

**BHARAT HEAVY ELECTRICALS LIMITED, JHANSI  
(WORKS ENGG. & SERVICES DEPTT.)**

**Reconditioning of Horizontal Coil Winding Machines**

Spec.No: WEX/Recon./Winding M/cs-1094-96/15-16

Dated: 18.11.15

Details are as below:

Equipment : Horizontal Coil Winding machines.  
Capacity : 05 Tons  
Quantity : 04 Nos (M/c No:1094, 1096,1105&1106).

Following supply/ work to be done for the reconditioning and retrofitting of four horizontal coil winding machines with conversion in drive arrangement as per sketch.

**SCOPE OF SUPPLY & WORK UNDER RECONDITIONING AND RETROFITTING**

**Drive system:**

Existing dry clutch drive system in the machines to be replaced with fluid coupling drive as per sketch provided. Suitable rating fluid couplings of pulley model (FP-10 Model) shall be supplied. Item required for the modification such as Double speed induction motors (1400/2900) Motors, Base platform, CI pulleys, V belts (B- Section 3 No), thruster brake, brake drum with gear couplings, shaft, Plummer blocks, Motor mounting adjustable frame for belt tensioning, Motor base support, safety enclosure etc. for each machine to be supplied. These items to be fitted in the machines with necessary modification including fabrication work. The drive and driven pulley (B-section, 3-belts) should be selected in such a way to maintain complete range of winding speed (Maintaining the pulley ratio).

**Foot paddle and operating pendant:**

Existing hydraulic foot paddles and operating panels shall be removed. A new electrically operated foot paddle to be supplied for the operation of the machines (Single paddle operation for both Rev and Fwd movement of machine). One pendant should be mounted on the foot paddle at operators working height with three selector switches (Control ON/OFF, Winding REV/FWD, Speed HIGH/LOW) and one emergency switch.

**Electrical panel:**

The existing control panels to be removed and new control panel shall be designed, supplied and commissioned to suit the requirement as specified above. The electrical panel shall be designed to accommodate single point three phase input power supply. The control circuit shall operate on 110 VAC. Panel shall consist of MCB (4 pole), HRC fuse, main contactors, control transformers (415/110 volt), O/L relays, phase indicating lamps (red, yellow, blue), single phase preventer etc. Necessary industrial socket shall be provided on the panel (two locations) (1) 32Amp. 3 phase (2) 20 Amp single phase.

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*(Signature)*  
18/11

All the electrical components used in the panel should be of L&T/Siemens/C&S make only. All the contactors in the panels to be properly marked and wires shall be ferruled. Cable from panel to the pendant should be properly guarded with metallic conduit and secured with gland. Electrical circuit diagram shall be provided for new panel in four copies.

**Motor:**

The existing motors to be replaced. The supplied motor should be mounted on a plate which should have tensioning device for V- belt tightening.

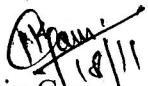
**Motor Rating** - (4.7 / 5.7 KW, dual speed- 1440/2880 RPM) Make of the motor should be of make ABB/Bharat Bijili/Crompton/Alostam only.

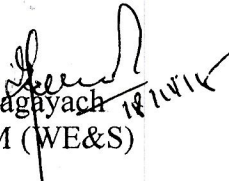
**Safety:**


Complete Safety enclosure to be provided for the drive system. The motor base frame and fabricated structure should be rigid enough to avoid vibration.

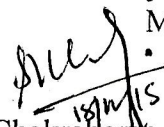
**General:**

1. Reconditioning work will be done at BHEL, Jhansi only.
2. Offer must be submitted with details in two parts :
  - i) Scope of supply complete with quantity.
  - ii) Scope of work.
3. Painting of the machine to be done after completion of work.
4. Supplier should prove the machine with full capacity.
5. One year guarantee for the reconditioning work w.e.f date of machine handover to BHEL by the party..
6. Total work should be completed by the party in all respect within 15 days from the date of takeover the machine from BHEL.

  
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