   Cleaning of enclosure   Cleaning in of Intake air filter   Rand   Tools   Cleaning of enclosure   Cleaning in the property of the property o	
Compressor   Cleaning of enciosure   Cleaning of enc	
Compressor   Cleaning of enclosure   Type: Screw type   General Tool Box   Cleaning of enclosure   Type: Screw type   General Tool Box   Cleaning of enclosure   Type: Screw type   General Tool Box   Tools   Tools	
Processor   Proc	
980-P-C101 A/B  980-P-C101 A/B  980-P-C101 A/B  1	
A/B replacement if required re	
Second   S	
MD1   Area cleaning	
Compressor   Cleaning of enclosure   Cleaning/inspectio n of Intake air filter   Lube oil/coolant required   Inspection of hose pipes   Housekeeping / Area cleaning   Make: Sterling, ltaly   Make: Sterling, ltaly   Check Alignment   Check Alignment   Check Alignment   Cleaning of pump body and skid   Check Alignment   Check Alignment   Cleaning of pump body and skid   Check Alignment   Check Alignment   Check Alignment   Cleaning of pump body and skid   Check Alignment   Cleaning of pump body and skid   Check Alignment   Check Alignment   Check Alignment   Check Alignment   Cleaning of pump body and skid   Check Alignment   Cleaning of pump body and skid   Check Alignment   Check Alignment   Check Alignment   Check Alignment   Cleaning of pump body and skid   Cleaning of pump body and	
Compressor   Cleaning of enclosure   Cleaning/inspection of Intake air filter   Lube oil/coolant replacement if required   Inspection of hose pipes   Housekeeping / Area cleaning   Make: Sterling, trequired   Make: Sterling,	
September 100 Box   Cleaning/inspection   Compressor   Compressor   Cleaning/inspection   Compressor   Compressor   Cleaning/inspection   Compressor   Compressor   Cleaning/inspection   Compressor   Cleaning/inspection   Compressor   Compressor   Compressor   Cleaning/inspection   Compressor   Compressor   Compressor   Compressor   Cleaning/inspection   Compressor   Compressor   Compressor   Cleaning/inspection   Compressor   Compres	
970-C101 A/B  970-C101 A/B  970-C101 A/B  970-C101 A/B  1	
3   970-C101 A/B   replacement if required   140psi	
Solution   Post	
Area cleaning  Raw Water Pumps  Initial inspection Cleaning of pump body and skid Maintenance & repairing if required Check lube oil level Check Alignment  MD1 6  Utility Water Pumps  Area cleaning Raw Water Pumps  Initial inspection Cleaning of pump body and skid Maintenance & repairing if required Check lube oil level Check Alignment  Dutility Water Pumps  Initial inspection Cleaning of pump Make: Sterling, Millwright Special Check Alignment  Dutility Water Pumps  Initial inspection Cleaning of pump Make: Sterling, Millwright Special	
Pumps   Single Stage   General Tool Box	
Initial inspection  Single Stage Centrifugal  Cleaning of pump body and skid ltaly  Maintenance & repairing if required  Check lube oil level  Check Alignment  MD1 6  Utility Water Pumps  Initial inspection  Single Stage Centrifugal  Capacity: 1250 usgpm  Check Alignment  Check Alignment  Check Alignment  Check Alignment  MD1 6  Initial inspection  Single Stage Centrifugal  Centrifugal  General Tool Box  Centrifugal  Millwright Special	
2 930-P-102 A/B  Page 1	
930-P-102 A/B  Maintenance & repairing if required  Check lube oil level  Check Alignment  Check Alignment  Utility Water Pumps  Initial inspection  Cleaning of pump  Maintenance & Capacity: 1250 usgpm  Check Alignment  Check Alignment  Dial Companies to 1250 usgpm  Check Alignment  Check Alignment  MMD1  Check Alignment  Dial Companies to 1250 usgpm  Check Alignment  Check Alignment  Dial Companies to 1250 usgpm  MMD1  Check Alignment  Check Alignment  Dial Companies to 1250 usgpm  MMD1  Check Alignment  Dial Companies to 1250 usgpm  MMD1  Check Alignment  Dial Companies to 1250 usgpm  MMD1  Check Alignment  Dial Companies to 1250 usgpm  Dial Compan	
Single Stage   General Tool Box   Cleaning of pump   Make: Sterling,   Millwright Special   Cleaning of pump   Clean	
MD1 6 Pumps 2  Initial inspection Single Stage Centrifugal General Tool Box Cleaning of pump Make: Sterling, Millwright Special	
6 Pumps Z  Initial inspection Single Stage Centrifugal General Tool Box Cleaning of pump Make: Sterling, Millwright Special	
Cleaning of pump Make: Sterling, Millwright Special	
Cleaning of pump Make: Sterling, Millwright Special	
body and skid Italy Tools	

<del></del>

1	I	hadaa daa ta fall	I	I	1 1	I	I
		valve due to fall down hazard					
ME11	N2	N2 compressor	Pipe Size: 2", CS, 40S, A106	5	10		
IVIETT	Compressor	discharge lines relocation	Pipe Size: 3", CS, 40S, A106	6	18		
GROU	JP-F: MANUA	L VALVES:-					
	Slug	Manual Valves			Valves list		
MF1	Catchers	Gathering Area			attached	37	
	Area	(37 Nos.) Dismantling of					
1		Valves from					
		location					
2		Shifting of valves to workshop					
		Initial					
3		Testing/Inspection of valves					
4		Repair of defected valves					
5		Pressure Testing					
6		Painting of Valves					
0		if required.					
7		Shifting of valves at Location					
8		Installation of valves at location					
	Amino Troin	Manual Valves of	Onsite Service &		Value liet		
MF2	Amine Train- 300	Amine Train-I (27 Nos.)	Greasing: 18 out of 27		Valves list attached	27	
1		Dismantling of Valves from	0127				
		location Shifting of valves					
2		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	0				
MF3	Amine Train- 310	Manual Valves of Amine Train-II (26 Nos.)	Onsite Service & Greasing: 18 out of 26		Valves list attached	26	
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					
<u> </u>		if required.					

			•	ı.		i	
7		Shifting of valves					
		at Location					
8		Installation of					
		valves at location					
		Manual Valves of			Valves list		
MF4	Hot Oil/Utility	Hot Oil & Utility		attached	49		
		Area (49Nos.)			attached		
		Dismantling of					
1		Valves from					
		location					
2		Shifting of valves					
		to workshop					
3		Testing/Inspectio				·	
J		n of valves					
4		Repair of					
-		defected valves					
5		Pressure Testing					
		Painting of					
6		Valves if					
		required.					
7		Shifting of valves					
′		at Location					
8		Installation of					
0		valves at location					
				<u> </u>			 

			ELOPMEN			ED		
UCH-II GAS PROCESSING PLANT - ATA MARCH 2021 PRODUCTION FACILITIES - SCOPE OF WORK								
MAN	IUAL VALVES:-	•						
MV-1	Gathering Area	Manual Valves in-	place servicing					
	Gathering,	Onsite service, greasing, painting etc.	Ball valves 10" Class-600 = 78 Nos.	Grease gun with nozzles	78			
	Gathering/Separator		Ball valves 08" Class-600 = 19 Nos.		19			
	Flare header,		Ball valves 08" Class-150 = 15 Nos.		15	Only onsite service &		
	Gathering		Ball valves 06" Class-600 = 17 Nos.		17	greasing		
	Separator		Ball valves 02" Class-600 = 15 Nos.		15			
				Total =	144			
MV-2	Gathering Area	Shop Servicing of	NRVs and Gate/Glo	be Valves	•			•
	Gathering	dismantling of Valves from location	NRVs 10", 600#, Wafer, WCB, Dual Plates =13 Nos.	St. Spanner # 50, Brass Hammer	13			
	Gathering	Shifting of valves to workshop	NRVs 08", 600#, Wafer, WCB, Dual Plates = 03 Nos.	St. Spanner # 46, Brass Hammer	3	Shop Servicing of NRVs and Gate/Glo be Valves		
	Well Monitoring Lines	Testing/Inspection of valves	NRVs 06", 600#, Wafer, WCB, Dual Plates = 18 Nos.	St. Spanner # 41, Brass Hammer	18			
	Monitoring/Sep D/s	Repair of defected valves	Gate/Globe Valves 6", 600# WCB = 17 Nos.	St. Spanner # 41, Brass Hammer	17			
	Flare header,	Pressure Testing	Globe valves 2", 600# WCB = 15 Nos.	St. Spanner # 24, Brass Hammer	15			
		Painting of Valves if required.						
		Shifting of valves at Location Installation of						
	<u> </u>	valves at location		Total =	66	┨		
			l	i Olai =	00			
MV-3	Well Sites	Manual Valves	T	, ·		<del>                                     </del>		
	Uch-II well sites	In-Place service, greasing and painting etc.	Ball Valves 10", 900# = 26 Nos.	Grease gun with nozzles	26	- Only -		
			Ball Valves 08", 900# = 04 Nos. Ball Valves 04",		4	onsite service & greasing		
			900# = 15 Nos.		15			
				Total =	45			

# OIL & GAS DEVELOPMENT COMPANY LIMITED UCH-II GAS PROCESSING PLANT - ATA 2021 (INSTRUMENT SCOPE OF WORK)

Act #	Tag #	Job Description	Specifications	Tools Required	Remarks	Quantit y	Unit Rate	Total Rate	
Pressure Safety Valves PSV's									
Amine	e Train 300				Location				
1	300-PSV-001A	Removing from location, testing in workshop/bench and record "as found set" value	Size : 1.5" x 3"	- Crane, Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Hex Key Set, Pressure - Source 2000PSI, Other calibration equipment.	Feed gas Knockout	1			
2	300-PSV-003A		Size : 1" x 2"		Feed gas Filter coalescer	1			
3	300-PSV-004B		Size : 1" x 2"		Amine Contactor	1			
4	300-PSV-005A	(Psig/Bar), disassembling for	Size : 1" x 2"		Treated gas Knock out	1			
5	300-PSV-006A	Lapping trim and	Size : 8" x 10"		Flash Drum	1			
6	300-PSV-006B	overhauling completely (if	Size : 8" x 10"		Flash Drum	1			
7	300-PSV-008A	required),	Size : 4" x 6"		Surge drum	1			
8	300-PSV-010B	assembling, setting (provided	Size : 6" x 8"		Amine Fin fan cooler	1			
9	300-PSV-011A	by OGDCL) cold set points and	Size : 10" x 14"		Amine stripper	1			
10	300-PSV-015A	reinstallation.	Size : 4" x 6"		Reflux drum	1			
11	300-PSV-021A		Size : 2" x 3"		Lean Amine Cooler	1			
DeHydration Train 400									
1	400-PSV-001		Size : 3" x 6"	Crane, Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Hex Key Set, Pressure Source 2000PSI, Other calibration equipment. PSV Test Bench. Consumables.	Contactor	1			
2	400-PSV-002		Size : 3" x 6"		Contactor	1			
3	400-PSV-003	]	Size : 2" x 4"		Scrubber	1			
4	400-PSV-004	]	Size : 2" x 4"		Scrubber	1			
5	400-PSV-005		Size : 4" x 6"		Flash Drum	1			
6	400-PSV-006	1	Size : 4" x 6"		Flash Drum	1			
7	400-PSV-007	Removing from location, testing in	Size : 2" x 2"		Cartridge Filters	1			
8	400-PSV-008	workshop/bench and record "as	Size : 2" x 2"		Charcoal Filter	1			
9	400-PSV-009	found set" value (Psig/Bar),	Size : 2" x 2"		Cartridge Filters	1			
10	400-PSV-010	disassembling for Lapping trim and overhauling completely (if required), assembling, setting (provided by OGDCL) cold set points and reinstallation.	Size : 2" x 2"		Glycol Circulation Pump	1			
11	400-PSV-011		Size : 2" x 2"		Glycol Circulation Pump	1			
12	400-PSV-012		Size : 1.5" x 2"		Storage Tank	1			
13	400-PSV-013		Size : 2" x 6"		Gas/TEG Exchanger	1			
14	400-PSV-014		Size : 2" x 6"		Gas/TEG Exchanger	1			
15	400-PSV-015		Size : 4" x 3"		Surge Drum	1			
16	400-PSV-016		Size : 4" x 3"		Surge Drum	1			
17	400-PSV-018		Size : 2" x 2"		Heat Exchanger	1			
18	400-PSV-019		Size : 2" x 2"		Heat Exchanger	1			
Utility	Area				Location				

-				i	Stroage Tank	i l		
2	900-PSV-002	Removing from location, testing in workshop/bench and record "as found set" value	Size : 1.5" x 3"		Expansion	1		
3	900-PSV-003A/B/C/D		Size : 3" x 4"		Vessel Side Filter	4		
4	900-PSV-004		Size:		Side Filter	1		
5	-		Size : 1" x 2"		Strainer	1		
6	900-TSV-003		Size:		Heaters	1		
7	970-PSV-001		Size : 1" x 2"	Crane, Screw Driver	Instrument Air	1		
8	970-PSV-002	(Psig/Bar),	Size : 1" x 2"	Set, Terminal Screw Drivers, Spanner Set	Instrument Air	1		
9	970-PSV-003	disassembling for	Size : 1" x 2"	mm/Inch, Hex Key Set, Pressure	Instrument Air	1		
10	970-PSV-004	Lapping trim and overhauling	Size : 1.5" x 2"		Instrument Air	1		
11	980-PSV-001	completely (if required),	Size : 1" x 3"		Nitrogen Package	1		
12	980-PSV-002	assembling, setting (provided by OGDCL) cold	Size : 1" x 2"		Nitrogen Package	1		
13	980-PSV-003	set points and reinstallation.	Size : 1" x 2"		Nitrogen Package	1		
14	980-PSV-004		Size : 1.5" x 2"		Nitrogen Package	1		
15	980-PSV-005		Size : 1" x 2"		Nitrogen Package	1		
16	980-PSV-006		Size :		Nitrogen Package	1		
Control Valves CV's								
Slug Catcher Area								
1	210-LCV-001	Dismantling, shifting to W/S,	1.5"/600	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools, calibration equipment	Eastern Slug Catcher	1		
2	211-LCV-001	body & trim inspection, lapping	1.5"/600		Central Slug Catcher	1		
3	212-LCV-001	of plug/seat (if reqd.), replacement of kits, actuator integrity testing, Functional Test,Reassemblin g, reinstallation and onsite Calibration. Onsite Servicing, Cleaning, Greasing and functional testing and loop verification through CCR	1.5"/600		Western Slug Catcher	1		
4	210-PCV-006		1.5"/600		Eastern Slug Catcher	1		
Amin	e Train 300				Location			
1	300-FCV-018	Onsite Servicing,	3"/150		Feed Gas	1		
2	300-FCV-019	Cleaning, Greasing and	6"/150		Treated Gas	1		
3	300-PCV-033	functional testing and loop verification through CCR	6"/300		Gas to Flare	1		
4	300-FCV-020	Dismantling,	6"/150		Trim Cooler	1		
5	300-FCV-021	shifting to W/S, body & trim	2"/150	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools, calibration equipment	Condensate	1		
6	300-FCV-036	inspection, lapping of plug/seat (if reqd.), replacement of kits, actuator	10"/300		Hot Oil to Reboiler	1		

	1	1					ı	
		integrity testing, Functional Test,Reassemblin g, reinstallation and onsite Calibration.						
Amin	e Train 310				Location			
1	310-FCV-018	Onsite Servicing,	3"/150		Feed Gas	1		
2	310-FCV-019	Cleaning, Greasing and	6"/150		Treated Gas	1		
3	310-PCV-033	functional testing and loop verification through CCR	6"/300		Gas to Flare	1		
4	310-FCV-020	Dismantling, shifting to W/S, body & trim	6"/150		Trim Cooler	1		
5	310-FCV-021	inspection, lapping of plug/seat (if	2"/150		Condensate	1		
6	310-FCV-036	reqd.), replacement of kits, actuator integrity testing, Functional Test,Reassemblin g, reinstallation and onsite Calibration.	10"/300	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools, calibration equipment	Hot Oil to Reboiler	1		
Dehy	dration Train 40	00			Location			
1	400-FCV-006B	Onsite Servicing, Cleaning, Greasing and functional testing and loop verification through CCR	8"/600	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools, calibration equipment	Treated Gas to Flare	1		
Dehy	dration Train 41	10			Location			
1	410-FCV-006B	Dismantling, shifting to W/S, body & trim inspection, lapping of plug/seat (if reqd.), replacement of kits, actuator integrity testing, Functional Test,Reassemblin g, reinstallation and onsite Calibration.	8"/600	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools, calibration equipment	Treated Gas to Flare	1		
Fuel I	Knock Out				Location			
1	960-PCV-005	Onsite Servicing, Cleaning, Greasing and	4"/600	Crane, Spanner Set mm/Inch, Screw	LP Fuel KO	1		
2	960-PCV-003	functional testing and loop verification through CCR	4"/150	Driver Set, General Tools, calibration equipment	LP Fuel KO	1		
		Emergency	Shutdown	Valves ESDV	's			
Amin	e Train 300				Location			
1	300-ESDV-013	Dismantling, shifting to W/S, body & trim inspection, lapping of plug/seat (if	12"/600	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools.	Treated Gas	1		

ĺ	1	1		1			
		reqd.), replacement of kits, actuator integrity testing, Functional Test,Reassemblin g, reinstallation and onsite Calibration.					
2	300-ESDVs	Onsite Servicing, Cleaning, Greasing and functional testing and loop verification through CCR	Shutdown Valves	Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Millimeter, consumables	Amine Unit 300	14	
Amin	e Train 310				Location		
1	310-ESDV-013	Dismantling, shifting to W/S, body & trim inspection, lapping of plug/seat (if reqd.), replacement of kits, actuator integrity testing, Functional Test,Reassemblin g, reinstallation and onsite Calibration.	12"/600	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools.	Treated Gas	1	
2	310-ESDVs	Onsite Servicing, Cleaning, Greasing and functional testing and loop verification through CCR	Shutdown Valves	Screw Driver Set, Terminal Screw Drivers, Spanner Set mm/Inch, Millimeter, consumables	Amine Unit 310	15	
Hot O	il Area				Location		
1	900-ESDV-001A	Onsite Servicing, Cleaning, Greasing and		Screw Driver Set, Terminal Screw	Hot Oil Heater A/B/C/D Inlet	4	
2	900-ESDV-002A	functional testing and loop verification through CCR		Drivers, Spanner Set	Hot Oil Heater A/B/C/D Outlet	4	
		Tran	smitters & S	witches			
Slug	Catchers Area				Location		
1	210-LT-001					1	
2	210-LSLL-002	]			Eastern Slug	1	
3	210-LSHH-002	On Site internal			catcher	1	
4	210-FT-006	Cleaning of level		Spanners Set (In/mm)		1	
5	211-LT-001	Troll and switches, Sensor cleaning		Screw Drivers Set,		1	
6	211-LSLL-002	and setting, Field	Transmitter &	Hex Key set, Multi- meter, Pipe Wrench	Central Slug	1	
7	211-LSHH-002	signal electric connection	Switches	18", 12", Transparent nylon tube of 1" dia,	catcher	1	
8	211-FT-006	checking, Calibration		10 meter, length,		1	
9	212-LT-001	Calibration verifications, loop testing.		HART Communicator		1	
10	212-LSLL-002				Western Slug	1	
11	212-LSHH-002	]			western Slug catcher	1	
12	212-FT-006					1	

40	250 LT 000	<u> </u>		1		1	
13	250-LT-002	-				1	
14	250-LSLL-001	_				1	
15	250-LSHH-001	_				1	
16	250-LSLL-002	_				1	
17	250-LSHH-002	]				1	
18	250-LT-003					1	
19	250-LSLL-003				Cond.Degassi ng Boot	1	
20	250-LSHH-003				ng Book	1	
Amin	e Train 300	<u> </u>			Location		
1	300-FIT-003	Dismantling,			Feed Gas	1	
2	300-FIT-002	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.	Treated gas	1	
3	300-LT-002					1	
4	300-LSLL-002	]			Feed Gas Knockout	1	
5	300-LSHH-002	_				1	
6	300-LT-003				□iltor.	1	
7	300-LSLL-003				Filter Coalescer	1	
8	300-LSHH-003	_				1	
9	300-LT-013	_			Amine	1	
10	300-LSLL-014	_		Spanners Set	Contactor	1	
11	300-LSHH-014					1	
12	300-LT-008 A/B 300-LSLL-	On Site internal				2	
13	008A/B/C/D	Cleaning of level Troll and switches,		(In/mm) Screw Drivers Set,	Reboiler A/B	4	
14	300-LSHH-008A/B	Sensor cleaning and setting, Field		Hex Key set, Multi-		2	
15	300-LT-004	signal electric	Transmitter & Switches	meter, Pipe Wrench 18", 12", Transparent		1	
16	300-LSLL-004	connection checking,	Owitories	nylon tube of 1" dia,	Surge Vessel	1	
17	300-LSHH-004	Calibration		10 meter, length, HART		1	
18	300-LT-006	verifications, loop testing.		Communicator		1	
19	300-LT-005	testing.				1	
20	300-FIT-005	-			Amine Flash	1	
21	300-LSHH-005	-			Vessel	1	
22	300-LSHH-006 300-LSLL-005	-				1	
23	300-LSLL-005 300-LSLL-006	1				1	
25	300-LSLL-006 300-LIT-011	1				1	
26	300-LSHH-011	1			Amine Reflux	1	
27	300-LSLL-011	-			Vessel	1	
28	300-LIT-009	1			Amine Stripper		
	e Train 310				Location		
1	310-FIT-003	Dismantling,			Feed Gas	1	
2	310-FIT-002	shifting to W/S, inspection, replacement of kits, Functional Test, reinstallation and onsite	Annubar Flow Transmitters	Crane, Spanner Set mm/Inch, Screw Driver Set, General Tools.	Treated gas	1	

Verification through System.  3	1	
4 310-LSLL-002 Feed Gas Knockout	1	
4 310-LSLL-002 Feed Gas Knockout		
Knockout –	1	
0 0.0 25.11.002	1	
6 310-LT-003	1	
7 310-I SI I -003 Filter	1	
8 310-LSHH-003 Coalescer	1	
9 310-LT-013	1	
10 310-LSLL-014 Amine	1	
11 310-LSHH-014 Contactor	1	
12 310-LT-008 A/B On Site internal	2	
310-LSLL- Cleaning of level Spanners Set (In/mm) Reboiler A/B	2	
14 310-LSHH-008A/B Sensor cleaning Sensor clea	2	
15 310-LT-004 signal electric Transmitter & meter, Pipe Wrench	1	
16 310-LSLL-004 connection Switches 18, 12, Transparent nylon tube of 1" dia Surge Vessel	1	
17 310-LSHH-004 Calibration 10 meter, length,	1	
18 310-LT-006 verifications, loop HART Communicator	1	
19 310-LT-005 testing.	1	
20 310-FIT-005 Amine Flash	1	
21 310-LSHH-005 Vessel	1	
22 310-LSHH-006	1	
23 310-LSLL-005	1	<u> </u>
24 310-LSLL-006	1	
25 310-LIT-011 Amine Reflux	1	<u> </u>
26 310-LSHH-011 Vessel	1	<u> </u>
27 310-LSLL-011	1	
28 310-LIT-009 Amine Stripper	1	
Incinerator Location		
1 350-FT-001 On Site internal Cleaning of level	1	
2 350-PIT-001 Troll and switches,	1	
3 350-PIT-002 Sensor cleaning and setting, Field Crane, Spanner Set	1	
4 350-PIT-003 signal electric Transmitters Driver Set General Incinerator	1	
connection checking, 5 350-PIT-004 Calibration verifications, loop testing.	1	
Dehydration Train 400 Location		
1 400-FIT-006 Dismantling, shifting to W/S,	1	
inspection, replacement of kits, Functional Test, reinstallation  inspection, replacement of kits, Functional Test, reinstallation  Annubar Flow Transmitters  Crane, Spanner Set mm/Inch, Screw Driver Set, General Dehy Outlet	1	
Tools. gas  Verification through System.		
and onsite Verification through System.  3 400-LSLL-001 On Site internal Spanners Set	1	
and onsite Verification through System.  3 400-LSLL-001 On Site internal Cleaning of level Transmitter & Screw Drivers Set Glycol	1 1	
and onsite Verification through System.  3 400-LSLL-001 On Site internal Cleaning of level		

		connection		nylon tubo of 1" dia			
7	400-LSLL-005	checking,		nylon tube of 1" dia, 10 meter, length,	Flash drum V-	1	
8	400-LSHH-005	Calibration verifications, loop		HART Communicator	103	1	
9	400-LIT-005	testing.		Communicator		1	
10	400-LSLL-006				Surge Vessel	1	
11	400-LSHH-006				V-104	1	
12	400-LIT-006	_				1	
13	400-LSLL-003				Overhead	1	
14	400-LSHH-003				separator V- 102	1	
15	400-LIT-003				102	1	
16	400-LSLL-007					1	
17	400-LSHH-007				Re boiler E- 103	1	
18	400-LIT-007					1	
19	400-LIT-009				Glycol Storage Tank TK-101	1	
Dehy	dration Train 41	0			Location		
1	410-FIT-006	Dismantling, shifting to W/S,			Dehy Inlet gas	1	
2	410-FIT-003	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.	Dehy Outlet gas	1	
3	410-LSLL-001					1	
4	410-LSHH-001		Glycol contactor T-	1			
5	410-LSLL-002				101	1	
6	410-LSHH-002					1	
7	410-LSLL-005					1	
8	410-LSHH-005	On Site internal		Spanners Set	Flash drum V- 103	1	
9	410-LIT-005	Cleaning of level Troll and switches,		(In/mm)		1	
10	410-LSLL-006	Sensor cleaning		Screw Drivers Set, Hex Key set, Multi-		1	
11	410-LSHH-006	and setting, Field signal electric	Transmitter & Switches	meter, Pipe Wrench 18", 12", Transparent	Surge Vessel V-104	1	
12	410-LIT-006	connection checking,	Owitories	nylon tube of 1" dia,		1	
13	410-LSLL-003	Calibration		10 meter, length, HART	Overhead	1	
14	410-LSHH-003	verifications, loop testing.		Communicator	separator V-	1	
15	410-LIT-003				102	1	
16	410-LSLL-007					1	
17	410-LSHH-007				Re boiler E- 103	1	
18	410-LIT-007					1	
19	410-LIT-009				Glycol Storage Tank TK-101	1	
Hot O	il Area				Location		
1	900 LSLL-004	On Site internal		Spanners Set		1	
2	900 LSHH-004	Cleaning of level Troll and switches,	vel nes, ng Transmitter & S H	(In/mm) Screw Drivers Set,	Expansion	1	
3	900 LIT-004	Sensor cleaning			Vessel V-102	1	
4	900-LSLL-001	-001 and setting, Field signal electric				1	
5	900 FI-11.01A	connection				1	

				1 40 4 4			
6	900 FI-11.01B	checking, Calibration		10 meter, length, HART	Fuel Gas to	11	
7	900 FI-11.01C	verifications, loop		Communicator	Heaters	1	
8	900 FI-11.01D	testing.				1	
9	900 LIT-002				Sump Vessel V-101	1	
10	900 FI-014A					1	
11	900 FI-014B				LI-4 O'l Flam	1	
12	900-FI-014C				Hot Oil Flow	1	
13	900 FI-014D					1	
Flare	Knock Out				Location		
1	990-LT-001	On Site internal		Spanners Set		1	
2	990-LSLL-001	Cleaning of level Troll and switches,		(In/mm) Screw Drivers Set,	-	1	
3	990-LSHH-001	Sensor cleaning and setting, Field signal electric connection checking, Calibration verifications, loop testing.	Transmitter & Switches	Hex Key set, Multi- meter, Pipe Wrench 18", 12", Transparent nylon tube of 1" dia, 10 meter, length, HART Communicator	Vessel	1	
Misce	ellaneous Jobs				Location		
1	Analyzers		Analyzers		Incinerator & Hot Oil	5	
2	310-PSE-070	Calibration/servici	Size: 12", Make: Continental Disc Corporation	Calibration Kit, Cal Gases	Feed gas cooler	1	
3	310-PSE-071		Size: 16", Make: Continental Disc Corporation		Treated Gas Cooler	1	

## OIL AND GAS DEVELOPMENT COMPANY LIMITED T&I- Section (PE&FD), Production Department ATA-2021 - UGF-II

Wel	l Site:-								
Sr. No	Loca tion	Tag No.	Instruments Type / Make	Job Descriptio n	Tools/Eqps. Required	Remarks	Quan tity	Unit Rate	Total Rate
		100- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP)0-30 cc/min		All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1		
1	Well No 19 (Eastern Lobe )	100- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	Calibration , servicing and maintenanc e will be carried out and verification of reading will be monitored by CCR- HMI	cing d Screw Drivers d Set nanc Resistance Box. Pressure d out Calibrator mA Source suitable Pneumatic/Hydr aulic Pump for Calibrator -etc CR-	will deduct in case of non-availability of tools and calibration equipment.  3. mA Source and pressure calibrator at Contractor end	1		
		100- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP)0-1450 psig				1		
		100- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP)0-200 psig				1		
	Vell No 19 (	100- LIT- 001	LT Smart HART / ABB 266 HSH (CIP)0-100%				1		
	Λ	100- LIT- 003	LT Smart HART / ABB 266 HSH (CIP)0-100%				1		
		100- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,	process requirement. 6. A dedicated	1		
		100- FD- 002	Multispectrum IR Flame	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	Double Cabin Vehicle must be available to	1		
		100- FD- 003	Detector X3301 / Det- Tronics	and verification of reading will be monitored by CCR- HMI		complete Well site Jobs. 7. Crane Mounted Truck with man hoisting	1		

	100- H2S-		Calibration	Calibration Gas (H2S 100 ppm),	cradle will be required for	1	
	001A		, servicing	Multi-meter,	activities on	1	
	100-		and	NTMOS	FDs & OGDs.		
	H2S-	H2S Detectors	maintenanc	Calibration Kit,	8. Well is 25	1	
	001B	Infini Gas	e will be	Ampoule Calibration Kit,	Km approx. away from		
	100- H2S-	Transmitter	carried out and	General Tool Kit	Plant.	1	
	001C	U9500 Model	verification	General Tool Kit	T failt.	1	
	100 -	R8471B / Det-	of reading				
	H2S-	Tronics	will be			1	
	002		monitored				
	100 -		by CCR-			1	
	H2S- 003		HMI			1	
	100-		Calibration	HART			
	OGD-		, servicing	Communicator,		1	
	1B		and	Calibration			
	100-		maintenanc	Magnet, EQP			
	OGD-		e will be	Telescope,		1	
	2B	OGD, OPECL / Det-	carried out and	Aperture Kit & General Tool Kit			
		Tronics	verification	General 1001 Kit			
	100-	Tromes	of reading				
	OGD-		will be			1	
	3B		monitored				
		by CCR-					
			HMI Dismantlin	Spannara Sat			
			g, shifting	Spanners Set (In/mm)			
			to W/S,	Screw Drivers			
			body &	Set, General			
			trim	Tool Kit,			
			inspection,	Hammer ,Pipe			
			lapping of	wrench, Hydro			
			plug/seat (if reqd.),	test Pump etc			
		Pressure	hydro				
	100-	Control Valve	testing,				
	PCV-	Valvitalia LTG3-C-4-E	replacemen			1	
	001	WCC	t of kits,				
		Y766002	actuator				
			integrity				
			testing and calibration,				
			Buildup,				
			Chroming,				
			Welding,				
			&				
			Machining				
			etc				

			1	1	1	T		1	
		103- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP) 0-30 cc/min		All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1		
		103- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	Calibration , servicing and maintenanc	Hart Communicator Spanners Set (In/mm) Screw Drivers Set Resistance Box.	out. 2. OGDCL will deduct in case of non- availability of tools and calibration	1		
		103- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig	e will be carried out and verification	Calibrator mA Source mA Source and pressure calibrator at	and pressure calibrator at			
	(	103- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig	of reading will be monitored by CCR-	aulic Pump for Calibrator -etc	end 4. All the procedure as per manual	1		
2	Well No 32 (Eastern Lobe )	103- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%	HMI		will be provided by OGDCL that must be followed. 5. Site test with SCADA left as per process requirement. 6. A dedicated Double Cabin	1		
		103- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%				1		
	8	103- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,		1		
		103- FD- 002	Multispectrum IR Flame	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	Vehicle must be available to complete	1		
		103- FD- 003	Detector X3301 / Det- Tronics	and verification of reading will be monitored by CCR- HMI		Well site Jobs. 7. Crane Mounted Truck with man hoisting cradle will be	1		
		103- H2S- 001A	H2S Detectors Infini Gas	Calibration , servicing and	Calibration Gas (H2S 100 ppm), Multi-meter,	required for activities on FDs & OGDs.	1		
		103- H2S- 001B	Transmitter U9500 Model R8471B / Det-	maintenanc e will be carried out	NTMOS Calibration Kit, Ampoule	8. Well is 25 Km approx. away from	1		
		103- H2S- 001C	Tronics	and	Calibration Kit, General Tool Kit	Plant.	1		

		100	1	111 1	I		1	I
		103- H2S-		will be monitored			1	
		002		by CCR-				
		103 -		HMI				
		H2S-					1	
		003						
		103-		Calibration	HART			
		OGD-		, servicing	Communicator,		1	
		1B		and	Calibration			
		103-	-	maintenanc	Magnet, EQP			
		OGD-		e will be	Telescope,		1	
		2B	OGD, OPECL	carried out	Aperture Kit &		1	
		20	/ Det-	and	General Tool Kit			
			Tronics	verification	General Tool Int			
		103-	Tromes	of reading				
		OGD-		will be			1	
		3B		monitored			1	
		30		by CCR-				
				HMI				
			Flow		All tools,	1. OGDCL		
		102-	Transmitter		consumables,	will deduct		
		FIT-	Smart HART /		calibration	from actual	1	
		001	ABB 266DSH		equipment at	cost if any job	1	
		001	(CIP)		contractor's end	is not possible		
			0-30 cc/min		Multi-meter	to be carried		
			Pressure		Hart	out.		
			Differential		Communicator	2. OGDCL		
		102-	Transmitter	Calibration	Spanners Set	will deduct in		
		PDT-	Smart HART /		(In/mm)	case of non-	1	
		001	ABB 266DSH	, servicing and	Screw Drivers	availability of		
	ope)		(CIP)	maintenanc	Set	tools and		
	qo		0-72 psig	e will be	Resistance Box.	calibration		
	n I	102-	PT Smart	carried out	Pressure	equipment.		
	ter	PIT-	HART / ABB;	and	Calibrator	3. mA Source	1	
3	(Eastern L	011	266 HSH (CIP)	verification	mA Source	and pressure		
3		011	0-1450 psig	of reading	Suitable	calibrator at		
	35	102-	PT Smart	will be	Pneumatic/Hydr	Contractor		
	Ž	PIT-	HART / ABB;	monitored	aulic Pump for	end	1	
	Well No 28	014	266 HSH (CIP)	by CCR-	Calibrator -etc	4. All the	1	
		017	0-200 psig	HMI		procedure as		
		102-	LT Smart			per manual		
		LIT-	HART / ABB			will be	1	
		001	266 HSH			provided by	-	
		301	(CIP)0-100%			OGDCL that		
		102-	LT Smart			must be		
		LIT-	HART / ABB			followed.	1	
		003	266 HSH			5. Site test		
			(CIP)0-100%			with SCADA		
		102-	Multispectrum	Calibration	HART	left as per		
		FD-	IR Flame	, servicing	Communicator,	process	1	
		001	Detector	and	Test Lamp,	requirement		

		102-	X3301 / Det-	maintenanc	Magnet IO,	6. A dedicated		
		FD-	Tronics	e will be	MAN IO &	Double Cabin	1	
		002		carried out	General Tool Kit	Vehicle must be available to		
				and verification		complete		
		102-		of reading		Well site		
		FD-		will be		Jobs.	1	
		003		monitored		7. Crane		
				by CCR-		Mounted		
				HMI		Truck with		
		102-			Calibration Gas	man hoisting		
		H2S-		Calibration	(H2S 100 ppm),	cradle will be	1	
		001A		, servicing	Multi-meter, NTMOS	required for activities on		
		102- H2S-		and	Calibration Kit,	FDs & OGDs.	1	
		001B	H2S Detectors	maintenanc e will be	Ampoule	8. Well is 25	1	
		102-	Infini Gas	carried out	Calibration Kit,	Km approx.		
		H2S-	Transmitter	and	General Tool Kit	away from	1	
		001C	U9500 Model	verification		Plant.	_	
		102-	R8471B / Det-	of reading				
		H2S-	Tronics	will be			1	
		002		monitored				
		102 -		by CCR-				
		H2S-		HMI			1	
		003		C 1'1 4'	HADT	-		
		102- OGD-		Calibration , servicing	HART Communicator,		1	
		1B		and	Calibration Calibration		1	
		102-		maintenanc	Magnet, EQP			
		OGD-		e will be	Telescope,		1	
		2B	OGD, OPECL	carried out	Aperture Kit &			
			/ Det-	and	General Tool Kit			
			Tronics	verification				
		102-		of reading				
		OGD-		will be			1	
		3B		monitored by CCR-				
				HMI				
			Flow	Calibration	All tools,	1. OGDCL		
	~	101	Transmitter	, servicing	consumables,	will deduct		
	pe	101- FIT-	Smart HART /	and	calibration	from actual	1	
	Ĺ	001	ABB 266DSH	maintenanc	equipment at	cost if any job		
	ern	001	(CIP)0-30	e will be	contractor's end	is not possible		
	(Eastern Lobe		cc/min	carried out	Multi-meter	to be carried		
4			Pressure Differential	and verification	Hart Communicator	out. 2. OGDCL		
	Well No 27	101-	Transmitter	of reading	Spanners Set	will deduct in		
	Ž	PDT-	Smart HART /	will be	(In/mm)Screw	case of non-	1	
	/ell	001	ABB266	monitored	Drivers	availability of		
	<b>&gt;</b>		DSH(CIP)0-72	by CCR-	SetResistance	tools and		
			psig	HMI	Box.Pressure	calibration		

	101-	PT Smart		CalibratormA	equipment.			
	PIT-	HART / ABB;		SourceSuitable	3. mA Source	1		
	011	266 HSH (CIP)		Pneumatic/Hydr	and pressure			
		0-1450 psig		aulic Pump for Calibrator -etc	calibrator at			
	101-	PT Smart		Cambrator -etc	Contractor end			
	PIT-	HART / ABB; 266 HSH (CIP)			4. All the	1		
	014	0-200 psig			procedure as			
		LT Smart			per manual			
	101-	HART / ABB			will be			
	LIT-	266 HSH (CIP)			provided by	1		
	001	0-100%			OGDCL that			
	101	LT Smart			must be			
	101-	HART / ABB			followed.	4		
	LIT-	266 HSH (CIP)			5. Site test	1		
	003	0-100%			with SCADA			
	101-		Calibration	HART	left as per			
	FD-		, servicing	Communicator,	process	1		
	001		and	Test Lamp,	requirement 6.			
	101-		maintenanc	Magnet IO,	A dedicated			
	FD-	Multispectrum	e will be	MAN IO &	Double Cabin	1		
	002	IR Flame	carried out	General Tool Kit	Vehicle must			
		Detector	and		be available to			
		X3301 / Det-	verification		complete			
	101-	Tronics	of reading		Well site			
	FD-		will be		Jobs. 7. Crane	1		
	003		monitored		Mounted			
			by CCR-		Truck with			
	101-		HMI	Calibration Gas	man hoisting			
	H2S-		Colibration	(H2S 100 ppm),	cradle will be	1		
	001A		Calibration , servicing	Multi-meter,	required for	1		
	101-		and	NTMOS	activities on			
	H2S-		maintenanc	Calibration Kit,	FDs & OGDs.	1		
	001B	H2S Detectors	e will be	Ampoule	8. Well is 25	•		
	101-	Infini Gas	carried out	Calibration Kit,	Km approx.			
	H2S-	Transmitter	and	General Tool Kit	away from	1		
	001C	U9500 Model	verification		Plant.			
	101-	R8471B / Det- Tronics	of reading					
	H2S-	Tromes	will be			1		
	002		monitored					
	101 -		by CCR-					
	H2S-		HMI			1		
	003							
	101-		Calibration	HART		_		
	OGD-		, servicing	Communicator,		1		
	1B	000 000	and	Calibration				
	101-	OGD, OPECL	maintenanc	Magnet, EQP		4		
	OGD-	/ Det-	e will be	Telescope,		1		
	2B	Tronics	carried out	Aperture Kit &				
	101-		and	General Tool Kit		1		
	OGD-		verification			1		
	3B		of reading				1	

				*11_1		1	1	
				will be monitored				
				by CCR- HMI				
				Dismantlin	Spanners Set			
				g, shifting	(In/mm) Screw Drivers			
				to W/S, body &	Set, General			
				trim	Tool Kit,			
				inspection, lapping of	Hammer ,Pipe wrench ,			
				plug/seat	Hydrotest Pump			
			Pressure Control Valve	(if reqd.), hydro	etc			
		101- PCV-	Valvitalia	testing, replacemen			1	
		001	LTG3-C-4-E WCC	t of kits,			1	
			Y766002	actuator integrity				
				testing and				
				calibration, Buildup,				
				Chroming,				
				Welding, &				
				Machining etc				
			Flow		All tools,	1. OGDCL		
		111- FIT-	Transmitter Smart HART /		consumables, calibration	will deduct from actual	1	
		001	ABB 266DSH (CIP)0-30		equipment at contractor's end	cost if any job is not possible	1	
			cc/min		Multi-meter	to be carried		
	•		Pressure Differential	Calibration , servicing	Hart Communicator	out. 2. OGDCL		
	ope)	111- PDT-	Transmitter	and	Spanners Set (In/mm)Screw	will deduct in case of non-	1	
	ral I	001	Smart HART / ABB 266DSH	maintenanc e will be	Drivers	availability of	1	
5	(Central Lobe)		(CIP) 0-72 psig	carried out and	SetResistance Box.Pressure	tools and calibration		
	21	111-	PT Smart	verification	CalibratormA	equipment.		
	Well No	PIT-	HART / ABB; 266 HSH (CIP)	of reading will be	SourceSuitable Pneumatic/Hydr	3. mA Source and pressure	1	
	Wel	011	0-1450 psig PT Smart	monitored by CCR-	aulic Pump for Calibrator -etc	calibrator at Contractor		
		111- PIT-	HART / ABB;	HMI		end	1	
		014	266 HSH (CIP) 0-200 psig			4. All the procedure as		
		111-	LT Smart			per manual will be		
		LIT-	HART / ABB 266 HSH (CIP)			provided by	1	
		001	0-100%			OGDCL that		

			T	T	<u> </u>	T		1	
		111-	LT Smart			must be			
		LIT-	HART / ABB			followed.	1		
			266 HSH (CIP)			5. Site test	1		
		003	0-100%			with SCADA			
		111-		Calibration	HART	left as per			
		FD-		, servicing	Communicator,	process	1		
		001		and	l ·	requirement	1		
					Test Lamp,	6. A dedicated			
		111-	3.5.1	maintenanc	Magnet IO,				
		FD-	Multispectrum	e will be	MAN IO &	Double Cabin	1		
		002	IR Flame	carried out	General Tool Kit	Vehicle must			
			Detector	and		be available to			
			X3301 / Det-	verification		complete			
		111-	Tronics	of reading		Well site			
		FD-		will be		Jobs.	1		
		003		monitored		7. Crane			
		005		by CCR-		Mounted			
				HMI		Truck with			
		111		LIMI	Calibratian				
		111-		G 111	Calibration Gas	man hoisting	1		
		H2S-		Calibration	(H2S 100 ppm),	cradle will be	1		
		001A		, servicing	Multi-meter,	required for			
		111-		and	NTMOS	activities on			
		H2S-	H2S Detectors	maintenanc	Calibration Kit,	FDs & OGDs.	1		
		001B	Infini Gas	e will be	Ampoule	8. Well is 25			
		111-		carried out	Calibration Kit,	Km approx.			
		H2S-	Transmitter	and	General Tool Kit	away from	1		
		001C	U9500 Model	verification		Plant.			
		111-	R8471B / Det-	of reading					
		H2S-	Tronics	will be			1		
		002		monitored			1		
		111 -		by CCR-					
				HMI			1		
		H2S-		ПМП			1		
		003		~					
		111-		Calibration	HART				
		OGD-		, servicing	Communicator,		1		
		1B		and	Calibration				
		111-		maintenanc	Magnet, EQP				
		OGD-		e will be	Telescope,		1		
		2B	OGD, OPECL	carried out	Aperture Kit &				
			/ Det-	and	General Tool Kit				
			Tronics	verification					
1		111-		of reading					
		OGD-		will be			1		
		3B		monitored			•		
		שנ		by CCR-					
				HMI					
			Flow	Calibration	All tools	1 OCDCI			
	Well No 33 Central Lobe)				All tools,	1. OGDCL			
	Well No 33 entral Lob	114-	Transmitter	, servicing	consumables,	will deduct			
6	a Z	FIT-	Smart HART /	and	calibration	from actual	1		
	ell	001	ABB 266DSH	maintenanc	equipment at	cost if any job			
	W Zer	301	(CIP)0-30	e will be	contractor's end	is not possible			
	<b>)</b>		cc/min	carried out	Multi-meter	to be carried			

1	T			T		1	
114- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	and verification of reading will be monitored by CCR- HMI	Hart Communicator Spanners Set (In/mm)Screw Drivers SetResistance Box.Pressure	out. 2. OGDCL will deduct in case of non- availability of tools and calibration	1		
114- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig		CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1		
114- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig		Calibrator -etc	Contractor end 4. All the procedure as	1		
114- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%			per manual will be provided by OGDCL that	1		
114- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%			must be followed. 5. Site test with SCADA	1		
114- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,	left as per process requirement	1		
114- FD- 002	Multispectrum IR Flame	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	6. A dedicated Double Cabin Vehicle must be available to	1		
114- FD- 003	Detector X3301 / Det- Tronics	and verification of reading will be monitored by CCR- HMI		complete Well site Jobs. 7. Crane Mounted Truck with	1		
114- H2S- 001A		Calibration , servicing	Calibration Gas (H2S 100 ppm) , Multi-meter,	man hoisting cradle will be required for	1		
114- H2S- 001B	H2S Detectors Infini Gas	and maintenanc e will be	NTMOS Calibration Kit, Ampoule	activities on FDs & OGDs. 8. Well is 25	1		
114- H2S- 001C	Transmitter U9500 Model R8471B / Det-	carried out and verification	Calibration Kit, General Tool Kit	Km approx. away from Plant.	1		
114- H2S- 002	Tronics	of reading will be monitored			1		
114- H2S- 003		by CCR- HMI			1		

		114-		Calibration	HART			
		OGD-		, servicing	Communicator,		1	
		1B 114-		and maintenanc	Calibration Magnet, EQP			
		OGD-		e will be	Telescope,		1	
		2B	OGD, OPECL	carried out	Aperture Kit &			
		114- OGD- 3B	/ Det- Tronics	and verification of reading will be monitored by CCR- HMI	General Tool Kit		1	
		110- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP)0-30 cc/min		All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1	
		110- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	Calibration , servicing and maintenanc e will be	Hart Communicator Spanners Set (In/mm)Screw Drivers SetResistance Box.Pressure	out. 2. OGDCL will deduct in case of non- availability of tools and calibration	1	
	ral Lobe)	110- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig	carried out and verification of reading	CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1	
7		110- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig	will be monitored by CCR- HMI	Calibrator -etc	Contractor end 4. All the procedure as	1	
	Well No 20 (Cent	110- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%			per manual will be provided by OGDCL that	1	
		110- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%			must be followed. 5. Site test with SCADA	1	
		110- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,	left as per process requirement	1	
		110- FD- 002	Multispectrum IR Flame Detector	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	6. A dedicated Double Cabin Vehicle must	1	
		110- FD- 003	X3301 / Det- Tronics	and verification of reading will be monitored		be available to complete Well site Jobs. 7. Crane	1	

				by CCR- HMI		Mounted Truck with		
		110- H2S- 001A		Calibration , servicing	Calibration Gas (H2S 100 ppm), Multi-meter,	man hoisting cradle will be required for	1	
		110- H2S- 001B	H2S Detectors Infini Gas	and maintenanc e will be	NTMOS Calibration Kit, Ampoule	activities on FDs & OGDs. 8. Well is 25	1	
		110- H2S- 001C	Transmitter U9500 Model R8471B / Det-	carried out and verification	Calibration Kit, General Tool Kit	Km approx. away from Plant.	1	
		110- H2S- 002	Tronics	of reading will be monitored			1	
		110- H2S- 003		by CCR- HMI	HADT		1	
		110- OGD- 1B 110-		Calibration , servicing	HART Communicator, Calibration Magnet, EQP		1	
		OGD- 2B	ogp optgr	and maintenanc e will be	Telescope, Aperture Kit & General Tool Kit		1	
		OGD, OPECL / Det- Tronics  110- OGD- 3B	carried out and verification of reading will be monitored by CCR- HMI			1		
	(e)	109- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP)0-30 cc/min	Calibration , servicing	All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1	
8	Well No 31 (Central Lobe)	109- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	and maintenanc e will be carried out and verification of reading will be	Hart Communicator Spanners Set (In/mm)Screw Drivers SetResistance Box.Pressure	out. 2. OGDCL will deduct in case of non- availability of tools and calibration	1	
	Well	109- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig	monitored by CCR- HMI	CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1	
		109- PIT- 014	PT Smart HART / ABB;		Calibrator -etc	Contractor end 4. All the	1	

 <del>                                     </del>		T - =:			I		1	
		266 HSH (CIP)			procedure as			
		0-200 psig			per manual			
					will be			
	109-	LT Smart			provided by			
	LIT-	HART / ABB			OGDCL that	1		
	001	266 HSH (CIP)			must be	1		
	001	0-100%			followed.			
	100	LT Smart			5. Site test			
	109-	HART / ABB			with SCADA			
	LIT-	266 HSH (CIP)			left as per	1		
	003	0-100%			process			
	109-	0 10070	Calibration	HART	requirement 6.			
					A dedicated	1		
	FD-		, servicing	Communicator,	Double Cabin	1		
	001		and	Test Lamp,	Vehicle must			
	109-	M14'	maintenanc	Magnet IO,	be available to	1		
	FD-	Multispectrum	e will be	MAN IO &	complete	1		
	002	IR Flame	carried out	General Tool Kit	Well site			
		Detector	and		Jobs.			
		X3301 / Det-	verification		7. Crane			
	109-	Tronics	of reading		Mounted			
	FD-		will be		Truck with	1		
	003		monitored		man hoisting			
			by CCR-		cradle will be			
			HMI					
	109-			Calibration Gas	required for			
	H2S-		Calibration	(H2S 100 ppm),	activities on	1		
	001A		, servicing	Multi-meter,	FDs & OGDs.			
	109-		and	NTMOS	8. Well is 25			
	H2S-	HOGD	maintenanc	Calibration Kit,	Km approx.	1		
	001B	H2S Detectors	e will be	Ampoule	away from			
	109-	Infini Gas	carried out	Calibration Kit,	Plant.			
	H2S-	Transmitter	and	General Tool Kit		1		
	001C	U9500 Model	verification					
	109-	R8471B / Det-	of reading					
	H2S-	Tronics	will be			1		
	002		monitored			*		
	109-		by CCR-					
	H2S-		HMI			1		
	003					1		
	109-		Calibration	HART				
	OGD-		, servicing	Communicator,		1		
	1B		, servicing and	Calibration Calibration		1		
	109-		maintenanc	Magnet, EQP		1		
	OGD-	OCD OPECI	e will be	Telescope,		1		
	2B	OGD, OPECL	carried out	Aperture Kit &				
		/ Det-	and	General Tool Kit				
	100	Tronics	verification					
	109-		of reading			_		
	OGD-		will be			1		
	3B		monitored					
			by CCR-					
			HMI					

		112- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP)0-30 cc/min		All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1	
		112- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	Calibration , servicing and maintenanc e will be	Hart Communicator Spanners Set (In/mm)Screw Drivers SetResistance Box.Pressure	out. 2. OGDCL will deduct in case of non- availability of tools and calibration	1	
		112- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig	carried out and verification of reading	CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1	
		112- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig	will be monitored by CCR- HMI	Calibrator -etc	Contractor end 4. All the procedure as	1	
	Well No 25 (Central Lobe)	112- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%			per manual will be provided by OGDCL that	1	
9	l No 25 (Co	112- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%			must be followed. 5. Site test with SCADA	1	
	Wel	112- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,	left as per process requirement	1	
		112- FD- 002	Multispectrum IR Flame	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	6. A dedicated Double Cabin Vehicle must	1	
		112- FD- 003	Detector X3301 / Det- Tronics	and verification of reading will be monitored by CCR- HMI		be available to complete Well site Jobs. 7. Crane Mounted Truck with	1	
		112- H2S- 001A	H2S Detectors Infini Gas	Calibration , servicing and	Calibration Gas (H2S 100 ppm), Multi-meter,	man hoisting cradle will be required for	1	
		112- H2S- 001B	Transmitter U9500 Model R8471B / Det-	maintenanc e will be carried out	NTMOS Calibration Kit, Ampoule	activities on FDs & OGDs. 8. Well is 25 Km approx.	1	
		112- H2S- 001C	Tronics	and verification of reading	Calibration Kit, General Tool Kit	away from Plant.	1	

			ı		T	T		Ī
		112- H2S- 002		will be monitored by CCR-			1	
		112- H2S- 003		НМІ			1	
		112- OGD- 1B		Calibration , servicing and	HART Communicator , Calibration		1	
		112- OGD- 2B	OGD, OPECL	maintenanc e will be carried out	Magnet, EQP Telescope, Aperture Kit &		1	
		112- OGD- 3B	/ Det- Tronics	and verification of reading will be monitored by CCR- HMI	General Tool Kit		1	
		113- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP)0-30 cc/min		All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1	
	ope)	113- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	Calibration , servicing and maintenanc e will be	Hart Communicator Spanners Set (In/mm)Screw Drivers SetResistance Box.Pressure	out. 2. OGDCL will deduct in case of non- availability of tools and calibration	1	
10	Well No 26 (Central L	113- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig	carried out and verification of reading	CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1	
	Well No 26	113- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig	will be monitored by CCR- HMI	Calibrator -etc	Contractor end 4. All the procedure as	1	
		113- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%			per manual will be provided by OGDCL that	1	
		113- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%			must be followed. 5. Site test with SCADA	1	
		113- FD- 001	Multispectrum IR Flame Detector	Calibration , servicing and	HART Communicator, Test Lamp,	left as per process requirement	1	

		113- FD- 002	X3301 / Det- Tronics	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	6. A dedicated Double Cabin Vehicle must	1	
		113- FD- 003		and verification of reading will be monitored by CCR- HMI	General 1001 Kit	be available to complete Well site Jobs. 7. Crane Mounted Truck with	1	
		113- H2S- 001A		Calibration , servicing	Calibration Gas (H2S 100 ppm), Multi-meter,	man hoisting cradle will be required for	1	
		113- H2S- 001B	H2S Detectors Infini Gas	and maintenanc e will be	NTMOS Calibration Kit, Ampoule	activities on FDs & OGDs. 8. Well is 25	1	
		113- H2S- 001C	Transmitter U9500 Model R8471B / Det-	carried out and verification	Calibration Kit, General Tool Kit	Km approx. away from Plant.	1	
		113- H2S- 002	Tronics	of reading will be monitored			1	
		113- H2S- 003		by CCR- HMI			1	
		113- OGD- 1B		Calibration , servicing and	HART Communicator, Calibration		1	
		113- OGD- 2B	OGD, OPECL	maintenanc e will be carried out	Magnet, EQP Telescope, Aperture Kit &		1	
		113- OGD- 3B	/ Det- Tronics	and verification of reading will be monitored by CCR- HMI	General Tool Kit		1	
	(Western Lobe)	107- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP)0-30 cc/min	Calibration , servicing and maintenanc e will be carried out	All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1	
11	Well No 29 (W	107- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	and verification of reading will be monitored by CCR- HMI	Hart Communicator Spanners Set (In/mm)Screw Drivers SetResistance Box.Pressure	out. 2. OGDCL will deduct in case of non- availability of tools and calibration	1	

	107- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig		CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1	
	107- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig		Calibrator -etc	Contractor end 4. All the procedure as	1	
	107- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%			per manual will be provided by OGDCL that	1	
	107- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%			must be followed. 5. Site test with SCADA	1	
	107- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,	left as per process requirement	1	
	107- FD- 002	Multispectrum IR Flame	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	6. A dedicated Double Cabin Vehicle must be available to	1	
	107- FD- 003	Detector X3301 / Det- Tronics	and verification of reading will be monitored by CCR- HMI		complete Well site Jobs. 7. Crane Mounted Truck with man hoisting	1	
	107- H2S- 001A		Calibration , servicing	Calibration Gas (H2S 100 ppm), Multi-meter,	cradle will be required for	1	
	107- H2S- 001B	H2S Detectors	and maintenanc e will be	NTMOS Calibration Kit, Ampoule	activities on FDs & OGDs. 8. Well is 25	1	
	107- H2S- 001C	Infini Gas Transmitter U9500 Model	carried out and verification	Calibration Kit, General Tool Kit	Km approx. away from Plant.	1	
	107- H2S- 002	R8471B / Det- Tronics	of reading will be monitored			1	
	107- H2S- 003		by CCR- HMI			1	
	107- OGD- 1B		Calibration , servicing and	HART Communicator, Calibration		1	
	107- OGD- 2B	OGD, OPECL / Det- Tronics	maintenanc e will be carried out	Magnet, EQP Telescope, Aperture Kit &		1	
	107- OGD- 3B		and verification of reading	General Tool Kit		1	

		1		*** *		T		
				will be monitored				
				by CCR-				
				HMI				
		104- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH (CIP)0-30 cc/min		All tools, consumables, calibration equipment at contractor's end Multi-meter	1. OGDCL will deduct from actual cost if any job is not possible to be carried	1	
		104- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266DSH (CIP) 0-72 psig	Calibration , servicing and maintenanc e will be	Hart Communicator Spanners Set (In/mm)Screw Drivers SetResistance Box.Pressure	out. 2. OGDCL will deduct in case of non-availability of tools and calibration	1	
		104- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig	carried out and verification of reading	CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1	
	Lobe)	104- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig	will be monitored by CCR- HMI	Calibrator -etc	Contractor end 4. All the procedure as	1	
12	(Western Lobe)	104- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%			per manual will be provided by OGDCL that	1	
	Well No 22	104- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%			must be followed. 5. Site test with SCADA	1	
		104- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,	left as per process requirement	1	
		104- FD- 002	Multispectrum IR Flame	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	6. A dedicated Double Cabin Vehicle must be available to	1	
		104- FD- 003	Detector X3301 / Det- Tronics	and verification of reading will be monitored by CCR- HMI		complete Well site Jobs. 7. Crane Mounted Truck with	1	
		104- H2S- 001A	H2S Detectors Infini Gas Transmitter	Calibration , servicing and	Calibration Gas (H2S 100 ppm), Multi-meter,	man hoisting cradle will be required for	1	
		104- H2S- 001B	U9500 Model R8471B / Det- Tronics	maintenanc e will be carried out	NTMOS Calibration Kit, Ampoule	activities on FDs & OGDs. 8. Well is 25	1	

		104-		and	Calibration Kit,	Km approx.		
		H2S-		verification	General Tool Kit	away from	1	
		001C		of reading	General 1001 Kit	Plant.	1	
		104-		will be		Fiant.		
				monitored			1	
		H2S-					1	
		002		by CCR-				
		104-		HMI				
		H2S-					1	
		003						
		104-		Calibration	HART			
		OGD-		, servicing	Communicator,		1	
		1B		and	Calibration			
		104-		maintenanc	Magnet, EQP			
		OGD-		e will be	Telescope,		1	
		2B	OGD, OPECL	carried out	Aperture Kit &			
			/ Det-	and	General Tool Kit			
			Tronics	verification				
		104-		of reading				
		OGD-		will be			1	
		3B		monitored			-	
		32		by CCR-				
				HMI				
			Flow	111/11	All tools,	1. OGDCL		
			Transmitter		consumables,	will deduct		
		105-	Smart HART /		calibration	from actual		
		FIT-	ABB 266DSH		equipment at	cost if any job	1	
		001	(CIP)0-30		contractor's end	is not possible		
			cc/min		Multi-meter	to be carried		
			Pressure		Hart	out.		
					Communicator	2. OGDCL		
		105	Differential	G 111 41				
		105-	Transmitter	Calibration	Spanners Set	will deduct in	1	
	)e)	PDT-	Smart HART /	, servicing	(In/mm)Screw	case of non-	1	
	10°	001	ABB 266DSH	and	Drivers	availability of		
	n I		(CIP)	maintenanc	SetResistance	tools and		
	(Western Lobe		0-72 psig	e will be	Box.Pressure	calibration		
	/es	105-	PT Smart	carried out	CalibratormA	equipment.		
13	$\mathbf{g}$	PIT-	HART / ABB;	and	SourceSuitable	3. mA Source	1	
		011	266 HSH (CIP)	verification	Pneumatic/Hydr	and pressure	*	
	Well No 23	011	0-1450 psig	of reading	aulic Pump for	calibrator at		
1	Z	105-	PT Smart	will be	Calibrator -etc	Contractor		
1	/el	PIT-	HART / ABB;	monitored		end	1	
1	<b>×</b>	014	266 HSH (CIP)	by CCR-		4. All the	1	
1		014	0-200 psig	HMI		procedure as		
		105	LT Smart			per manual		
1		105-	HART / ABB			will be	1	
1		LIT-	266 HSH (CIP)			provided by	1	
		001	0-100%			OGDCL that		
		105	LT Smart			must be		
1		105-	HART / ABB			followed.	_	
1		LIT-	266 HSH (CIP)			5. Site test	1	
		003	0-100%			with SCADA		
L		1	1 20070	1		1		

			<b>1</b>	T	T	T		1	
		105-		Calibration	HART	left as per			
		FD-		, servicing	Communicator,	process	1		
		001		and	Test Lamp,	requirement			
		105-		maintenanc	Magnet IO,	6. A dedicated			
		FD-	Multispectrum	e will be	MAN IO &	Double Cabin	1		
		002	IR Flame	carried out	General Tool Kit	Vehicle must	_		
		002	Detector	and		be available to			
			X3301 / Det-	verification		complete			
		105-	Tronics	of reading		Well site			
			Tromes	will be		Jobs.	1		
		FD-				7. Crane	1		
		003		monitored					
				by CCR-		Mounted			
				HMI		Truck with			
		105-			Calibration Gas	man hoisting			
		H2S-		Calibration	(H2S 100 ppm),	cradle will be	1		
		001A		, servicing	Multi-meter,	required for			
		105-		and	NTMOS	activities on			
		H2S-	Had D	maintenanc	Calibration Kit,	FDs & OGDs.	1		
		001B	H2S Detectors	e will be	Ampoule	8. Well is 25			
		105-	Infini Gas	carried out	Calibration Kit,	Km approx.			
		H2S-	Transmitter	and	General Tool Kit	away from	1		
		001C	U9500 Model	verification		Plant.	•		
		105-	R8471B / Det-	of reading					
		H2S-	Tronics	will be			1		
							1		
		002		monitored					
		105-		by CCR-					
		H2S-		HMI			1		
		003							
		105-		Calibration	HART				
		OGD-		, servicing	Communicator,		1		
		1B		and	Calibration				
		105-		maintenanc	Magnet, EQP				
		OGD-		e will be	Telescope,		1		
		2B	OGD, OPECL	carried out	Aperture Kit &		•		
			/ Det-	and	General Tool Kit				
			Tronics	verification	Seneral Foot Mit				
		105-	Tromes	of reading					
				will be			1		
		OGD-					1		
		3B		monitored					
				by CCR-					
			T71	HMI	A 11 1	1.005.07			
	)e)		Flow	Calibration	All tools,	1. OGDCL			
	or	106-	Transmitter	, servicing	consumables,	will deduct			
	n I	FIT-	Smart HART /	and	calibration	from actual	1		
	eri	001	ABB 266DSH	maintenanc	equipment at	cost if any job	1		
	est	001	(CIP)0-30	e will be	contractor's end	is not possible			
14	(Western Lobe)		cc/min	carried out	Multi-meter	to be carried			
			Pressure	and	Hart	out.			
	Well No 24	106-	Differential	verification	Communicator	2. OGDCL			
	Ž	PDT-	Transmitter	of reading	Spanners Set	will deduct in	1		
	ell	001	Smart HART /	will be	(In/mm)Screw	case of non-	_		
	Š	001	ABB 266DSH	monitored	Drivers	availability of			
			ADD 200D3H	momoreu	D111013	avaiiaoiiity 01			

			(CIP)	by CCR-	SetResistance	tools and			
			0-72 psig	HMI	Box.Pressure	calibration			
		106	PT Smart		CalibratormA	equipment.			
		106-	HART / ABB;		SourceSuitable	3. mA Source	1		
		PIT-	266 HSH (CIP)		Pneumatic/Hydr	and pressure	1		
		011	0-1450 psig		aulic Pump for	calibrator at			
		10.5	PT Smart		Calibrator -etc	Contractor			
		106-	HART / ABB;			end			
		PIT-	266 HSH (CIP)			4. All the	1		
		014	0-200 psig			procedure as			
			LT Smart			per manual			
		106-	HART / ABB			will be			
		LIT-	266 HSH (CIP)			provided by	1		
		001	0-100%			OGDCL that			
			LT Smart			must be			
		106-	HART / ABB			followed.			
		LIT-				5. Site test	1		
		003	266 HSH (CIP)			with SCADA			
		106	0-100%	G 111 .:	II A D.T.	left as per			
		106-		Calibration	HART	process	1		
		FD-		, servicing	Communicator,	requirement	1		
		001		and	Test Lamp,	6. A dedicated			
		106-		maintenanc	Magnet IO,	Double Cabin			
		FD-	Multispectrum	e will be	MAN IO &	Vehicle must	1		
		002	IR Flame	carried out	General Tool Kit	be available to			
			Detector	and					
			X3301 / Det-	verification		complete Well site			
		106-	Tronics	of reading		Jobs.			
		FD-		will be			1		
		003		monitored		7. Crane			
				by CCR-		Mounted			
				HMI		Truck with			
		106-			Calibration Gas	man hoisting			
		H2S-		Calibration	(H2S 100 ppm),	cradle will be	1		
		001A		, servicing	Multi-meter,	required for			
		106-		and	NTMOS	activities on			
		H2S-	HOC Date 4	maintenanc	Calibration Kit,	FDs & OGDs.	1		
		001B	H2S Detectors	e will be	Ampoule	8. Well is 25			
		106-	Infini Gas	carried out	Calibration Kit,	Km approx.			
		H2S-	Transmitter	and	General Tool Kit	away from	1		
		001C	U9500 Model	verification		Plant.			
		106-	R8471B / Det-	of reading					
		H2S-	Tronics	will be			1		
		002		monitored			_		
		106-		by CCR-					
		H2S-		HMI			1		
		003					1		
		106-		Calibration	HART	1			
		OGD-		, servicing	Communicator,		1		
		1B	OGD, OPECL	and	Calibration ,		1		
		106-	/ Det-	maintenanc	Magnet, EQP				
		OGD-	Tronics	e will be	Telescope,		1		
		2B			relescope,		1		
1		$\angle \mathbf{D}$	I	carried out		1		I	1

				and	Apartura Vit &			 	
		106- OGD- 3B		and verification of reading will be monitored by CCR-	Aperture Kit & General Tool Kit		1		
		108- FIT- 001	Flow Transmitter Smart HART / ABB 266DSH	HMI	All tools, consumables, calibration	1. OGDCL will deduct from actual	1		
		108- PDT- 001	Pressure Differential Transmitter Smart HART / ABB 266 DSH (CIP)0-72 psig	Calibration , servicing and	equipment at contractor's end Multi-meter Hart Communicator Spanners Set	cost if any job is not possible to be carried out.  2. OGDCL will deduct in	1		
		108- PIT- 011	PT Smart HART / ABB; 266 HSH (CIP) 0-1450 psig	maintenanc e will be carried out and	(In/mm)Screw Drivers SetResistance Box.Pressure	case of non- availability of tools and calibration	1		
		108- PIT- 014	PT Smart HART / ABB; 266 HSH (CIP) 0-200 psig	verification of reading will be monitored	CalibratormA SourceSuitable Pneumatic/Hydr aulic Pump for	equipment. 3. mA Source and pressure calibrator at	1		
	Western Lobe)	108- LIT- 001	LT Smart HART / ABB 266 HSH (CIP) 0-100%	by CCR- HMI	Calibrator -etc	Contractor end 4. All the procedure as	1		
15	30	108- LIT- 003	LT Smart HART / ABB 266 HSH (CIP) 0-100%			per manual will be provided by OGDCL that	1		
	Well No	108- FD- 001		Calibration , servicing and	HART Communicator, Test Lamp,	must be followed. 5. Site test with SCADA	1		
		108- FD- 002	Multispectrum IR Flame	maintenanc e will be carried out	Magnet IO, MAN IO & General Tool Kit	left as per process requirement	1		
		108- FD- 003	Detector X3301 / Det- Tronics	carried out and verification of reading will be monitored by CCR- HMI		6. A dedicated Double Cabin Vehicle must be available to complete Well site Jobs.	1		
		108- H2S- 001A	H2S Detectors Infini Gas Transmitter	Calibration , servicing and	Calibration Gas (H2S 100 ppm), Multi-meter,	7. Crane Mounted Truck with	1		
		108- H2S- 001B	U9500 Model R8471B / Det- Tronics	maintenanc e will be carried out	NTMOS Calibration Kit, Ampoule	man hoisting cradle will be	1		

							•	
		108- H2S-		and verification	Calibration Kit General Tool Kit	required for activities on	1	
		001C 108-		of reading will be		FDs & OGDs. 8. Well is 25		
		H2S- 002		monitored by CCR-		Km approx. away from	1	
		108- H2S-		HMI		Plant.	1	
		003					1	
		108- OGD-		Calibration , servicing	HART Communicator,		1	
		1B 108-		and maintenanc	Calibration Magnet, EQP			
		OGD- 2B	OGD, OPECL	e will be carried out	Telescope, Aperture Kit &		1	
		<u> </u>	/ Det-	and	General Tool Kit			
		108- OGD-	Tronics	verification of reading will be			1	
		3B		monitored by CCR- HMI				
		108- PCV- 001	Pressure Control Valve Valvitalia LTG3-C-4-E WCC Y766002	Dismantlin g, shifting to W/S, body & trim inspection, lapping of plug/seat (if reqd.), hydro testing, replacemen t of kits, actuator integrity testing and calibration, Buildup, Chroming, Welding, & Machining etc	Spanners Set (In/mm) Screw Drivers Set , General Tool Kit , Hammer ,Pipe wrench , Hydro test Pump etc		1	
<u>UPI</u>	<u> </u>							
Site	_							

						1. OGDCL		
						will deduct		
						from actual		
						cost if any job		
						is not possible		
						to be carried		
						out.		
						2. OGDCL		
						will deduct in case of non-		
						availability of		
						tools and		
						calibration		
						equipment.		
				Dismantlin		3. mA Source		
				g, shifting		and pressure		
				to W/S,		calibrator at		
				body &		Contractor		
				trim		end		
				inspection,		4. All the		
				lapping of		procedure as		
				plug/seat	Spanners Set	per manual		
	[ <del>-</del> ]		Pressure	(if reqd.),	(In/mm) Screw Drivers	will be		
		600-	Control Valve	hydro testing,	Set, General	provided by OGDCL that		
16	$\mathbf{S}$	PCV-	Valvitalia	replacemen	Tool Kit,	must be	1	
10	UPL-2 SITE	002	LTG3 14 PDA	t of kits,	Hammer ,Pipe	followed.	1	
		002	24LI	actuator	wrench,	5. Site test		
				integrity	Hydrotest Pump	with SCADA		
				testing and	etc	left as per		
				calibration,		process		
				Buildup,		requirement		
				Chroming,		6. A dedicated		
				Welding,		Double Cabin		
				&		Vehicle must		
				Machining		be available to		
				etc		complete this Jobs.		
						7. Crane		
						Mounted		
						Truck will be		
						required for		
						the		
						dismantling/in		
						stallation and		
						shifting of		
						PCV.		
						8. UPL is 85		
						Km approx.		
						away from		
		l				<b>Plant</b>		

	OIL & GAS DEVELOPMENT COMPANY LIMITED										
UCH	I GAS	PROCESSING			2021 (E	LECTR	ICAL				
		<u> </u>	COPE OF WO	Tools				Total			
S.No	Tag #.	Job Description	Specifications	Requir ed	Location	Quantit y	Unit Rate	Rate			
MV SV	VITCHGE/	⊥ AR									
		ı	Bus Bar A (6.6 KV, 31	50 Amps,	40 KAIC, 50 H	IZ)					
1	HT-BB- A	Inspection and cleaning of Bus Bars, VCB's, soft starters, tightening of power & control connections.	HT Panel +L01 to +L13 & SS1-2		MCC ROOM MV SWITCHG EAR	15					
			Bus Bar B (6.6 KV, 31	50 Amps,	40 KAIC, 50 F	IZ)					
2	HT-BB- B	Inspection and cleaning of Bus Bars, VCB's, soft starters, tightening of power & control connections.	HT Panel +L19 to +L29 & SS1-2		MCC ROOM MV SWITCHG EAR	13					
		HT Bus	Bar Siemens (6.6 KV	, 3150 Am	ps, 40 KAIC, !	50 HZ)					
3	HT-BB- C	Inspection and cleaning of Bus Bars, VCB's, soft starters, tightening of power & control connections.	HT Panel +L14 to +L18		MCC ROOM MV SWITCHG EAR	5					
LV SWI	TCHGEAR										
		T	us Bar A (0.4 KV, 630	0 Amps, 1	00 KAIC, 50 H	IZ);					
		Inspection and cleaning of Bus	Row-1, Panel # 1 to 17		MCC ROOM	17					
4	LT-BB-	Bars, ACBs, Motor Starters	Row-2, Panel # 1 to 16		SWITCH	16					
	A	(DOL,ASD,VFD, S.Starter), Feeders,	Row-3, Panel # 1 to 16		GEAR	16					
		tightening of power & control connections.	Row-4, Panel #1 to 4			4					
			Bus Bar B (0.4 KV, 630	00 Amps, 1	_	HZ)	T				
	17.55.5	Inspection and cleaning of Bus	Row-1, Panel # 1 to 18		MCC ROOM	18					
5	LT-BB-B	Bars, ACBs, Motor Starters	Row-2, Panel # 17 to 22		SWITCH	6					
		(DOL,ASD,VFD, S.Starter), Feeders,	Row-3, Panel # 17 to 22		GEAR	6					

			D 4 D 1 1 4 2			
		tightening of power	Row-4, Panel # 12			
		& control	to 17		6	
		connections.				
		LT B	Bus Bar C (0.4 KV, 400	0 Amps, 100 KA	IC, 50 HZ)	
		Inspection and	Row-4, Panel #5	MCC		
		cleaning of Bus	to 11	ROO	М	
6	LT-BB-C	Bars, ACBs, Feeders,		LT	_	
		tightening of power		SWIT	rch 7	
		& control		GEAI		
		connections				
			Bus Bar MLDB (0.4 k	V. Amps. KAIC	50 HZ)	
		Inspection and	Row-4, Panel # 1	MCC		
		cleaning of Bus Bars	to 3	ROO		
7	LT-BB-	and Feeders,		LT		
'	MLDB	tightening of power		SWIT	TCH 3	
		& control		GEA		
		connections		GEA		
11/ 614/	ITCLICEAL					
LV SVV	ITCHGEA	R-SGTs & WHRU				
			Conrol Center (0.4 K	-	_	
		Inspection and	Panel # 1 to 4	MCC		
	SGT 1-	cleaning of Bus		ROO		
8	MCC-	Bars, Motor		SIEM		
	001	Starters, Feeders,		LV N	ICC 4	
		tightening of power		PANI	EL	
		& control				
		connections.				
		SGT-2 Motor	Conrol Center (0.4 KV	/, 850 Amps, 10	0 KAIC, 1sec,50 HZ)	
		Inspection and	Panel # 1 to 4	MCC	,	
	CCT 2	cleaning of Bus		ROO	М	
	SGT 2-	Bars, Motor		SIEM	IENS	
9	MCC-	Starters, Feeders,		LV N		
	001	tightening of power		PANI		
		& control				
		connections.				
			Conrol Center (0.4 KV	/. 850 Amps. 10	0 KAIC. 1sec.50 H7	
		Inspection and	Panel # 1 to 4	MCC	<del></del>	
		cleaning of Bus		ROO		
	SGT 3-	Bars, Motor		SIEM		
10	MCC-	Starters, Feeders,		LV N		
	001	tightening of power		PANI		
		& control		FAIN	LL	
		connections.	Control Control (0.4.1		00 KAIC 1000 FO 117	<u> </u>
			Control Center (0.4 K	· · · · · · · · · · · · · · · · · · ·		.)
	WHRU-	Inspection and	Panel # 1 to 3	MCC		
11	MCC-	cleaning of Bus		ROO		
	004	Bars, Motor		SIEN		
		Starters, Feeders,		LV N		
		tightening of power		PANI	EL	

		& control					
		connections.					
		connections.					
GCP's	AND CSP						
	GCP-	Inspection and		MCC			
12	SGT1/2	cleaning, tightness	Generator Control	ROOM	3		
	/3	of Power and	Panel of SGT-1/2/3				
		control	Common				
13	CSP-01	connections.	Synchronizing		1		
			Panel (CSP)				
THYRIS	STOR CON	NTROL PANEL					
		Inspection and	Thyristor Control P	MCC			
	TCP-	cleaning, tightness	anel of SGT-1/2/3	ROOM			
14	001/2/	of Power and			3		
	3	control					
		connections.					
NER'S	N.E.S.		No tool 5 at 1 5	1100			
	NER-	Inspection and	Neutral Earthing R	MCC			
15	SGT1/2	cleaning, tightness of Power and	esistor of SGT-	ROOM	2		
15	/3	control	1/2/3		3		
		connections.					
SIFME	NS GAS T						
312.1112	PMG-	Inspection and	PMG	POWER			
16	SGT1/2	cleaning of	Exciter of SGT Gen	GENERATI	3		
	/3	generator and PMG	erator 1/2/3	ON AREA			
	CCT	Exciters, tightening	SGT-1/2/3				
17	SGT- GEN1/2	of power and	Generator		3		
1/	/3	control			3		
		connections.					
Batter		and Battery Bank					
	SGT-		24 VDC Battery	UPS/Batte			
_	1/2/3	Inspection and	Chargers and	ry Room			
18	BATT-	cleaning of battery	Battery Banks Of		3		
	CHARG	chargers and	SGTs				
	ER BTC-	batteries, battery load testing,	110 VDC Battery	<del></del>			
	SIEM-	tightness of Power	Charger and				
19	110VD	and control	Battery Bank		1		
	C	connections.	(SIEMENS)				
	BTC-		110 VDC Battery				
20	SCH-		Charger and		1		
20	110VD		Battery Bank		1		
	С		(SCHNEIDER)				
UPS							
	80-	Inspection/		UPS Room			
1 24	KVA-	Preventive	80 KVA UPS		1	1	
21	UPS-01	maintenance on by			-		

					T	1	
		pass mode and					
		general cleaning.					
IGNITO	ORS						
22	IG- SGT1/2 3		AC Ignitor SGT1/2/3	POWER GENERATI ON AREA	3		
23	350- H101- IG1/2/3	Inspection, cleaning and lightening of	Incinerator Ignitor- 1/2/3	INCINERA TOR AREA	3		
24	900- H101A/ B/C/D- IG1/2/3 /4	power and control connections.	Hot Oil Fired Heater A/B/C/D Ignitor-1/2/3/4	HOT OIL AREA	16		
TRANS	FORMER	S					
25	TRAFO-		4000 KVA Transfor mer A (6.6 KV/ 415 Vac, 50 HZ KNAN t ype)	TRANSFO RMER AREA	1		
26	TRAFO- 2	Inspection, cleaning of transformers, BTD, Power/ control connections.	4000 KVA Transfor mer B (6.6 KV/ 415 Vac, 50 HZ KNAN t ype)		1		
27	TRAFO-		500 KVA Transfor mer (11 KV/ 415 V ac, 50 HZ ONAN ty pe)		1		
MISC.	<b>SERVICES</b>						
28		Cleaning, watering and resistivity measurement of earth pits	Earth Pits and Earth Connection Plates				
29		Allied Services for electric supply at different locations of Plant.	Allied Services	Whole Plant			
30		Rectification of faults of lights (if any) installed at plant premises.					
MV MOT ORS, PLAN T AREA							
31	300/31 0- P105A/ B	Inspection and external cleaning of motor, heat exchanger,	Amine Circulation P. Motor, 6.6kv, 121.4 A, 1200 kW	AMINE-I/II	4		

	900-	tightening of power and control connections.  Inspection and external cleaning of motor, tightening of power and control	Hot Oil Circulation pump Motor, 6.6 V, 22.3 A, 220 kW		HOT OIL AREA		
32	P102A- J	connections.  Bearing replacement if required				10	
LV MOT ORS, PLAN T AREA							
			Amir	ne-I/II			
33	300/31 0-P104 A/B		Amine Booster P. Motor, 400V, 158A, 90 kW		AMINE-I/II	4	
34	300/31 0-P106 A/B		Amine Reg. Reflux P. Motor, 400V, 13.5A, 7.5 KW			4	
35	300/31 0-P107 A/B	Inspection and	Amine Transfer P. Motor, 400V, 3.9A, 1.5 KW			4	
36	300/31 0-P109	external cleaning of motor, tightening of power and control	Amine Sump P. Motor, 400V, 21 A, 11KW			2	
37	300/31 0-P110 A/B	connections.	Anti-foam Injection P. Motor,400V, 1.72A, 0.55 KW			4	
38	300/31 0-C103 A/B/C/ D		Amine Cooler Fans, 400V, 70.5A, 37KW			8	
			COOLING T	OWER 1 &	ι2		 
39	300/31 0-P111 A/B	Inspection and external cleaning of motor, tightening of power and control	Cooling Water Pump Motor, 400V, 330A,185KW		AMINE-I/I, Cooling Tower-1/2	4	
40	300/31 0-C101 A to H	connections. Bearing replacement if required	Cooling Water Air Fan Motor, 400V, 23A, 11KW			32	
			INCINERA	TOR AREA	<u> </u>		

	T					T	
41	350- C101 A/B		Incinerator Primary Blower Motor A/B, 400V, 233A, 132KW	Incinera r	2		
42	350- C102 A/B/C	Inspection and external cleaning of motor, tightening of power and control connections.	Incinerator Secondary Blower Motor A/B/C, 400V, 98.9A, 55KW		3		
43	350- C103 A/B		Incinerator Pilot Blower Motor A/B, 400V, 11.5A, 5.5KW		2		
			DEHYDRATIO	N 1 & 2 AREA			
44	400/41 0-P101 A/B	Inspection and external cleaning of	Glycol Circulation Pump Motor, 400V, 45.9A, 25.5KW	DHY-1/2	4		
45	400- P104	motor, tightening of power and control connections.	Glycol Makeup Pump Motor, 400V, 3.9A, 1.5KW		1		
46	410- P102	connections.	Glycol Sump Pump Motor, 400V, 10.2A, 5.5KW		1		
			HOT OIL SY	STEM AREA			
47	900- C520 A/B/C/ D	Inspection and external cleaning of	Hot OIL F.D Fan Motor, 400 V, 53 A, 30 KW	HOT OIL SYSTEM AREA			
48	900- P101	motor, tightening of power and control connections.	Hot Oil Make up {ump Motor, 400 V, 14.7A, 7.5 KW		1		
			POWER GENERATION	ON (TURBINE) AREA	4		
49	XM 11/33/ 70	Inspection and	ABLOC Fan Motors SGT-1/2/3 400V, 12.3A, 5.5KW	SIEMEN Gas Turbine 1,2&3	g		
50	XM 52/53	external cleaning of motor, tightening of power and control connections.	Gen: CACA Fan Motors SGT-1/2/3 400V. 13.75A, 7kw	,	6		
51	XM 1	Bearing replacement if required	Auxiliary Lube Oil Pump Motor, 400V, 18.6A, 9.5KW		3		
52	XM 2		Emergency DC Lube Oil Pump		3		

	1		T					
			Motor, 24Vdc, (32, 2.4)A, 0.46KW					
			•					
53	XM 3		Hydraulic Start Motor			3		
			Liquid Fuel Pump					
54	XM 5		Motor, 400V,			3		
			24.5A, 13KW					
			Enclosure Vent					
			Fan Main					
55	XM 6/7		Motor/Standby			6		
	,		SGT-1/2/3					
			400V, 53A, 36KW					
			Liquid Fuel					
	XM-		Treatment Skid			_		
56	105		Motor, 400V, A,			3		
			KW					
			Liquid Fuel					
			Treatment					
57	XM-24		Forwarding Skid			3		
3,	7.171 2.1		Motor, 400V, A,			3		
			KW					
			Vent Filter Bleed					
58	XM-42		Fan Motor, 400V,			3		
36	AIVI 42		2.2A, 1.10KW			,		
			Secondary Air Fan					
59	XM-19		Motor, 400V,			3		
33	VIAI-13		3.0A, 1.5KW			J		
	WHRU-		Seal Air Fan Motor					
60	C302A1		Main/Standby,			6		
00	-C2-MT		=			O		
	-CZ-IVI I		400V, 4kW	NT AREA				
		Inconcettan and	I	NIAKEA	D O DI ANT			
	930-	Inspection and	R.O Feed Water		R.O PLANT			
61	P102 A-	external cleaning of	Pump Motor A/B,			2		
	P1 A/B	motor, tightening of	400V, 19.8A,					
		power and control	11KW					
	930-P-	connections.	R.O High Pressure					
62	102A-		Pump Motor,			1		
	P2		400V, 32.5A,					
			18.5KW					
	930-P-		CID Device NA					
63	102A-		CIP Pump Motor,			1		
	Р3		400V, 11A, 5.5KW					
			UTILITIES, A	REA MOTO	RS		<u> </u>	
	930-	Inspection and	Raw Water Pump	YEY INIO I O	UTILITY			
64	P102	external cleaning of	Motor A/B, 400V,		AREA	2		
04	A/B	_	54.4 A, 30KW		ANLA	۷		
	1	motor, tightening of power and control						
65	930- p103	connections.	Utility Water			2		
65	P103		Pump Motor A/B,			۷		
	A/B	Bearing	400V, 65A, 37KW					

	930-	replacement if	Demin Water					
66	P104	required.	Pump Motor A/B,			2		
	A/B		400V, 27A, 15KW					
		COMPRESSOR AREA						
	970-		Inst. Air Comp.		Compress			
67	C101A/		Motor A/B, 400V,		or Area	2		
	В		171A, 90KW					
	970-		Inst. Air Comp. Fan					
68	C101	Inspection and	Motor A/B, 400v,			2		
	A/B	external cleaning of	7.7A, 4KW					
69	980-	motor, tightening of	Nitrogen Comp.					
	C101	power and control	Motor A/B, 400V,			2		
	A/B	connections.	137A, 75KW					
	980-		Nitrogen Comp.					
70	C101		Fan Motor A/B,			2		
	A/B		400V, 4.5 A, 2.2			۷		
	7,0		KW					
		FIRE WATER SYSTEM AREA						
71	920-P-		Jockey Pump		Fire Water			
	103	Inspection and	Motor A/B, 400V,		System	2		
	A/B	external cleaning of	40A, 22KW		Area			
	920-P-	motor, tightening of	Fire Water Pump					
72	101	power and control	Motor A/B, 400V,			2		
	A/B	connections.	233A, 132KW			<b>~</b>		
	7,0							

## Note:-

- Bid bond of PKR 800,000/- (Pak Rupees Eight Hundred Thousand Only) must be submitted with the technical bid. Please see master set of tender documents (services) for further detail.
- Master set of tender documents uploaded on OGDCL website is the integral part of this TOR.