

OIL AND GAS DEVELOPMENT COMPANY LIMITED
Chanda LPG Plant

SCHEDULE OF REQUIREMENT

TENDER ENQUIRY # TE/COF/ATA/02/2018

Technical services for Preventive Maintenance of 03 Nos. Ajax Integral-Engine Compressors during ATA-2018 at Chanda LPG Plant.

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-2018 OF CHANDA LPG PLANT

GENERAL:

1. Technical services are required for Annual Maintenance of 03 No's Ajax integral-engine compressors during annual turn around (ATA-18) of Chanda Plant for an estimated period of 15 days tentatively schedule from 01-08-2018 to 15-08-2018; however the schedule and duration of shut down may be changed.
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. In case of no submission of bid bond, bid will be rejected.
4. Working hours for the day will be considered 10 hours/day excluding lunch break. Sunday/holiday will be considered as normal working day.
5. Most of the jobs will be carried out in the day shift however limited tasks will be carried in the night shift also.
6. Payment will be made as per actual work done through cross cheque after completion of the job being verified by OGDCL rep. at site.
7. Skilled manpower should be well experienced in their respective crafts.
8. Management of the plant reserves the right to terminate the services of any hired staff at any time without any justification.
9. HSEQ Rules & Regulations will be strictly observed.
10. **All the participating companies should have an experience of working on Ajax compressors. (reference should be provided)**
11. 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.
12. OGDCL may delete, add or change any type of activity given in the scope of work.
13. The technical manpower must be skilled, having at least five years' experience in respective trade. Skilled manpower will be interviewed by OGDCL professionals in all disciplines, if deemed necessary and contractor should arrange the interview at their premises. The detailed CV's of direct manpower/supervisors is mandatory.
14. Use of mobile phone and camera is prohibited in the plant premises.
15. 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 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. **All kind of tools required for the Maintenance of Ajax Integral-Engine Compressors.**
5. Security of all the Hired Crew.
6. Drinking Water, Boarding/ Lodging, refreshment to all the Crew.
7. Pick and drop from Plant to accommodation and back.
8. In case of any accident, medical treatment or compensation, whichever is applicable.
9. Electrical Supply Boards along with cables as per HSE standard.

OGDCL RESPONSIBILITIES:

1. Electricity for Lighting & Fan.
2. Spare parts will be provided by OGDCL.
3. Blinds & Spads for Isolation & Pressure Testing.
4. **Logistic support i.e. Cranes, Lifters & Rigging Tools.**
5. Nitrogen purging / leak test will be the responsibility of OGDCL but services for this job, will be provided by Contractor.

EQUIPMENT'S DETAIL&SCOPE OF WORK FOR MAINTENANCE OF 03 NO'S AJAX INTEGRAL-ENGINE COMPRESSORS.

There are 03 Ajax integral-engine compressors L.P, M.P and H.P installed at Chanda LPG plant. Annual Turn Around of Chanda LPG Plant is tentatively scheduled w.e.f **01-08-2018 to 15-08-2018**. Technical services for maintenance of 03 No's Ajax compressors are required during the period. Equipment's and scope of work is as under.

DETAIL OF EQUIPMENTS:

1. L.P COMPRESSOR (K-100)

Engine Side:

Make : Cooper Ajax Energy Services USA
Model : DPC-140
Serial No : 83813
Speed, rated RPM : 400
Rated BHP : 140 (Two Stroke Engine)
No of Power Cylinder : 01
Engine Bore & Stroke : 13.25" × 16"

Compressor Side:

Serial No : 099883
Pressure : 3.5 psi to 50 psi
No of Comp Cylinders: 01
Comp Stroke : 11"

2. M.P COMPRESSOR (K-101)

Engine Side:

Make : Cooper Ajax Energy Services USA
Model : DPC-600
Serial No : 84059
Speed, rated RPM : 400
Rated BHP : 600 (Two Stroke Engine)
No of Power Cylinder : 03
Engine Bore & Stroke : 15" × 16"

Compressor Side:

Serial No : 11616
Pressure : 50 psi to 250 psi
No. of Comp Cylinders: 02
Comp Stroke : 11"

3. H.P COMPRESSOR (K-102)**Engine Side:**

Make : Cooper Ajax Energy Services USA
Model : DPC-600
Serial No : 84069
Speed, rated RPM : 400
Rated BHP : 600 (Two Stroke Engine)
No of Power Cylinder : 03
Engine Bore & Stroke : 15" × 16"

Compressor Side:

Serial No : 11598
Pressure : 250 psi to 750 psi
No of Comp Cylinders: 02
Comp Stroke : 11"

SCOPE OF WORK:

Cooling System:

1. Thoroughly clean all cooling water jackets for dirt accumulation.
2. Inspect and replace worn cooling fan and water pump belt.
3. Inspect/ replace radiator fan shaft bearing (if required) and remove vibrations.
4. Straightening & cleaning of cooler fins.
5. Inspection/ cleaning of cooler tubes.
6. Inspect/ repair of cooling water pump (if required).
7. Pressure test of compressor side of MP and HP units.
8. Greasing of all Bearings.
9. Remove all leakages.

Lubrication System:

1. Clean and inspect force feed lubricators and replace worn parts.
2. Clean and inspect pre lube pump and replace worn parts.
3. Rectify Level Float Valve operation(float to be arranged & replaced).
4. Inspect and remove leakages in the lubrication system.
5. Clean overhead lubricant tank and remove any leakages.

Crankcase Assembly:

1. Drain and flush Crankcase.
2. Inspect/ replace crank pin bearings (if necessary) and adjust clearances. (Power & compressor piston)
3. Inspect/ replace cross head pin bearing (if necessary) and adjust clearances.(Power & compressor piston)
4. Inspect/ replace thrust bearings (if necessary) and adjust clearances.
5. Inspect & repair/ replace crankshaft (if necessary).
6. Inspect/ replace lay shaft gear &drive gear on crankshaft (if necessary).
7. Clean breather caps on the crankcase.

Power Cylinder Assembly:

1. Remove cylinder head, Inspect intake and exhaust ports and remove all carbon in ports.
2. Check Compressor piston rod pressure packing.
3. Inspect/ replace worn piston rings (if required) and thoroughly clean piston and ring grooves.
4. Inspect/ replace Body/liners (if required).
5. Inspect/ replace piston and piston rod (if required).

Compressor Cylinder Assembly:

1. Check compressor piston rod pressure packing.
2. Check compressor variable pocket pressure packing.
3. Inspect/ replace cylinder liners (HP only).
4. Inspect/ replace piston and piston rod (if required).
5. Inspect/ replace worn piston rings (if required) and thoroughly clean piston and ring grooves.
6. Inspect and, if necessary, replace suction and discharge valves.
7. Inspect/ replace variable pocket assembly.

Fuel System:

1. Check Fuel System and clean inlet Fuel Filter.
2. Complete overhauling of fuel injection valves.
3. Inspect/ replace hydraulic pumps (if required).
4. Inspect/ replace hydraulicNRV's (if required).
5. Inspect and repair the complete hydraulic system used for hydraulically actuated fuel injection valves.
6. Remove leakages in the hydraulic system.
7. Inspect/ replace tubes of hydraulic circuit (if required).
8. Clean hydraulic storage bottle.
9. Inspect/ replace driving Cams of hydraulic pumps (if required).
10. Inspection of layshaft and driving Gears.
11. Inspect the fuel intake manifold and remove leakages.

Air Intake System:

1. Inspect and clean air intake system.
2. Replace Air filters.

Ignition System:

1. Inspect/ replace spark plugs (if required).
2. Inspect/ replace cables (if required).
3. Inspect/ replace pick up coil (if required).
4. Inspect/ replace ignition coil (if required).
5. Inspect/ replace alternator (if required).

Other Jobs:

1. Proper Cleaning of Fly wheel.
2. Complete cleaning of Compressor & skid after completion of job.
3. Startup of Compressor after completion of job.
4. Adjustment of Firing timing (if required).
5. Load testing.
6. Housekeeping of area after job completion.