

OIL AND GAS DEVELOPMENT COMPANY LIMITED
Chanda LPG Plant

SCHEDULE OF REQUIREMENT

TENDER ENQUIRY # TE/COF/ATA/01/2020

Technical services for Maintenance jobs of Dehydration, Hot Oil, CPI Pit, Crude Oil Stabilization, HP Separator & Utility Area during ATA-2020.

S#	<u>Description</u>	<u>Reference #</u>	<u>Rate</u>	<u>Total rate (inclusive of all Taxes)</u>	<u>Deviation</u>
1	As per scope of work given in tender documents				

Note: Separate rate to be quoted for each and every activity as mentioned in scope of work.

TERMS & CONDITIONS FOR ATA-2020 OF CHANDA LPG PLANT

GENERAL:

1. Technical services are required for Maintenance jobs of Dehydration, Hot Oil, CPI Pit, Crude Oil Stabilization, HP Separator & Utility Area of Chanda LPG Plant during Annual Turn Around (ATA-20) for an estimated period of **07 days** tentatively schedule from **06-06-2020 to 12-06-2020**; however the schedule and duration of shut down may change.
2. **Bids are required in PKR against each activity as mentioned in the scope of work. Detail of jobs (scope of work) is elaborated in tender documents.**
3. Working hours will be considered 24 Hrs. with 02 shifts (12 Hrs. day shift & 12 Hrs. night shift). Sunday/holiday will be considered as normal working day.
4. Payment will be made as per actual work done through cross cheque after completion of the job being verified by OGDCL rep. at site.
5. Skilled manpower should be well experienced in their respective crafts.
6. Management of the plant reserves the right to terminate the services of any hired staff at any time without any justification.
7. HSEQ Rules & Regulations will be strictly observed. 01 HSEQ Officer must be present in ATA team.
8. All the participating companies should have an experience of 05 years of ATA jobs in large Oil & Gas Processing Plants or Fertilizer Companies / Refineries (reference must be provided).
9. Jobs will be carried out as per priority set by OGDCL supervisors and contractor will utilize all its resources to complete the jobs as per time frame given by OGDCL.
10. OGDCL may delete, add or change any type of activity given in the scope of work.
11. The technical manpower must be skilled having at least five years' experience in respective trade. Contractor skilled manpower will be interviewed by OGDCL professionals in all disciplines, if deemed necessary. Contractor should arrange the interview at their premises. The detailed CV's of direct manpower/supervisors is mandatory.
12. Use of mobile phone and camera is prohibited in the plant premises.
13. Any required technical clarification/detail regarding scope of work should be cleared before submission of bid. No change in substance of bid will be entertained after bid submission date.

CONTRACTOR RESPONSIBILITIES:

1. Site administration personnel with associated resources like computer, printers, photocopiers etc.
2. Provision of PPE (Safety helmet, Coverall, safety shoes, gloves etc.) of all kinds to hired crew.
3. CV's of all the skilled Personnel (Millwright, Rigger, Scaffolder, Mechanic etc.) will be provided well before ATA. Evaluation of all the short listed skilled personnel will be carried out by Field personnel well before the ATA.
4. Local labors will be given preference while hiring services for ATA.
5. All kind of tools required for the job.
6. Provision of Rigging and hoisting equipment.
7. Scaffolding material & services.
8. Removal of Insulation/ Cladding & installing back by skilled insulators.
9. Security of all the Hired Crew.
10. Drinking Water, Boarding/ Lodging, refreshment to all the Crew.
11. Pick and drop from Plant to accommodation and back.
12. In case of any accident, medical treatment or compensation, whichever is applicable.
13. Electrical Supply Boards along with cables as per HSE standard.
14. Head trolley for movement of parts inside the Plant will be arranged by the contractor.
15. Arrangement of Pipes & Fitting for vessel flushing.
16. Proper housekeeping and skids cleaning of all equipment's must be ensured.

OGDCL RESPONSIBILITIES:

1. Electricity for Lighting & Fans.
2. Spare parts.
3. Blinds & Spads for Isolation & Pressure Testing.
4. Logistic support i.e. Cranes, Lifters.
5. Nitrogen purging & Leak test. (Contractor's manpower to be available on site during leak test)

***Scope of Work for ATA-20 Jobs of Dehydration /Hot Oil/CPI
Pit/LPG/Utility Area Along With Rotary Equipment.***

1. ROTARY EQUIPMENT:

General Inspection, cleaning and repair, decoupling & coupling of motors with proper alignment.

1.1 Pumps:

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG101	Stabilized Crude Pumps	P-100 A/B	Centrifugal Pump 230 Psig 126 GPM
LPG102	Condensate Transfer Pump	P-102 A/B	Centrifugal Pump 300 psig 22 GPM
LPG103	LPG Column Reflux Pumps	P-103 A/B	Centrifugal Pump 310 Psig 415 GPM
LPG104	LPG loading Pump	P-104 A/B	Centrifugal Pump 140 Psig 121 GPM
LPG105	MEG Pumps	P-200 A/B	Plunger Type 800 psig 1.5 GPM
LPG106	Hot Oil Pumps	P-400 A/B	Centrifugal Pump 100 psig 285 GPM
LPG107	Flare Liquid Transfer Pump	P-500 A/B	Centrifugal Pump 70 psig 22 GPM
LPG108	Condenser Water Circulation Pumps	P-701 A/B	Centrifugal Pump 06 meters Head
LPG109	KIMRAY/TEG/Glycol Pumps	A/B/C/D	PD Pumps 1000psig 450 GPH
LPG110	Fire Water Main Pump	P-800 A/B/C	Centrifugal Pump 80 psig 960 GPM
LPG111	Jockey Fire Water Pump	P-801 A/B	Centrifugal Pump 80 psig 60 GPM
LPG112	Utility Pump	P-802 A/B	Centrifugal Pump 60 psig 300 GPM
LPG113	Condensate Loading pump	P-1200	Centrifugal Pump 60 psig 300 GPM
LPG114	Recovered Oil Transfer Pump	P-1201	Centrifugal Pump 30 psig 50 GPM

1.2 Compressors & Engines

General Inspection/Maintenance to be carried out.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG115	Feed Gas Compressor	Feed Gas	Ariel Compressor 16 MMSCF
LPG116	Sale Gas Compressor	Sale Gas	Ariel Compressor 08 MMSCF
LPG117	Fire water pumps engine	P-800 A/B/C	Clark 04 Cylinder & Perkins 03 Cylinder Engine
LPG118	All Generator Sets	G1, G2, G3, G4, DG, Ref Package Engine	Caterpillar Engine 3412 & 3408
LPG119	Instrument Air Compressor	K-600A/B	INGERSOLL RAND

2. STATIONERY EQUIPMENT:

2.1 VESSELS/COLUMNS

Opening of man ways, inspection, cleaning, flushing and box up of the below mentioned vessels and columns.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG120	HP Separators	V-116 A/B/C	OD = 36"Length = 15'Manway = 16" Design = 1440 Psig at 180°F
LPG121	Flash Separator	V-100	ID = 60"Length = 177"Manway = 20" Design = 175 Psig at 190°F
LPG122	Flash Separator	V-101	ID = 51.2"Length = 153.5"Manway = 20" Design = 75 Psig at 190°F
LPG123	Flash Separator	V-102	OD = 51"Length = 153.5"Manway = 20" Design = 175 Psig at 190°F
LPG124	LT Separator	V-108	ID = 66"Length = 307"Manway = 20" Design = 925 Psig at 150°F
LPG125	Flare KOV	V-500	ID = 55"Length = 192"Manway = 20 " Design = 50 Psig at 480°F
LPG126	LPG Column reflux drum	V-109	ID=3.42' length= 10.33' Design= 240psig at 210°F
LPG127	De-Ethanizer column	C-100	Top/Bottom ID=2/3' No of beds=2 height=23/11.5', Design pressure=300/260.8psig at 220°F (Top), Design pressure=310/263.8psig at 220°F (Bottom)
LPG128	LPG column	C-101	Top/Bottom ID=2.5/3.5' No of beds=4 height=23/11.5', Design pressure=240/207.3psig at 440°F (Top), Design pressure=250/210.3psig at 440°F (Bottom)
LPG129	TEG ABSORBER TOWER	V-1001	ID=914mm Design Pressure= 1200psig Design Temp=150°F

2.2 MISCELLANEOUS OTHER EQUIPMENT

ACTIVITY	DESCRIPTION	REMARKS
LPG130	Ajax Integral Compressor K-100, K-101, K-102 Water Jacket Cleaning	
LPG131	E-111 Product Cooler jet cleaning to be carried out.	
LPG132	Hot Oil Return Line Filter Cleaning.	
LPG133	Hot Oil Furnace Refractory Inspection & deemed remedy	
LPG134	TEG surge tank and TEG Re-boiler cleaning and flushing.	
LPG135	Remove leakage of TEG reboiler.	
LPG136	TEG/MEG unit cartridge and charcoal filter replacement.	
LPG137	Greasing of all block valves at dehydration plant.	
LPG138	Gas pre- heat treatment unit Filters Inspection.	
LPG139	Instrument air dryer inlet/outlet filter to be replaced. (K-600 A/B)	

3 HEAT EXCHANGERS

3.1. FIN FAN COOLERS

General inspection, cleaning and maintenance of the following Fin Fan Coolers.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG140	Refrigeration Package Cooling Tower	K-700	Fin Fan Cooler (tubes cleaning) & Inspection of cooling fan bearings (replace if not in good condition) Length: 12' Width: 10'
LPG141	Refrigeration Package engine radiator	K-700	Radiator tubes internal cleaning/inspection Length: 5.5' Width: 5.5'
LPG142	Crude Oil Condenser	E-111 A/B	Fin Fan Cooler (tubes cleaning) & Inspection of bearings (replace if not in good condition) Tube Dia: 1.5" No of Tubes =160 Nos. Length per tube: 24'
LPG143	Sale Gas Engine (WAUKESHA)	Sale Gas Unit	Jacket Water line Tubes cleaning to be carried out: No. of Tubes= 160 Nos. Tube Dia: ½" Length per tube 17.5'
LPG144	Feed Gas Engine (WAUKESHA)	Feed Gas Unit	Jacket Water line Tubes cleaning to be carried out: No. of Tubes= 90 Nos. Tube Dia: 1-1/4" Length per tube: 45'
LPG145	CAT 3412 GENSET	G1 & G2	Jacket Water line Tubes cleaning to be carried out: No. of Tubes= 132 Nos. Tube Dia: 1/2" Length per tube: 8.5'
LPG146	CAT 3408 GENSET	G3 & G4	Radiator External & Internal Cleaning to be carried out
LPG147	CUMMINS NTA-855 GENSET	DG	Radiator External & Internal Cleaning to be carried out
LPG148	AJAX COMPRESSORS	K-100, K-101, K-102	Cooler external & internal cleaning to be carried out.

3.2. SHELL AND TUBE TYPE EXCHANGERS

Only the inlet/outlet connections of shell side will be opened and flushing will be carried out.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG149	TEG Reboiler	H-500	OD=1016mm, Design Pressure psig=ATM Design Temp=450°F

3.3 TUBE BUNDLE OF THE FOLLOWING EXCHANGER WILL BE PULLED OUT FOR CLEANING

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION	REMARKS
LPG150	Crude Oil Heater	E-100A/B	Dia=635mm,Length=3000mm No. of tubes=218,Tube OD=25.4mm	Internal Inspection and jet/mechanical Cleaning of tubes bundle will be carried out.
LPG151	MEG Reboiler	E-201	OD= 20"Length = 7' - 6" Design = 5 Psig at 450°F	Internal Inspection and jet/mechanical Cleaning of tubes bundle will be carried out.
LPG152	De-Ethanizer Reboiler	E-108	OD of tube=1" Length of tubes=10' No of tubes=48 Design pressure=2100psig at 540°F (Tube side) Design pressure=310psig at 14°F (shell side)	Internal Inspection and jet/mechanical Cleaning of tubes bundle will be carried out.
LPG153	LPG Column Reboiler	E-110	OD of tube=1" Length of tubes=20' No of tubes=102 Design pressure=170psig at 540°F (Tube side) Design pressure=250psig at 440°F (shell side)	Internal Inspection and jet/mechanical Cleaning of tubes bundle will be carried out.

4. Valve Replacement/ Fabrication Jobs

ACTIVITY	DESCRIPTION
LPG154	Feed gas compressor exhaust muffler modification job.
<p>NOTE: A separate commissioning/start-up team (for static and rotary equipment) is required at time of Plant commissioning/start-up after ATA, which will be released after completion of commissioning/start-up activities.</p>	

5. Welding Jobs (Miscellaneous)

Welding of max of 250 dia inches (Sch-80). per dia inch rate to be quoted in the bid.