



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड, भोपाल Bharat Heavy Electricals Limited, Bhopal

## FEEDERS MAINTENANCE DIVISION (FDX/310) FOUNDRY

### SCOPE OF WORK

Enquiry No.: FDX/FYM/310/19-20/W-04(R1); Date: 31.01.2020

Due Date: 21.02.2020.

**Sub: Preventive and Breakdown Maintenance of Critical & Other Important Machines & Plants of Foundry division.**

#### **GENERAL COMPONENTS:-**

##### **ELECTRICS: -**

All electrics such as main switches fuse distribution boards, indicating lamps, limit switches, wires and cables etc. are to be repair / replaced / maintained.

##### **MOTORS:-**

Motors are to be checked for sound free running .check for bearing sound and replace if required. Measure IR value of motors, IR value should not be less than 1 mega-ohm. Check starter, O/L relay, S/P Preventer for proper functioning and set / repair / replace as required.

##### **TRANSFORMERS:-**

The transformers of all machine and plants are to be checked for proper working.

##### **WATER PUMPS: -**

Water pumps are provided on Furnaces for circulating water through the Coils for cooling. They are to be maintained in perfect running condition including leakages. Pumps are to be replaced if they are beyond repair.

##### **PIPE LINES: -**

All pipe lines to be maintained in perfect order. All the leakages are to be attended immediately. If needed the pipes and their fittings are to be changed.

##### **WATER COOLING RUBBER HOSES: -**

The worn out rubber hoses are to be replaced with new hoses wherever needed.

##### **INSTRUMENTS: -**

All instruments such as pressure gauges, temperature controllers, temperature indicators, ammeters and volt meters are to be removed by the contractor for repair / calibration and are to be fixed back after repair / calibration. However repair and calibration of instruments shall be done by BHEL, Bhopal.

##### **ELECTRIC OVEN / ANNEALING FURNACES:-**

Dismantling of power connection from equipment, checking of I.D fan motor, dismantling for greasing and changing the bearing as required, Balancing the impeller and motor, Dismantling the cover plates of ovens / furnaces, cleaning of burners, NRV's, filters, checking of thermocouples and thermal controllers, Checking of fire bricks, ceramic wool / glass wool, Repair / replacement of fire brick lining of all three side and roof oven / furnace, checking of door and pulley movements and their rectification. Testing and handing over to manufacturing div.



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#### **ELECTRIC ARC FURNACES:-**

Dismantling of power connection from equipment, cleaning of all panels equipments, tightening of all screws in terminal blocks. H.T breaker trolley overhauling, amplidyne generator cleaning, commutator cleaning, master controller and other controller switches cleaning, checking of tilting and hydraulic motors.

#### **INDUCTION/PILER INDUCTION FURNACES:-**

Cleaning of all panels / equipments, tightening of all screws in terminal blocks, checking of capacitor bank Checking of DM water, close circuit, Raw water motors & pumps, dismantling for greasing and changing the bearing as required, checking and resetting of water pressure switch, thermal switch, flow switch, Checking of hydraulic motors and pumps.

#### **SHOT BLAST MACHINES:-**

Cleaning of all panels/equipment's, tightening of all screws in terminal blocks, checking of control cage setting, checking of all pneumatic valves, cylinders, airline. , checking of dust collector motor, dismantling for greasing and changing the bearing as required

#### **LATHE / MILLING / VERTICAL BORING MACHINE:-**

Check for motor, starter, over load relay, Single phasing preventer check for proper functioning if required reset O/L relay, Check V-belts replace if required. Check pulley, gear box , worm wheel and worm shaft, rack and pinion, helical gear, bevel gear, clutch system, check oil level in fluid coupling & top up if required, counter etc. Check and repair for perfect running order.