



GOVERNMENT OF INDIA

BHABHA ATOMIC RESEARCH CENTRE
ELECTRONICS & INSTRUMENTATION GROUP
REACTOR CONTROL DIVISION (RCnD)

Ref: RCnD/RCSDS/2022/MF/P-37770

Date: 01/04/2022

Minor Fabrication- Invitation of quotations

Sub: Design, fabrication, supply and installation of Track & Roller System and Safety Partition for FMS Lab as per Annexure - 1 and 2.

Dear Sirs,

1. Quotations are invited for the minor fabrication job as per enclosed Annexure-1 & 2.
2. No insurance policy is required as no material (FIM) is issued to supplier.
3. Taxes shall be quoted separately. The above work is required for R & D purpose.
4. PAN and GST nos. of suppliers are mandatory along with offer.
5. Response to the tender enquiry shall be submitted in **two parts viz. Part-A (Technical Bid) and Part-B (Price Bid) in separate envelopes.**
6. Part-A (Technical Bid) shall include following:
 - A. PAN and GST no. of Supplier.
 - B. Compliance sheet/list of deviation (if any) against the technical specifications and testing mentioned Annexure-1 and 2.
7. Part-B (Price Bid) shall include following:
 - A. PAN and GST no. of Supplier
 - B. Quotation mentioning lump-sum cost for Design, fabrication, supply and installation of Track and Roller System as per Annexure - 1 and Design, fabrication, supply and installation of Partition as per Annexure - 2.
8. Tenders are required to be submitted in separate sealed and super scribed envelopes containing and indicating following:

| | | |
|----|-----------------|------------------------|
| I | First Envelope | Part-A (Technical bid) |
| II | Second Envelope | Part-B (Price Bid) |

- Both of the above sealed envelopes shall be put in a separate bigger envelope, which will be duly sealed and super scribed with the name of the work, name and address of the bidder, tender notice no. and due date.
9. The quotations must reach Head, Reactor Control Division by **25/04/2022** and must be sent in sealed envelope super-scribed as mentioned above. The quotation must be sent by speed post/ordinary post only.
 10. The address on the envelope should read:


The Head
Reactor Control Division
Bhabha Atomic Research Centre
North site, Trombay, Mumbai-400 085.

Kind Attn.: Mr. Puneet Panwar, Scientific Officer (D), RCnD

11. Part-A (Technical Bid) will be opened on **26/04/2022**. Part-B (Price Bid) of the tender will be opened at a later date after detail evaluation of technical bid.
12. The items shall be subject to final inspection by our engineer. The components shall not be dispatched prior to approval by our engineer at bidder's works. Necessary inspection facilities should be provided to our engineers at bidder's premises.

13. The delivery, installation and commissioning shall be completed at BARC site within 10 weeks from date of order placement.
14. The supply shall be covered under **one year comprehensive warranty** from the date of acceptance.
15. Head, Reactor Control Division, BARC, reserve the right to accept/reject any or all quotations without assigning any reason.
16. The period of validity of the bidder's offer shall be minimum 45 days.
17. Supplier should clearly indicate the delivery period and validity of the offer.
18. Quotations should be preferably neatly typed and corrections are not acceptable.
19. Any incomplete offer or offer received after due date will not considered and rejected.

Encl.: as above


31/03/2022

(U. W. Vaidya)
Head, Reactor Control Division
उद्यय वा. वैद्य / Uday W. Vaidya
अध्यक्ष, रिएक्टर नियंत्रण प्रभाग
Head, Reactor Control Division
भारत सरकार / Government of India
भाभा परमाणु अनुसंधान केंद्र / B.A.R.C.
ट्रॉम्बे / Trombay, मुंबई / Mumbai-400 085.

Annexure 1

Technical Specifications for Track and Roller System

The objective of installing Track and Roller (T&R) system is to enable the movement of projector screen to any desired position along the length of the room. 3D view of T&R system is shown in Figure 1.

The T&R system consists of two C-channels fixed parallel on the ceiling of a rectangular room as shown in the Figure 2. Total length of the track is 54 feet (2 parallel channels of 27 feet each). These tracks shall be welded to steel plate which is fastened to the ceiling using suitable anchor bolts. A four-wheeled trolley will be running along the length of the C-channels. Trolley's movement along the length of the track will result into movement of projector screen. Chain-pulley connected to back wheels of the trolley will be used as driving mechanism. Two self-locking hooks will be connected to L-channel of the trolley. These hooks will be used to hang the projector screen on T&R system.

The projector screen casing has no eyelets, hence **two metallic eyelets compatible with self-locking hook shall be included in the supply**. These eyelets will be welded on the top of projector screen casing.

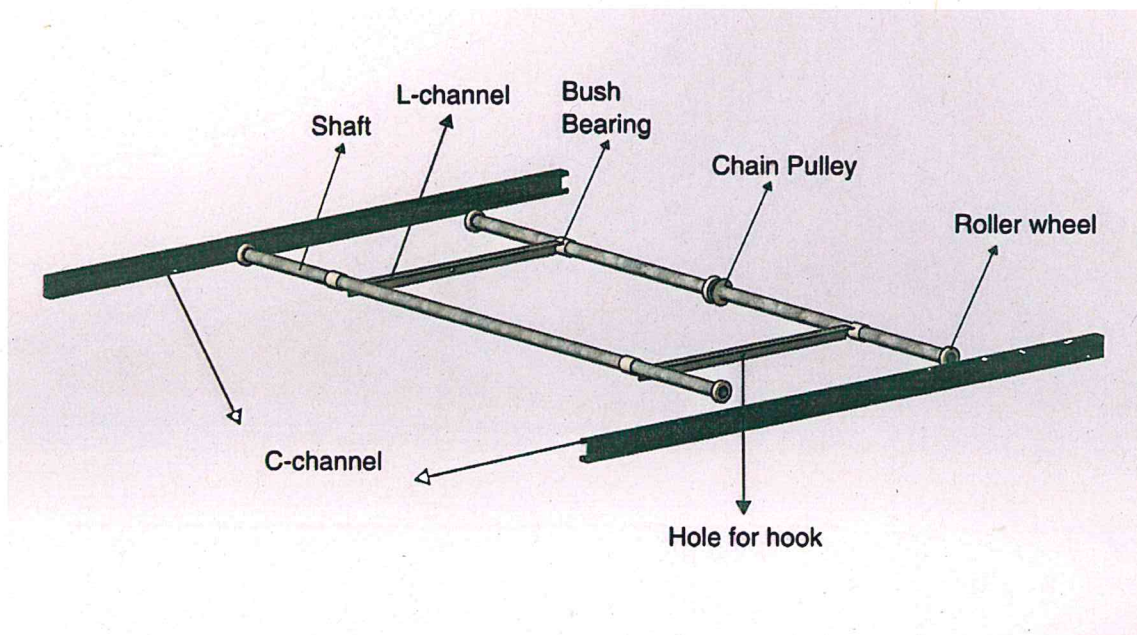
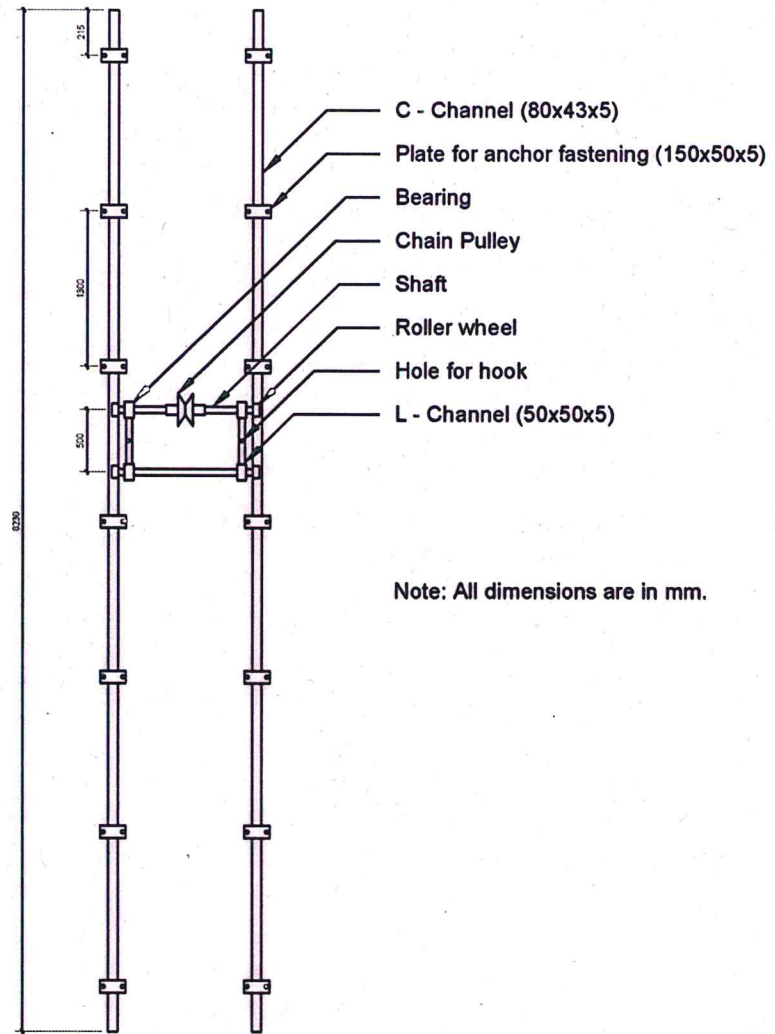
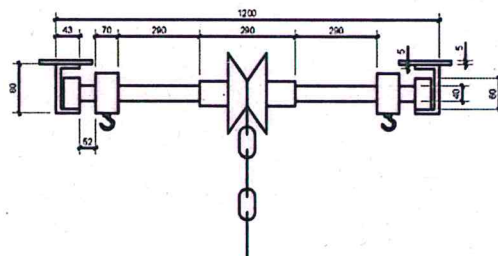
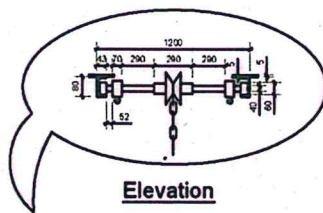


Figure 1: 3D view of T&R system

Dr. M. S. ...
31/03/2022



Plan



TRACK AND ROLLER SYSTEM

Figure 2: T&R System Bottom View

Sheet
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(1). Track specifications:

| Property | Dimensions |
|---------------------------|---|
| Height | 70-80 mm. |
| Width | 40-50 mm. |
| Thickness | 5-6 mm. |
| Material | Galvanized Iron (GI) |
| Total length of the track | 54 feet (27 ft. x 2 parallel channels) |

Note: To stop the over-run of rollers, high quality stoppers made of hard rubber shall be fixed at both ends of the tracks. If there is a need to join multiple C-channels to cover the total length of the track then heavy duty couplers must be used for joining two channels.

(2). Rollers/trolley Specification:

| Property | Dimensions/value | Material |
|-------------------------------------|------------------------------|----------|
| Shaft Diameter | 25-40 mm | SS |
| Shaft Length | As per the drawing in Fig. 2 | |
| Roller Wheel (Diameter x thickness) | 60-65 x 25 mm | SS |
| L-channel | 50 x 50 x 5 mm | MS |
| L-channel length | As per the drawing in Fig. 2 | |
| Pulley block load capacity | 0.5-1 tonn. | |
| Chain length | min. 3 m. | SS |
| Self-Locking Hook Capacity | 0.5-1 tonn. | SS |

1. Roller wheels should be designed in such a way that there is enough clearance for movement in the c-channel.
2. Roller wheels should be made of stainless steel and designed for long life.
3. 2 pairs of bush bearings will be used to connect front shaft of the trolley to the back shaft. Bush bearings should be made of SS and proper lubrication must be available for smooth movement.
4. Two self-locking hooks will be connected to L-channel of the trolley. These hooks will be used to hang the projector screen. The distance between ceiling and end of the hook shall be in the range of 6-10 inches. The load capacity of these hooks should be in the range of 0.5-1 tonn.

(3). Anchor and Fastener Arrangement:

1. One anchor fastener plate should be placed every 1-1.5 m. along the length to support the track.
2. Each anchor fastener plate must be supported with at least two anchor fastening bolts of size: M8 x 70 mm.
3. The track should be clamped (preferable)/welded with anchor fastener plate of dimensions 150 x 50 x 5 mm.
4. Anchor fastener should be made of stainless steel.

(4). Warranty: The supply shall be covered under comprehensive warranty of one year from the date of acceptance.

(5). Acceptance Testing:

The offered solution should qualify following acceptance test.

Accepted
31/03/2022

1. **Demonstration of anchor fastening bolts strength:** In addition to weight of the track, each holding structure i.e. anchor fastener bolts should be able to take a minimum pull-out load up to 100 Kg.
2. **Demonstration of Track's Strength:** The structural strength of the track has to be tested by applying a point load of 100 Kg at middle of two consecutive anchor fastener plates along the length of the track as shown in Figure 3. **Maximum allowable deflection for track in the direction of applied load is 2mm.**

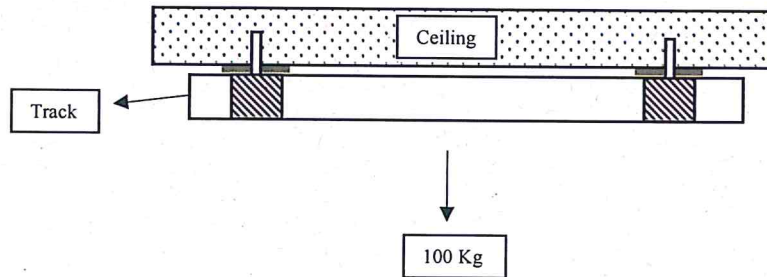


Figure 3: Schematic for test procedure (Side view of T&R system)

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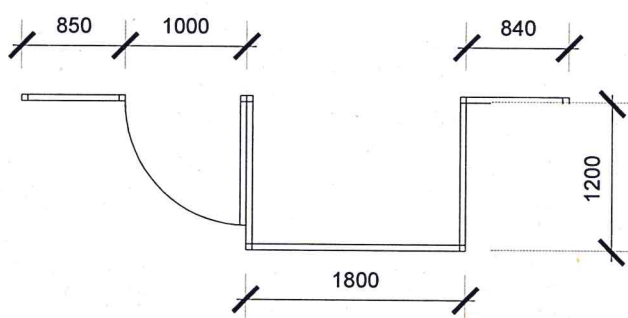
Annexure - 2

Technical Specification for Partition

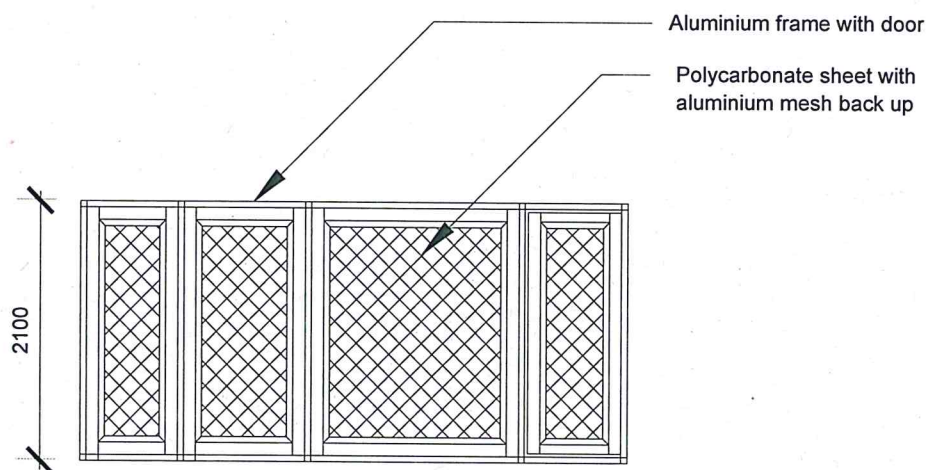
This specification applies to fabrication, supply and installation of partition to be set up inside the FMS Lab, RCnD, North Site, BARC, as per dimensions shown in drawing given below.

The partition should be made up of aluminium frame with transparent polycarbonate sheets and aluminium mesh, the frame shall be fixed to floor and side walls using anchor fasteners, so as to facilitate easy removal and installation of partition. The partition shall have a door made up of transparent polycarbonate sheets and aluminium mesh mounted on aluminium frame and provided with aluminium handles and latch and lock arrangements. Transparent polycarbonate sheets used in the partition and door should be at least 10 mm thick. Aluminium mesh should have at least 8 mm thickness with Hex design of maximum 2" sides. Cross section area and thickness of aluminium frame should be at least 80 square cm and 4 mm respectively.

Warranty: The supply shall be covered under comprehensive warranty of one year from the date of acceptance.



Plan



Elevation

Note: All dimensions are in mm.

Partition

Handwritten signature and date:
31/03/2022