

ANNEXURE 1



SCOPE OF WORK FOR MAN POWER RATE CONTRACT (PART A)

The scope of work/facilities under this contract broadly covers providing best in class servicing relating to services including Commissioning activities as well as repairing, servicing including modification/safety related works & observation/defects notification compliances time to time as desired for respective system/components/equipments for Boiler & Aux.

Detailed scope of work:

Scope of work is as specified below & for providing complete assistance in commissioning activities/servicing/repair for following equipments/systems:

1. Fans and its Lube oil system

- a. Assistance in fan lube oil flushing activities.
- b. Assistance in attending leakages in fan lube oil system during commissioning activities.
- c. Assistance in PRV setting of control oil.
- d. Assistance in oil flow setting for main bearing and motor bearing.
- e. Assistance in lube oil pumps checks, servicing as when needed or instructed by EIC during commissioning activities.
- f. Assistance in filter lube oil cleaning.
- g. Assistance in tank cleanliness checking.
- h. Assistance in checking blade gap with casing.
- i. Assistance in doing alignment of motor with fan.
- j. Assistance in blade pitch setting in local as well as from DCS.
- k. Assistance in leakage attending from main bearing assembly
- l. Assistance in damper limit setting.
- m. Assistance in Punch points preparation

2. Mill, Lube oil system and Coal Pipe

- a. Assistance in mill lube oil flushing activities.
- b. Assistance in attending leakages in mill lube oil system during commissioning activities.
- c. Assistance in PRV setting.
- d. Assistance in oil flow setting for gearbox.
- e. Assistance in lube oil pumps checks or servicing as when required or instructed by EIC during commissioning activities.
- f. Assistance in filter lube oil cleaning.
- g. Assistance in tank cleanliness checking.
- h. Assistance in roller oil level checking.

- i. Assistance in mill internal parameter checking like gap between inverted cone with inner cone, vane wheel segment with air restriction ring segment, journal head gap, spring tension, classifier setting etc. as instructed by EIC.
- j. Assistance in bolt tightness checking of MDV, journal cover, coal pipe etc, as instructed by EIC.
- k. Assistance in all gates and damper operation checking and limit setting during commissioning activities.
- l. Assistance in valve setting linked with coal mill
- m. Assistance in attending coal leakages during commissioning activities.
- n. Assistance in doing alignment of motor with gearbox.
- o. Assistance in checking leakages from mill hot air duct, mill manhole, coal pipe etc. during ATT.
- p. Assistance in Punch points preparation

3. Coal Feeder

- a. Assistance in coal feeder internal checks during commission activities.
- b. Assistance in valve setting linked with coal feeder.
- c. Assistance in all gates and damper operation checking and limit setting during commissioning activities
- d. Assistance in lube oil top-up and grease lubrication
- e. Assistance in Punch points preparation

4. Ducting, Gates & Dampers & Expansion Joints

- a. Assistance in duct inspection for foreign material and welding leakages.
- b. Assistance in all gates and damper operation checking and limit setting during commissioning activities.
- c. Assistance in metallic bellow inspection during commissioning activities.
- d. Assistance in Punch points preparation

5. Air Pre-heater:

- a) Assistance in lube oil flushing activities
- b) Assistance in attending leakages of lube oil system during commissioning activities.
- c)** Assistance in PRV setting
- d) Assistance in filter cleaning
- e) Internal inspection of APH like baskets inspection, seals inspection and critical values like clearances inspection and correction if required
- f) Assistance in air tightness test and arresting leakages
- g) Assistance in scaffolding erection & removal
- h) Assistance in scrap removal
- i) Assistance in punch points preparation

6. Main Boiler & Aux. Boiler

- a. Assistance in commissioning of Fuel oil system – Attending leakages, flushing, gun cleaning, filter/strainer cleaning etc.
- b. Assistance in commissioning of soot blower system – Soot blower line charging, pressure setting, soot blower trials, attending flange leakages, etc.
- c. Taking boiler expansion readings.
- d. Walk down checks during boiler light up & load ramp up/ramp down.

- e. Assistance in commissioning of Boiler drain, vent valves/ spray valves/ start up system valves/ MMSV – attending gland leakages/ gland tightening/ valve lapping, etc.
- f. Assistance in attending boiler tube leakages, boiler internal inspection, manhole door opening, etc. as per instructions of EIC.
- g. Assistance in checking during Boiler hydro tests/ ATT, any other inspection readings.
- h. Providing lighting arrangements wherever required as per instructions of EIC.
- i. Painting of area limited to the routine works.
- j. Fabrication & erection of platform, ladder, stair case, hand rail, toe guard etc. as per requirement.
- k. Any other work connected with the above job but not specifically mentioned in the scope of work & which is required for job completion shall be in the scope of contractor.
- l. Insulation/refractory removal if required as per instructions of EIC.
- m. Repair, modification and strengthening of existing pipe and its supports.
- n. Taking CLH & VLH readings in cold and hot condition

7. FOPH

- a. FO Strainer cleaning. HFO, LDO pumps inspection & lubrication.
- b. Attending gasket leakages in Steam/Oil line.
- c. Valves lubrication, inspection, setting & servicing.

8. Misc. Works

- a. Assistance in Inspection /repair/load test of EOT cranes, electrically operated hoists, manual operating hoist etc.
- b. Any work related to compressed air system including instruments air system, service air system, drier, receiver tanks and associated valves & piping.
- c. Punch points attending/Modification/ Fabrication of hand railings, platforms & approaches wherever required.
- d. Repairing, rectification, servicing and break down maintenance of all sump pumps
- e. Contractor shall provide assistance for commissioning activity of electrical and C&I department which involves mechanical related works like coupling & decoupling, alignments, removal & fixing of actuators, welding of impulse line etc.
- f. Housekeeping after every job shall be ensured by the contractor.
- g. Contractor has to make any special fixture or arrangement if requires to carry out any repair work.
- h. Contractor shall carry out necessary scaffolding erection/dismantling work and other temporary approach platform as per site requirement. Scaffolding material shall be in the scope of contractor.
- i. Shifting of all spares, material, tool & tackles from owners store to site shall be in contractor's scope.
- j. Shifting of all metal/non-metal scrap and used oil to scrap yard after completion of work shall be ensured by contractor. Tractor shall be in the scope of the contractor
- k. The Contractor has to provide full assistance to Owner for reverse engineering of equipment/components installed/ available at the Owner's plant, by identifying the components, taking dimensions etc. as per the direction of the Owner's EIC. The Contractor shall carry out the reverse engineering activity as per the directions of the Owner's EIC, whenever equipment is disassembled, for stand by equipment for all components/ equipment available at plant & plant stores.

Note: Scope of work as specified above is not exhaustive. Any other work required for successful commissioning of Boiler & Aux. but not specifically mentioned in the scope of work shall be in the scope of contractor.

