

OIL AND GAS DEVELOPMENT COMPANY LIMITED
Chanda LPG Plant

SCHEDULE OF REQUIREMENT

TENDER ENQUIRY # TE/COF/M/ATA/01/2023

Technical services for Maintenance jobs of Chanda LPG plant during ATA-2023

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-2023 OF CHANDA LPG PLANT

GENERAL:

1. Technical services are required for Maintenance jobs at Chanda LPG Plant during Annual Turn Around (ATA-23) for an estimated period of **07 days** tentatively schedule from ~~06-09-2023~~ to ~~12-09-2023~~ ⁰²⁻⁰⁷⁻²³; however the schedule and duration of shut down may change. ~~09-7-23~~
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 in ATA team.
8. All the participating companies should have an experience of ATA jobs in Oil & Gas Processing Plants or Fertilizers Companies (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. Accommodation of all crew to be managed by contractor and outside of plant premises.
5. Daily progress report of all activities on daily basis.
6. Manpower should be vaccinated and Covid certificates/card as proof to be provided.
7. Local labors will be given preference while hiring services for ATA.
8. All kind of tools/consumables required for the job.
9. Provision of scaffolding services, Rigging and hoisting equipment.
10. Removal of Insulation/ Cladding & installing back by skilled insulators.
11. Security of all the Hired Crew.
12. Drinking Water, Boarding/ Lodging, refreshment to all the Crew.
13. Pick and drop from Plant to accommodation and back.
14. In case of any accident, medical treatment or compensation, whichever is applicable.
15. Electrical Supply Boards along with cables as per HSE standard.
16. Head trolley for movement of parts inside the Plant will be arranged by the contractor.
17. Arrangement of Consumable material like cotton rags, gloves, glasses etc.
18. Arrangement of Pipes & Fittings for vessel flushing.
19. 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.
6. Scaffolding material if required.

Scope of Work for ATA-23 Jobs of Dehydration /Hot Oil/CPI Pit/LPG/Utility Area Along With Rotary Equipment.

1. ROTARY EQUIPMENT:

1.1 Pumps:

General Overhauling, Inspection, cleaning/flushing and repair (if required), decoupling & coupling of motors with proper alignment.

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG101	Stabilized Crude Pumps	P-100 A/B/C	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/C	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	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

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATIONS	PREVENTIVE MAINTENANCE
LPG115	Feed Gas Compressor	Feed Gas	Ariel Compressor 16 MMSCF	General Routine maintenance
LPG116	Feed Gas Engine	Feed Gas	Waukesha engine F9390GSI	General Routine maintenance
LPG117	Sale Gas Engine	Sale Gas	Waukesha engine F3521GSI	General Routine maintenance
LPG118	Sale Gas Compressor	Sale Gas	Ariel Compressor 08 MMSCF	General Routine maintenance
LPG119	Fire water pumps engine	P-800 A/B/C	Clark 04 Cylinder & Perkins 03 Cylinder Engine	General Routine maintenance
LPG120	All Generator Sets	G1,G2, G3,G4,DG	Caterpillar Engine 3412 & 3408, Cummins NTA855	General Routine maintenance
LPG121	Ref package compressor	K700	SAB 85	General Routine maintenance
LPG122	Ref package Engine	Ref Package	CAT3412	General Routine maintenance
LPG123	Instrument Air Compressor	K-600A/B/C	INGERSOLL RAND	General Routine maintenance

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
LPG124	HP Separators	V-116 A/B/C	OD = 36" Length = 15' Manway = 16" Design = 1440 Psig at 180°F
LPG125	Flash Separator	V-100	ID = 60" Length = 177" Manway = 20" Design = 175 Psig at 190°F
LPG126	Flash Separator	V-101	ID = 51.2" Length = 153.5" Manway = 20" Design = 75 Psig at 190°F
LPG127	Flash Separator	V-102	OD = 51" Length = 153.5" Manway = 20" Design = 175 Psig at 190°F
LPG128	LT Separator	V-108	ID = 66" Length = 307" Manway = 20" Design = 925 Psig at 150°F
LPG129	Flare KOV	V-500	ID = 55" Length = 192" Manway = 20 " Design = 50 Psig at 480°F
LPG130	LPG Column reflux drum	V-109	ID=3.42' length= 10.33' Design= 240psig at 210°F
LPG131	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)
LPG132	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)
LPG133	TEG ABSORBER TOWER	V-1001	ID=914mm Design Pressure= 1200psig Design Temp=150°F

2.2 Miscellaneous Jobs

ACTIVITY	DESCRIPTION	REMARKS
LPG134	Ajax Integral Compressor K-100, K-101, K-102 Water Jacket Internal and external Cleaning.	
LPG135	E-111 Product Cooler jet cleaning to be carried out.	
LPG136	Hot Oil Return Line Filter inspection/Cleaning.	
LPG137	Hot Oil Furnace Refractory Inspection to be carried out.	
LPG138	TEG surge tank and TEG Re-boiler cleaning and flushing.	
LPG139	TEG/MEG unit cartridge and charcoal filter replacement.	
LPG140	Gas pre- heat treatment unit Filters Inspection.	
LPG141	Instrument air dryer inlet/outlet filter to be replaced. (K-600 A/B)	
LPG142	Ref package cooling tower water showering line to be inspected for proper showering.	
LPG143	Hot oil furnace burners inspection.	
LPG144	Proper maintenance of feed gas compressor's louvers to be done to rectify discharge gas temperature issue.	
LPG145	Damaged insulation at various plant areas to be repaired/installation.	

3 HEAT EXCHANGERS

3.1. FIN FAN COOLERS

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION	REMARKS
LPG146	Refrigeration Package Cooling Tower	K-700	Length: 12' Width: 10'	General inspection and Mechanical cleaning.
LPG147	Refrigeration Package CAT engine radiator	K-700	Length: 5.5' Width: 5.5'	Radiator external and Mechanically internal cleaning of tubes.
LPG148	Sale Gas Engine (WAUKESHA)	Sale Gas Unit	No. of Tubes= 160 Nos. Tube Dia: ½" Length per tube 17.5'	Radiator external and Mechanically internal cleaning of tubes.
LPG149	Feed Gas Engine (WAUKESHA)	Feed Gas Unit	No. of Tubes= 90 Nos. Tube Dia: 1-1/4" Length per tube: 45'	Radiator external and Mechanically internal cleaning of tubes.

LPG150	CAT 3412 GENSET	G1 & G2	RADIATOR CORE SIZE 104"X87"X26" No. of Tubes= 132 Nos. Tube Dia: 1/2" Length per tube: 8.5'	Radiator external cleaning, fins straitening and Mechanically internal cleaning of tubes.
LPG151	CAT 3408 GENSET	G3 & G4	RADIATOR CORE 29" x 62" x 7" ROW FLAT FINS	Radiator external and Mechanically internal cleaning of tubes.
LPG152	CUMMINS NTA-855 GENSET	DG	RADIATOR CORE 29" x 62" x 7" ROW FLAT FINS	Radiator external and Mechanically internal cleaning of tubes.
LPG153	AJAX COMPRESSORS	K-100, K-101, K-102	Vary for each compressor	Cooler external and Mechanically & chemically internal cleaning of tubes.

3.2. SHELL AND TUBE TYPE EXCHANGERS

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

ACTIVITY	DESCRIPTION	TAG NO	SPECIFICATION
LPG154	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
LPG155	Crude Oil Heater	E-100A/B	Dia=635mm, Length=3000mm No. of tubes=218, Tube OD=25.4mm	Tube bundle will be pulled out, internal Inspection and Jet/mechanical Cleaning of tubes bundle will be carried out and then will be installed back.
LPG156	MEG Reboiler	E-201	OD= 20" Length = 7' - 6" Design = 5 Psig at 450°F	Internal Inspection and jet/mechanical Cleaning of U tube bundle will be carried out.

4. Valves Replacement/ Fabrication Jobs

ACTIVITY	DESCRIPTION
LPG157	V-116 C crude side LG bottom spool to be fabricated.
LPG158	V-100 water side main isolation valves passing problem to be inspected/replaced.
LPG159	V-101 crude side isolation valve inspection/replacement

LPG160	K-100/K101 coolers gas side tubes leakage to be removed.
LPG161	K-101 isolation valve to be installed at suction scrubber.
LPG162	P100C both discharge valve passing problem to be rectified.
LPG163	E108 leakage to be rectified.
LPG164	V109 water drain line valve passing to be rectified.
LPG165	Leakage at meg coil inside still column to be rectified.
LPG166	V108 LTS main isolation valve of liquid side to be replaced.
LPG167	TEG Stack inspection to be carried out.
LPG168	TIE in points for system PCV at feed gas suction line and flare line modification job to be carried out.
LPG169	Feed gas compressor discharge line to be replaced with new one. <i>Approx. Dia Inches 200.</i>
LPG170	Feed gas compressor final stage damaged level glass to be replaced.

NOTE:

A separate commissioning/start-up team (for static and rotary equipment's) will be required at time of Plant commissioning/start-up after ATA, which will be released after completion of commissioning/start-up activities.