

**SPECIFICATION OF DUAL BRAKE SYSTEM OF EOT CRANE.**

Tech. Specification No. Mech./M&P/2900/GM/07

**1.0 PURPOSE FOR WHICH REQUIRED AND CAPABILITY:**

(a) There are 52 nos of EOT cranes working at Rail Coach Factory Kapurthala having single braking system for hoisting. Out of which 05 Nos. EOT required to be modified for Dual brake system.

(b) In case of failure of this single brake, no safety provision is there to stop the lifted load from falling on ground. To avoid this existing braking system is required to be modified as Dual Brake system.

**2.0 SCOPE OF WORK FOR DESIGN, MANUFACTURE, SUPPLY ERECTION, COMMISSIONING, PROVING OUT OF DUAL BRAKE SYSTEM.**

1. It is turnkey project.
2. Dismantling of existing gear box of main hoist.
3. Manufacture from (EN 24 Forged steel) & supply new input shaft as well as matching intermediate gear and fitting along with new bearings, seals, bearing cover plates and gear box gasket.
4. Fabrication and supply of new bracket for new brake.
5. Supply of EHT brake (18kg) and brake drum.
6. Fitting of EHT brake (18kg) and brake drum
7. Re-assembly of gearbox.
8. Proving out of Dual Brake system on EOT Cranes.
9. Gear oil will be supplied by RCF free of cost.
10. Firm shall supply material test certificate of raw material and finished job from reputed test house.

**3. MAJOR TECHNICAL PARAMETERS**

The following are the main Specification required for dual brake system.

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### **3.1 FOR 05 TON & 10 TON EOT CRANE DUAL BRAKE.**

3.1.1 Manufacture from (EN 24 Forged steel) & supply new input shaft as well as matching intermediate gear and fitting along with new bearings, seals, bearing cover plates and gear box gasket.

3.1.2 Diameter of brake drum: 200 mm

3.1.3 Diameter of EHT Brake: 200 mm

### **3.2 FOR 20 TON EOT CRANE DUAL BRAKE.**

3.2.1 Manufacture from (EN 24 Forged steel) & supply new input shaft as well as matching intermediate gear and fitting along with new bearings, seals, bearing cover plates and gear box gasket.

3.2.2 Diameter of brake drum: 250 mm

3.2.3 Diameter of EHT Brake: 250 mm

### **4.0 COMMISSIONING AND PROVING OUT:**

4.1 The Successful tender shall have to commission the Dual brake system within one week from the date of receipt at RCF, Kapurthala.

4.2 The Successful tender shall have to prove out the performance of Dual Brake system.

### **5.0 TECHNICAL LITERATURE:**

5.1 One copy of the Printed illustrative catalogue showing features of the Dual Brake system and its elements must be enclosed with each copy of the bid.

5.2 The successful tender will have to furnish, for each " Dual Brake system" 02 copies of spare parts catalogue giving the part list number of each component with exploded views and assembly drawings, maintenance manual, trouble shooting guide, operational manual of the Dual Brake system and all electrical circuit diagrams including PCB circuits to the consignee. The bidder should provide a list of literature they will supply along with the 'Dual Brake system'. The technical literature shall be provided for complete Dual Break system including imported and indigenous purchased components/ sub assemblies.

### **6.0 SPECIAL FEATURES:**

6.1 Special features incorporated into the dual brake system, if any, shall be indicated separately by the tenderer, clearly indicating the advantages of these features.

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### **7.0 SPECIAL CONDITIONS:**

- i Any accident/mishap of the contractor labour during work will be the sole responsibility of the contractor and if any compensation has to be paid by the contractor, and RCF administration have nothing to do with this.
- ii Firm shall arrange their own lodging and boarding.
- iii firm shall arrange their own tool and tackles for carrying out the work.
- iv For carrying out work, no labour below the age of 18 years( minor) to be engaged by the firm.
- v All materials provided by the contractor will have to be registered in MH store, and then reissued through the concerned SSE. This is for proper accounting of material transit.
- vi Electrical/Compressed air connection if required will be provided by RCF free of cost.
- vii Fork lift truck, welding set, gas cutting set and crane if required will be provided by RCF.
- viii The successful bidder will have to produce police verification certificate of his employee involved in the said work.
- ix Worn out parts scrap removed should be return back as it is RCF property.
- X Work plan for daily work will be decided by SSE/MH/G
- xi Daily work register will be maintained by contractor and signed by SSE/MH/G.
- xii The work shall be attended by the experienced and trained staff under expert technical supervisor of successful bidder.
- Xiii The contractor staff shall be physically fit and non alcoholic.

**8.0 SPARES AND CONSUMABLES:**

- 8.1 List of recommended spares of 2 years normal maintenance to cover the complete range of mechanical and electrical equipment of 8 hours shift, 6 days a week, double shifts working basis, should be separately quoted.
- 8.2 List of recommended consumables for two years operation, 2 shifts a day 6 day a week shall be quoted separately.

**9.0 WARRANTY:**

- 9.1 The warranty of stores will be as per IRS condition of contract.

**1.0 DEVIATIONS:**

- 10.1 The tenderer should certify that the system offered fully meets the specifications. Various design features incorporated in the Dual Brake system to fulfill different technical and performance requirements should be fully explained in the offer. However, minor deviations from this specification which do not affect or in any way interfere with the stipulated performance standards, or would result in improved safety/ reliability or would reduce recurring maintenance/operating cost of the machine, can be considered for acceptance. The tenderer in such eventuality shall clearly indicate the details of the deviations and their implications.

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