

ANNEXURE-A1 (Rev-00)

A. Specification for Chain Pulley Block 2T:

1. Chain pulley Block shall, in general, confirm to **IS: 3832-2005**.
2. Application: For lifting of hydro turbine equipment in hydro power station.
3. Description: Main components of the chain pulley block should be of the following specification:-
 - 3.1 Hook: Steel forgings to **IS: 15560:2005** to withstand shock loads. Should be designed to rotate and swivel freely.
 - 3.2 Load Chain: Alloy Steel Link chain conforming to **IS: 3109-Part-2**.
 - 3.3 Load wheel: Made of steel casting conforming to **IS: 3832, suitably** heat treated and mounted on Needle /Ball Bearings for smooth operations.
 - 3.4 Brake: Screw & friction disc type, self-actuating load pressure brake ensuring safety.
 - 3.5 Hand Chain: Conforming to **Gr. 30** of **IS: 2429**.
4. Chain pulley Block is to conform to testing requirements of IS. Each chain pulley block is to be tested to 50% overload.
5. (i) Capacity: 2 Tonne
(ii) Hook travel (lift): 10 metre
6. Chain pulley block should be suitable for mounting on monorail trolley of I-Beam of size 175mm x 85mm (ISMB 175mm x 85mm).

B. General clauses:

- a) Packing: All items are to be packed in wooden boxes to avoid damage during transit.
- b) Test certificates: 6 copies of test certificates consisting of material tests (gear & pinion, shank hook, load chain), ultrasonic test report, load chain TC, ratchet & pawl hardness test report, proof load test at vendors place from approved lab and conformation certificates of equipment as per IS.
- c) Guarantee certificates: Equipment should be guaranteed for 24 months after despatch or 18 months from commissioning.
- d) Inspection: The equipment will be inspected by **BHEL Safety Division**. Minimum two weeks advance notice is to be given by the supplier.
- e) Two sets of catalogue to be submitted by supplier along with the offer, without which, the offer will be considered incomplete.
- f) Six sets of catalogue and O&M instruction shall be furnished at time of delivery.

ANNEXURE-B1 (Rev-00)

SPECIFICATION FOR MONORAIL TRAVELING TROLLEY

1. Monorail geared travelling trolley should be rigid, compact and easily adjustable for mounting on standard I beams. Wheels should be mounted on ball /Needle bearings for smooth & light travel, rigidly supported on side covers.

2. The trolley must also negotiate curved I- beam with uniform contact on wheel to rail rolling surface ensuring smooth rolling with low resistance.

a) **Travel:** Circular on PCD as mentioned in enquiry.

b) **Size of I beam:** ISMB 175mm x 85mm.

3. Materials:

a) **Frame:** Rigid frame, built of steel plates.

b) **Axle & shaft:** Steel (To be accurately machined).

c) **Runner & wheels:** High grade cast iron.

d) **Gears:** Special alloy steel hardened and treated for rust prevention.

e) **Chain:** Alloy steel link chain conforming to **Gr. 80** of **IS: 6216**.

4. **Chain height:** Chain height from wheel /trolley centre line = 10 m.

5. **Capacity of trolley:** Rated capacity of load handling of trolley = 2 Tonnes.

6. **Testing:** Trolley should be load tested to 1.5 times the rated load. TC required from authorized / approved lab for Chemical composition report of gear & pinion, hardness test report of gear & pinion, physical inspection and proof load test from authorized / Govt. approved lab will be conducted at vendors place.