

## **TG Auxiliaries overhauling -SCOPE OF WORK**

### **Company profile**

**Odisha Power Generation Corporation Ltd. (OPGC)** is a Government Company of the State of Odisha. It operates state of the art thermal power plants at Banharpalli, Jharsuguda. It has a total generation capacity of 1740 MW (2x210 MW in first phase and 2x660MW in second phase). Incorporated on November 14, 1984, OPGC started as a wholly owned Government Company of the State of Odisha.

**\*Overhauling of Unit # 3 & 4 (660 MW unit capacity) is planned in August - September 21 respectively\***

### **Shutdown Activity List**

Sr No	Activity	Sub activity
1	<b>CEP SUCTION STRAINER CLEANING</b>	a. Strainer removal, inspection and cleaning with water jet & air, to be replaced if found damaged b. Strainer box up and inspection any kind of leakage if found to be arrested
2	<b>MDBFP BOOSTER/MAIN PUMP SUCTION STRAINER CLEANING</b>	a. Strainer removal, inspection and cleaning with water jet & air, to be replaced if found damaged b. Strainer box up and inspection any kind of leakage if found to be arrested
3	<b>MDBFP/Booster Pump Bearing Inspection/Alignment</b>	a. Removal of Coupling Guards and Covers b. Decoupling of BFP to Voith coupling, Voith coupling to Motor, Motor to Booster pump. c. BFP,Booster pump etc bearing inspection/rectification/replacement if required, float checking and adjustment and final box up. d. Arresting of oil/water leaks if any. e. Alignment of BFP with hydraulic coupling, hydraulic coupling to motor, and motor to booster pump. f. Hydraulic coupling fusible plug inspection/replacement if required. g. Replacement of Oil/water line gaskets, if required. h. Mechanical sealing cooling line cooler cleaning/flushing. i. Seal water Magnetic filter cleaning and inspection. j. Hydraulic coupling filter cleaning/replacement k. Lube Oil removal/replacement/top up l. Recommissioning of the system & necessary rectification to be done
4	<b>MDBFP Lube Oil/ Working Oil Cooler cleaning</b>	a. Lube oil cooler flange opening, cooler cleaning and final box up. (By Nylon brush of suitable size) b. Working oil cooler flange opening, cooler cleaning and final box up.(By Nylon brush of suitable size)
5	<b>Vacuum Pump Cooler cleaning</b>	a. Lube oil cooler flange opening, cooler cleaning and final box up. (By Nylon brush of suitable size)
6	<b>SG/TGDMCW/ACW Pumps</b>	a. Coupling guard removal, decoupling and inspection of coupling bolts and bush b. Dismantling and inspection of Pump bearing, Mechanical seal, replace if required c. Dismantling & inspection of pump internals and replacement of worn out parts

		d. Final boxup, alignment and coupling
		e. Arresting any leaks in associated pipes & valves if found any
7	<b>Self cleaning suction strainers ACW Pump</b>	a. Removal of cover and internal cleaning of debris filter
		b. Internal inspection/rectification and final boxup
		c. Arresting any leaks in associated pipes & valves if any.
8	<b>Seal oil system PHE cleaning</b>	a. Dismantling of PHE Plates
		b. Cleaning of PHE Plates, inspection of gaskets, replacement if required
		c. Assembly of PHE plates , Hydro test
9	<b>Seal Oil System</b>	a. Inspection/rectification of Seal System Skid.
		b. VOT and IOT tank inspection/rectification. IOT/VOT float Valve inspection/replacement.
10	<b>COLTCS SCREEN INSPECTION</b>	a. COLTCS Screen Manhole opening/closing
		b. Platform preparation for inspection of screen
		c. Screen inspection/rectification
11	<b>HOTWELL</b>	a. Hot well manhole opening/closing.
		b. Inspection/cleaning of hotwell & necessary rectification to be done
12	<b>TDBFP BOOSTER/MAIN PUMP SUCTION STRAINER CLEANING</b>	a. Strainer removal, inspection and cleaning with water jet & air, to be replaced if found damaged
		b. Strainer box up and inspection any kind of leakage if found to be arrested
13	<b>TDBFP/Booster Pump Bearing Inspection/Alignment</b>	a. Removal of Coupling Guards and Covers
		b. Decoupling of BFP to Turbine, Turbine to Gear Box, Gear Box to Booster pump.
		c. Dismantling/Inspection of bearings of BFP,Booster pump & turbine, rectification/replacement if required. float checking and adjustment and final box up.
		d. Arresting of oil/water/steam leaks if any.
		e. Alignment of TDBFP Train as per drawing.
		f. Replacement of Oil/water line gaskets, if required.
		g. Mechanical seal inspection/rectification
		h. Mechanical sealing cooling line cooler cleaning/flushing.
		i. Seal water Magnetic filter cleaning and inspection.

		j. Pilot inspection ,cleaning & recalibration of Main control & Auxiliary control valve
		h. Filter inspection/rectification/replacement to be done
		i. Recommissioning of the system & necessary rectification to be done
14	<b>TDBFP Lube oil system</b>	a. Transfer of oil from MOT to COT
		b. Cleaning & inspection of Tank internals, rectification if required & final boxup
		c. Lube oil Pumps suction Strainers & discharge filters cleaning/replacement
		d. Arresting of oil/water/steam leaks if any.
		e. Replacement of Oil/water line gaskets, if required.
15	<b>TDBFP Lube Oil Cooler cleaning</b>	a. Lube oil cooler flange opening, cooler cleaning and final box up. (By Nylon brush of suitable size)
16	<b>HPBP/LPBP/Control Oil system</b>	a. Transfer of oil from skid to drums/ Cleaning of Oil Tanks/ Oil Filling and top up / clearance for filtration.
		b. Checking of pumps and rectification of defects if any
		c. Accumulators inspection/rectification/replacement/gas charging
		d. Filter inspection/cleaning/replacement
		e. Valve inspection/replacement if required
		f. PHE dismantling/cleaning /box up
17	<b>Primary water PHE Cleaning</b>	a. Dismantling of PHE Plates
		b. Cleaning of PHE Plates, inspection of gaskets, replacement if required
		c. Assembly of PHE plates , Hydro test
18	<b>TG MOT system</b>	a. Transfer of oil from MOT to COT
		b. Cleaning & inspection of Tank internals, rectification if required & final boxup
		c. Bucket Strainers & discharge filters cleaning/replacement
		d. Arresting of oil/water/steam leaks if any.
		e. Replacement of Oil/water line gaskets, if required.
19	<b>TG MOT Cooler</b>	a. Lube oil cooler flange opening, cooler cleaning and final box up. (By Nylon brush of suitable size)
20	<b>Deaerator</b>	a. Manhole opening of Deaerator and FST and provide cooling arrangement.
		b. Inspection & cleaning of Feed water storage tank.
		c. Inspection of Deaerator Spray Nozzle and tray assembly/ cleaning and repair/replacement if any found damaged.

		d. Final Box up of Deaerator and FST Tank/ replacement of new manhole gasket.
21	<b>DMCW Overhead Tank</b>	a. Manhole opening and cleaning of the tank
		b. Box up the tank manhole with new gasket.
22	<b>CPU Vessel inspection</b>	a. Manhole opening
		b. Internal inspection/rectification/replacement of under bed strainers
		c. Final Box up , leak attending if found any
23	<b>Hanger support</b>	a. Hot/Cold reading recording
		b. Inspection/rectification of hanger supports
		c. Report submission of hanger support inspection
24	<b>Flange restoration</b>	a. Flange bolts opening
		b. Inspection/rectification of seating surface , Online sealing material removal if found
		c. Gasket replacement & box up . If leakage found necessary rectification job to be done
25	<b>Gland restoration</b>	a. Gland box opening , inspection/rectification
		b. Gland replacement , box up . If leakage found tightening/replacement to be done
26	<b>LP valve replacement</b>	a. Pipeline Joint preparation/welding to be done
		b. Necessary supports to be provided to the pipeline if required
27	<b>HP valve replacement</b>	a. Pipeline Joint preparation/argon welding to be done
		b. DP checking of the joint to be done
		c. Necessary supports to be provided to the pipeline if required
		d. If required SR / NDT testing to be done
28	<b>Scaffolding</b>	a. Scaffolding material shifting, (Proper scaffolding & cuplock to be used).
		b. Scaffolding erection to be done as per required height, Safety standards of scaffolding preparation must be maintained
		c. Removal of scaffolding after completion of work.

### Vendor's Scope

1. All tools & tackles will be in vendor's scope. (All Tools & tackles must have valid test certificate)

2. All required materials shifting from warehouse to site will be in vendor's scope. Vehicles arrangement for material shifting like pickup trucks etc to be done by Vendor.
3. All arrangements required for working in confined space (ie 24 V DC transformer , Lights etc) will be vendor's scope.
4. All required PPE's for the working staff meeting OPGC standards will be in vendor's scope.
5. All consumables will be in vendor's scope. Consumables should be of approved company by EIC.
6. All Safety rules & regulations to be religiously followed by all staff of the contractor's working inside OPGC premises. If found any safety lapses/deviation heavy penalty will be imposed.
7. All statutory rules & regulations compliance is mandatory for performing job inside OPGC premises.
8. Minimum two Safety supervisor to be kept by the Vendor for round o'clock working.
9. EOT operator will be in vendor's scope. EOT operator must be hired in consultancy of EIC.
10. Disposal of all generated waste on regular basis will be in vendor's scope.

#### **OPGC SCOPE**

1. Providing all required spares will be in OPGCL scope. But transportation from warehouse to site will be in vendor's scope.
2. Permit to work will be provided by OPGCL & timely completion of job with desired quality to be ensured by vendor.
3. Compressed Air ( Service air) for maintenance purpose will be provided by OPGCL , Nearby available service air points will be provided but hose arrangement till the required location will be in vendor's scope.
4. Drinking water point will be provided by OPGCL.
5. Special tools & tackles will be OPGCL scope.