

**Government of India
Bhabha Atomic Research Centre
Technical Physics Division
Mumbai-400 085**

Purnima Labs
Date: 13/12/2021

Due Date: 27/12/2021

Ref: TPD/XNTS/MF/TP/08

Sub: Design, fabrication and supply of light-tight imaging box for large area X-ray tomography system

Dear Sir,

1. Quotations are invited for design, fabrication and supply of light-tight imaging box for large area X-ray tomography system as per specifications attached herewith.
2. Bidder shall quote for design, fabrication and supply of these components with material. Taxes shall be quoted separately.
3. The quotation must reach, Head, Technical Physics Division on or before the due date and must be sent in a sealed envelope super scribed with the above reference number and due date given above through **register post/speed post of Indian Postal Services only**.
4. The address on the envelope should read:

The Head, Technical Physics Division
Bhabha Atomic Research Centre
Purnima Labs., Trombay, Mumbai 400085.
Attn: Mr. Tarun Patel

5. The bidder shall have to take an insurance policy against any material issued to him by the purchaser as free issue material.
6. The fabrication work shall be subject to inspection by our representative. The finished components shall not be dispatched prior to approval by our representative at the bidder's works. Necessary inspection facilities should be provided to our engineers during fabrication at bidder's premises.
7. The bidder shall deliver and install the finished components after approval by our representative, within stipulated delivery time from the date of the firm purchase order issued to the bidder. The finished components and the scrap from the free issue material shall be delivered by the bidder at Purnima Laboratory, Technical Physics Division, B.A.R.C., Trombay, Mumbai 400085.
8. Head, Technical Physics Division, BARC, reserves the right to accept/reject any or all quotations without assigning any reason.
9. Detailed drawing if required will be made available after issue of order.
10. Bidder must provide PAN, GST number in the quotation.

(Tarun Patel)
Scientific Officer /F
Technical Physics Division
For and on behalf of President of India

Technical specifications:

1. Scope of supply:

The supplier has to design, fabricate and supply a light-tight imaging box as per specifications given below.

2. Description:

Light-tight imaging box is required for X-ray tomography of large size objects.

3. Detail scope of supply:

- i. The imaging box should be designed for housing an X-ray screen, a reflecting mirror and a CCD camera. X-ray screen size: 800 x 1200 x 1 mm, weight: ~0.5 kg., reflecting mirror size is ~600 x 750 x 6 mm (weight: ~7 kg.) and CCD camera: Andor make iKon-L 936 model with 35 mm lens. X-ray screen, reflecting mirror and CCD camera are not in scope of supply.
- ii. Imaging box should be made of two enclosure fixed with each other. The large box (Size: ~ 860 x 1250 x 1200 mm) should be made of 30 mm Aluminum profile and Aluminum plates except one side should be 5 mm MS plate towards camera side for radiation shielding of the camera. The small box (Size: ~ 640 x 400 x 400 mm) should be made of 30 mm Aluminum profile and 3 mm MS plates.
- iii. All side covering plates should be fixed with counter-sunk type screws.
- iv. The box should be lightproof.
- v. Mirror should be fixed at 45 degree w.r.to X-ray screen and should have ± 5 degree adjustment with degree marking.
- vi. X-ray screen should be fixed on front side of the box with proper holding mechanism.
- vii. All aluminum parts should be matt finished black color anodized and MS parts should be matt finished powder coated.
- viii. Size: overall dimensions should be ≤ 1500 mm (W) x 1250 mm (H) x 1200 mm (D).
- ix. All screws and nuts should be made of SS.

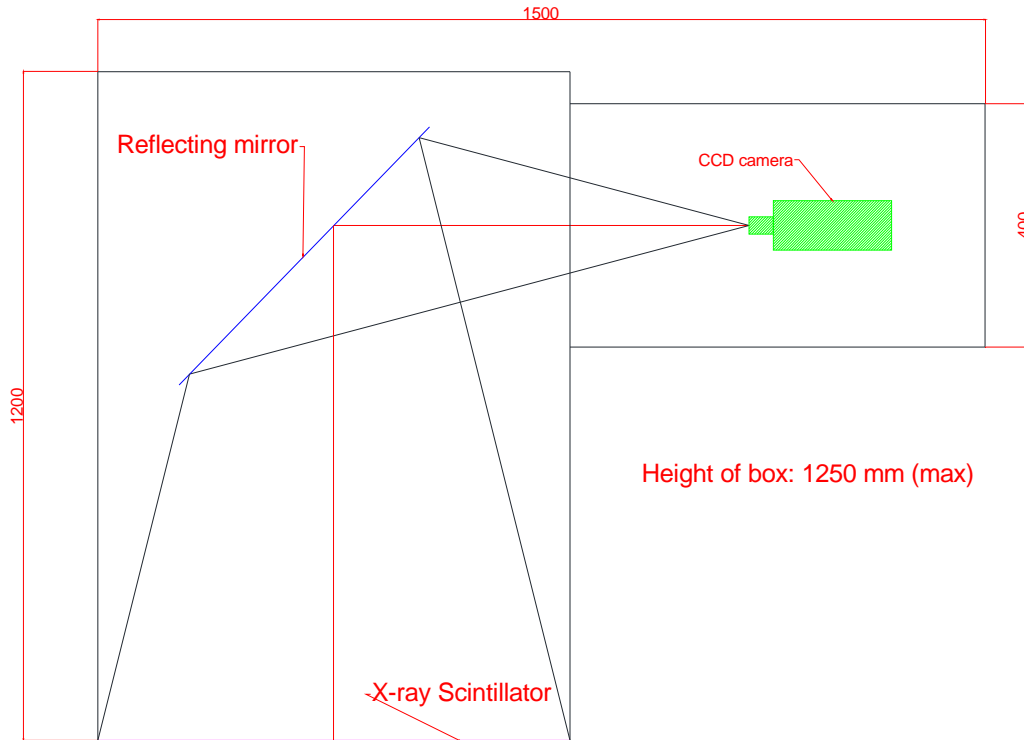
4. Design requirements:

- i. Schematic layout of the imaging box is enclosed.
- ii. Supplier has to make detailed design/fabrication drawings along with necessary design calculations to get focused image of 800 mm x 1200 mm size at X-ray scintillator.
- iii. The supplier has to provide CAD drawings to indenter for approval. The final drawing should be got approved by indenter before fabrication.

5. Other requirements

- i. Stage inspection if required to be decided by the indenter.
- ii. Pre-dispatch inspection of materials will be carried out at supplier's site
- iii. Warranty: Minimum 1 year from the date of delivery.
- iv. Contact pateltp@barc.gov.in in case of any clarification required.

6. Schematic layout of X-ray imaging box



General Specifications

1.0. Quality surveillance, inspection and inspection report:

1.1. All work covered by the specification shall be subject to quality surveillance by the purchaser or his authorized representative for which purpose the fabricator shall allow access at all reasonable times during manufacture to:

1.1.1 the premises in which the work is being carried out;

1.1.2 the drawings and/or tooling involved

1.1.3 gauges, inspection instruments etc. required for inspecting the work.

1.2. Inspection and tests shall be carried out by the fabricator as per the requirements detailed in the drawings and these specifications.

1.3. The fabricator shall submit three copies of inspection reports to the purchaser for approval if requires.

1.4. Components found unsatisfactory as to workmanship or material shall be removed by fabricator and replaced by components which are satisfactory.

1.5. Fabricator shall use materials as specified by the purchaser and submit to the purchaser, the material test certificate for approval.

1.6. The finished components shall not be dispatched prior to approval by our engineer at bidder's works.

2.0. Delivery

2.1 The bidder shall deliver the finished components after approval by our engineer within the delivery period mentioned in the firm purchase order issued to the bidder.

3.0 Sub contract

The fabricator shall not sub-contract any or all the work without written consent from the purchaser. The fabricator shall be responsible to the purchaser for all work of the subcontractor of the fabricator, if allowed by the purchaser.

4.0 Tax

4.1 Except GST no other taxes are payable.

4.2 Income tax@2% will be deducted from the bill.

5.0 Delivery: All materials should be delivered to **Purnima building, BARC, Trombay, Mumbai -400 085.**