

ITEMS / SERVICES LIST

(for new surface projects / facilities, pipelines and revamp / up gradation of existing surface facilities - but not limited to)

IV A. Machanical & Process Equipment

Sr. No.	Equipment
1	3-Ph Separators : 300 - 1800 m ³ /day
2	Heater Treater : 300 - 1800 m ³ /day
3	Bath Heater : 300 - 1800 m ³ /day
4	Test Separator : 50 m ³ ; 75 m ³ ; 100 m ³ /day
5	Pressure Vessels
6	Heat Exchangers
7	Storage Tank
8	Mixers & Agitators
9	Gas Scrubber : 25000 - 2lakh SCMD
10	Centrifugal Pumps : 5 – 40 m ³ /Hr., 5 – 20 kg/cm ² Water/Oil
11	Reciprocating Pumps: 10 – 75 m ³ /Hr., 50 – 140 kg/cm ² Water/Oil
12	Gas Compressors : 25000 - 1.2 lakh SCMD, 7kg/cm ² ; 18kg/cm ² ; 80kg/cm ²
13	Air Compressors
14	Blowers
15	Flare system : 10k, 30k, 50k, 80k, 100k, 150k, 200k SCMD
16	Air Floatation Unit (DAF)
17	Fire Fighting Systems
18	EOT Crane : 5, 10 & 15 Tons, 4 – 8m cross travel, 10-20 long travel
19	Jib Crane (Electric / Pneumatic) : 2 & 5 Tons.
20	Chain Pulley Block / HOT : 1, 2, 3, 5 & 10 Tons.
21	Dozing / Metering Pumps
22	Jockey Pumps

23	Filters
24	Piping Items – pipes / fittings / flanges / fasteners – CS / AS / SS
25	Valves – Gate, Globe, Check, Ball, Butterfly, Needle
26	Plate Interceptor
27	Centrifuge
28	Oil Skimmers
29	Hose Pipes
30	Submersible Pump

IV B. Pipeline

Sr. No.	Pipeline Items
1.	Seamless Line Pipe
2.	Line Pipe – HSAW / LSAW
3.	Line Pipe (EW) 3L Pe Coated
4.	Line Pipe (EW) Bare
5.	Fittings / Bends / Tees
6.	S.O. Flange
7.	Valves
8.	Pipeline Ball Valve
9.	Heat Shrinkable Sleeves
10.	Hinged Closures
11.	Monolithic Isolation Joints
12.	Pig Indicator
13.	Scraper Launcher & Receiver
14.	Corrosion Probes
15.	S D Bends
16.	Coal Tar Enamel & Synthetic Primer
17.	Fibre Glass Wraps
18.	Concrete Coating

IV C.

Electrical Equipment

Sr. No. Equipment

1. Out door switchyard Equipment (11/22 KV, 630/800/1000 Amps)
2. Switchgear
3. Control Switch
4. Power transformer 11/22KV/415V/250-1000KVA Oil filled Dry type
5. Transformer (LTG / Control / Potential / Current etc.)
6. Lighting transformer 415/230V/20-120 Dry type
7. HT Circuit breaker VCB 11/22KV/800-1600 Amps
8. H.T. panel
9. L.T. Panel Starter type
10. Motors
11. Generator Set 415V 35-1875KVA Diesel/Gas
12. APFC Panel (25-600KVAR)
13. UPS System 2-40KVA
14. Battery, Charger, DCDB 24V/110V 5-20KVA 0.5-2hrs. backup
15. High Mast Lighting 20 mtr/30 mtr 12 Nos. 2X400W
16. Lighting (External/Internal) Flameproof/Non flameproof
17. Cables (XLPE / PVC, Power & Control)
18. Cable Glands
19. Cable Trays
20. Fibre Glass Cable Trays
21. Bulk Items
22. Others
ASB
PDB
JB
LCS
LDB / MLDB / DCDB
ELCB / MCB & DB

- Earthing & Lightning protection equipments
- 23. Auto Transformer Starter
- 24. HT Capacitor Bank System
- 25. Pin Insulator, Porcelain Bushes, Disc, Post Insulators

IV D. Instrument Items

Sr. No.	Equipment
1	Pressure gauge bourdon type
2	Pressure gauge diaphragm seal type
3	Pressure gauges diaphragm type with extended capillary
4	Pressure transmitters
5	Pressure switches
6	Pressure safety valves
7	Pressure self actuated control valve
8	Pressure indicating controller
9	Differential pressure gauges
10	Differential pressure gauges cum switch
11	Level switches external float type
12	Level switches internal float type.
13	Level Transmitters torque tube type
14	Level Transmitters
15	Level switches capacitance type
16	Level switches (electronic)
17	Level switches (pneumatic)
18	Level switches (displacer type)
19	Level transmitters
20	Level gauges (reflex and transparent)
21	Gauge Glass and cocks
22	Tank level indicators (radar type)
23	Tank level indicators (servo type TGM)
24	Tank level indicators (mechanical float type)

- 25 Smart transmitters (pressure, temperature, flow)
- 26 Control valves electrically actuated (globe, butterfly, multiple, trim, specialty)
- 27 Control valves pneumatically actuated (globe, butterfly, multiple trim, specialty)
- 28 Shut down valves (ball, butterfly, plug, gate)
- 29 Pneumatic actuators for shut down valves
- 30 Deluge valve
- 31 Mass flow meter (magnetic type)
- 32 Mass flow meter (ultrasonic type gas service)
- 33 Mass flow meter (ultrasonic type liquid service)
- 34 Mass flow meter (Coriolis type)
- 35 Mass flow meter (turbine type gas service)
- 36 Mass flow meter (annubar type)
- 37 Mass flow meter (turbine type)
- 38 Multi phase flow meter
- 39 Mass flow meter with NOC
- 40 Vortex flow meter
- 41 Flow totalizer
- 42 Flow transmitter DP type
- 43 Flow switch
- 44 Rotameter online type
- 45 Rotameter bypass type
- 46 Orifice assembly
- 47 Senior orifice assembly
- 48 Restriction orifice
- 49 Water meter industrial grade
- 50 Pulse operated solenoid valves for remote operation of valves
- 51 Temperature transmitter
- 52 Temperature gauges
- 53 Multi point temperature sensor
- 54 Temperature switches (electronic)

55	Temperature indicating controller
56	Temperature relief valve
57	RTD assembly
58	Thermocouple
59	Gas flow computer
60	Liquid flow computer
61	P/I converter
62	I/P converter
63	Distributed control system
64	PC – PLC based system (dual / triple redundant)
65	Microprocessor based controller
66	Microprocessor based indicator totalizer
67	Data acquisition system capacity 100 tags, 500 tags and more.
68	Microprocessor based recorder
69	3 pen recorder
70	Recorder (electronic)
71	Recorder (pneumatic)
72	Instrumentation cables (signal cables, control cables)
73	Gas detection system cable FRLS
74	Instrument fittings
75	Averaging pilot tube
76	Hi – low pilot switch
77	Flame detector UV-IR type
78	Semiconductor / catalytic poison type for H ₂ S detection
79	Air filter regulator
80	Smoke detectors
81	Fixed thermal type detectors
82	Gas detectors IR type point type and area type
83	Portable gas detectors H ₂ S, HC
84	Erection hardware (cable trays, clamps, stanchions etc.)
85	Gas detection monitors / controllers H ₂ S, HC, H ₂
86	Manual call point

87	LEL detector IR type
88	Flame front generator
89	Process gas analyzers
90	Specific gravity analyzer
91	Machine monitoring system (vibration monitoring etc.)
92	Viscosity analyzer
93	Oxygen analyzer
94	Dew point monitor
95	BS & W analyzer
96	Conductivity analyzer
97	Water quality analyzer
98	Turbidity analyzer
99	Corrosion analyzer
100	Hydrogen analyzer
101	Pneumatic indicating controller
102	Electric actuator for MOV
103	Shut down panels
104	Marshalling cabinet 1.2m X 1.8m X 1.2m type
105	Telemetry interface cabinet
106	Fusible plug
107	ESD / FSD station
108	PLC controlled shut down panel
109	Junction boxes
110	Custody transfer metering system
111	Shut down panels

IV E.

SERVICES

Sr. No.	Equipment
1.	Civil Works

Area Grading / Structural works / Buildings /Sheds/Roads/
Foundations / Boundary walls / Reservoirs etc

Surveys – Soil investigation / site contour survey / pipeline route
survey / soil resistivity survey / hydrographic survey etc.

2. **Mechanical works**

Installation / Erection work static equipments, machinery, pumps,
compressors, DG set etc.

Site Fabrications - towers / crossovers / walkways, piping supports,
storage tanks (fixed / floating roof), pressure vessels

Underground / above ground piping works.

Fire fighting / fixed fire water spray system / fixed foam system etc.

Separators / Heater Treaters / Bath Heaters

Painting of structures, equipments and piping.

Thermal insulation works.

3. **Pipelines**

Pipe Coating (CTE, 3LPE, 2LPE, etc), pipe laying, pipeline crossings
(boring, trenchless, HDD etc.), radiography, holiday detection /
cathodic protection (temporary & permanent) etc.

4. **Electrical Works**

LT / HT works / Panels / SWGR / Transformers / DG Sets / Cabling /
Plant electrification

5. **Instrumentation Works**

Erection / Testing & Commissioning services

6. **Utilities** (construction power, construction water etc.)

7. **Project management**

8. **Detailed engineering**

9. Hook-up, Chemical cleaning, testing, trial run, pre-commissioning,
commissioning runs

10. Mobilization and Demobilization of Construction equipment and
labour.

11. **Third Party Inspection**

12. **NDT Services**
13. Other components forming part of services
14. **Transportation**