

**Government of India
Bhabha Atomic Research Centre
Metallic Fuels Division**

Ref: MFD/AJ/OPA/P3565)

Date: 01-04-2022

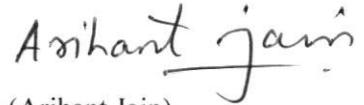
To,

M/s

Dear Sir,

We request you to submit your quotation for "**Design, Fabrication and supply of Cassette for interlocking of finished target plates for Mo⁹⁹ radioisotope production along with cassette cleaning system. (Detailed technical specifications and dimensions are enclosed in Annexure-I)"**

Yours Faithfully,


(Arihant Jain)
Scientific Officer (D)
(On behalf of the President of India)

Encl.: 1. Annexure (6 pages)

SCOPE:

"Design, Fabrication and supply of Cassette for interlocking of finished target plates for Mo⁹⁹ radioisotope production along with cassette cleaning system. (Detailed technical specifications and dimensions are enclosed in Annexure-I)."

General: The items specified in the indent will be used for most critical application. Therefore the methodology mentioned under technical specification of this tender document for the fabrication of items must be strictly adhere to. Any deviation towards the compliance will not be accepted.

Quantity: 125 pieces

Bidder Qualification: In order to qualify the bidder to participate in this tender, it is mandatory that the bidder has some prior experience in precision machining of aluminium and its components. Therefore the bidder is required to submit necessary documentation/proof (Purchase Orders, Work Orders, Contract etc) where he has been awarded the contract by any government agencies only for similar kind of work (mainly on aluminium precision machining). It is also desired that the bidder must also demonstrate by submitting documents demonstrating the timely completion of such contracts/work within stipulated time frame. In order to qualify it is also required that bidder must have completed minimum 5 number of tenders/work contracts in the last 2 year duration on precision aluminium machining.

The bidder must also have machining and related capabilities in house for executing this contract. The same will be confirmed by the users during company inspection process and will form a strong basis for accepting or rejecting the company. Base material procured shall be Al6061 alloy billet. The Chemical composition of the AA6061 must be as per UNS A96061 the specification below (in wt%):-

Mg: 0.8-1.2%
Si: 0.4-0.8%
Fe 0.7%
Cu: 0.15-0.4 %
Mn: 0.15%
Cr: 0.04-0.35%
Zn: 0.25%
Ti: 0.15%
Rest Aluminium

The elemental analysis report shall be generated by NABL accredited laboratories and the same will be verified by the facilities at BARC.

- The Boron content of the material supplied must be below 10 ppm. Only on approval of the material from BARC personnel, the job shall be started.

Sizing of billet in the desired shape & thickness must be carried out by EDM (Electro Discharge Mechanism) only. Hence it is required that reduction in thickness of billet to final product thickness shall be carried out by EDM only and therefore no machining or mechanical working should be involved. This will be confirmed by the user's during sizing of each billet. Therefore the sizing of billet will be done only in the presence of user or its representative.

1. Surface finish of the order of 5 to 10 µm is required on the job. This surface finish on each component/final product will be measured at user's premises by state of the art metrology machines and will also be part of acceptance criteria. Any deviation in the aforesaid value will lead to rejection of component/product for which the supplier will be required to fabricate the

new set. The metrology measurement carried out at user's premises will be final and binding on supplier too.

2. The final components should be finished by lapping operation in which a surface finish of 0.8 microns ($\Delta\Delta\Delta$) is mandatory in the finished product. This will be verified and checked at user's place by surface scanning and if any deviation is found then the job will not be accepted and the supplier has to resubmit the same as fresh item.

3. No changes are acceptable on tolerances and finishing as prescribed in the drawing and technical specification.

4. It is also desired that the tail end of each slot or groove must be machined by spark erosion technique only and not by any other milling process. The minimum spark erosion at the end section of each slot will be 20% of the slot length. Spark erosion at the end section of groove is mandatory for each and every slot shown in the component.

5. All the grooving and drilling of holes must be carried out in CNC milling machine as per the details mentioned in the drawings.

6. The items specified will be used for fabrication of special/critical assemblies; hence stringent control on dimensional tolerances & surface finish will be enforced.

7. After machining and milling operation the cassette shall be flat on both length and width direction. The flatness of finished job should be within a tolerance of 20 microns throughout the length of the job.

8. A single aluminium cassette shall be fabricated from a single solid Aluminum billet without the use of any joining technology. No joining of the aluminum pieces shall be allowed during the fabrication of one Aluminum cassette.

The scope of the work also includes design, fabrication and supply of Cassette cleaning system. The Cassette cleaning system shall also include a fume extraction system which shall be connected to the existing exhaust pipeline of the laboratory area. The cassette cleaning system shall be fabricated with SS 304 material. The connection of the fume extraction system with the existing exhaust pipeline shall be in the scope of the supplier.

Approval of Job Initiation & Progress

Before taking up fabrication, the supplier has to submit the process flow sheet for technical scrutiny and approval by BARC. The supplier should proceed with the fabrication job only after getting written approval from BARC.

After fabrication of one set of the items as per drawing, the same will be inspected and checked for necessary surface finish & geometrical tolerances. Thereafter, it will be cleared for further processing of the complete order.

OTHER REQUIREMENTS:

1. All the points stated above under the title **TECHNICAL DATA & REQUIREMENTS** should be addressed in the quotation

2. The indent includes the Onsite Supply of the product (as per the requirement by the indenting officer).

3. The workshop and all the equipments used for the fabrication of the items in the indent shall be visited by the representative from BARC before the placement of the Work Order to the concerned vendor. If found unsuitable, the particular offer will not be accepted further for any evaluation.

4. Pre dispatched inspection of the fabricated jobs is required at the supplier site.

5. The items specified in the indent shall be offered in complete single package only and any offer in terms of part delivery will not be accepted.

6. The Quality control/Assurance for the fabrication of the hardware must be strictly adhered.

7. The supplier workshop must be equipped with basic metal working, metal joining, CNC milling, EDM cutting, spark erosion setup and metrological inspection setup which must be capable for fabricating and qualifying the job. The purchaser reserves the right to inspect the facility/workshop of the supplier after the offer. The offer of suppliers found unsuitable will be out rightly rejected.
8. Bidder should send only a consolidated quote for fabrication of Aluminium cassette. Only consolidated and no part bidding will be accepted for any further consideration.
9. The purchaser will have access at all reasonable times to all shops of the contractor and the sub-contractors where material is being fabricated and assembled and all reasonable facilities for such inspection shall be provided. Prior to the supply of item the manufacture has to get it approved from the purchaser.

INSPECTION AND TESTING:

The purchaser will have access at all reasonable times to all shops of the contractor and the sub-contractors where material is being fabricated and assembled and all reasonable facilities for such inspection shall be provided. Prior to the supply of item the manufacture has to get it approved from the purchaser.

The inspected and accepted Assemblies shall be delivered to:

RLG Stores Officer
 Radiological Zonal Stores.
 Bhabha Atomic Research Centre
 Mumbai- 400 085

- You shall send your offer in a sealed envelope (**strictly by registered post/Speed post only**) indicating delivery period, price inclusive of taxes and other relevant information, to:

Arihant Jain
 Metallic Fuels Division
 Bhabha Atomic Research Centre
 Trombay,
 Mumbai 400 085

- Quotation shall reach us by speed post/register post only on or before **11-04-2022** before **11.30 hrs.**
- Please send "REGRET" if not quoting.
- On top left corner of the sealed envelope please indicate

"Design, Fabrication and supply of Cassette for interlocking of finished target plates for Mo⁹⁹ radioisotope production along with cassette cleaning system. (Detailed technical specifications and dimensions are enclosed in Annexure-I)."

All applicable taxes should be clearly mentioned.

- Overwriting, scratching etc. must be avoided in the quotation. Rewriting the whole figure shall carry out any alteration in the figure. The authorized person from the firm shall countersign such figure.

The delivery period mentioned in the quotation shall be strictly adhered to. If the contractor fails to supply and secure extension of delivery date before effecting delivery of the supply against the contract, acceptance of such item by the purchaser will in no way prejudice the right of the purchaser to levy liquidated damage nor will it be entitled to the contractor for payment of statutory levies that comes into force after the expiry of the delivery date.

- Guarantee / Warranty of the material supplied for one year.
- Early delivery schedule will be given a consideration.
- You may contact Shri Arihant Jain (25595008) for any clarification.

Requirement of Earnest Money Deposit (EMD)

The supplier should submit EMD for Rs. 1,00,000.00 (Rupees One Lakh only) in the form of DD in the name of Accounts Officer CC, BARC

Quotations without the EMD and bid security declaration form (attached in the document) shall be suspended from bidding till the last due date for this tender.

PLACE OF DELIVERY:

- The inspected and accepted assemblies shall be delivered to:

Stores Officer
Radiological Zonal Stores
Bhabha Atomic research centre
BOMBAY 400 085

INSPECTION AND TESTING:

The purchaser will have access at all reasonable times to all shops of the contractor and the sub-contractors where material is being fabricated and assembled and all reasonable facilities for such inspection shall be provided. Prior to the supply of item the manufacture has to get it approved from the purchaser.

PAYMENT TERMS:

Full payment will be made only after the satisfactory completion of Work order and delivery of "**Design, Fabrication and supply of Cassette for interlocking of finished target plates for Mo⁹⁹ radioisotope production along with cassette cleaning system. (Detailed technical specifications and dimensions are enclosed in Annexure-I).**" Please note that income tax @ 2% will be deducted from your bill. **No part payment or advance payment will be made.** For this mode of payment, you are required to draw your invoice in the name of Director, Nuclear Fuels Group, Bhabha Atomic Research Centre, Mumbai 400085, in **triplicate along** with Advance Stamp receipt and to be submitted along with "**Design, Fabrication and supply of Cassette for interlocking of finished target plates for Mo⁹⁹ radioisotope production along with cassette cleaning system. (Detailed technical specifications and dimensions are enclosed in Annexure-I).**"

Company's PAN No. should be furnished along with the bill.

- **Company's copy of Sales Tax /Service Tax Registration Certificate has also to be furnished along with the bill.**

DELAY CLAUSE:

Any delay which is attributable to the contractor is liable for penalty @0.5% per week (max. 5%) to be imposed on the contractor.

CONFIDENTIALITY:

No, party shall disclose any information to any third party, concerning the matters under this contract generally. In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractors, consultants, advisers or the employees engaged by a party with equal force. "Restricted information" categories under section 18 of the Atomic Energy Act, 1962 and "official Secrets" under section 5 of the official secrets act, 1923:- Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite

penal consequences under the aforesaid legislation. Prohibition against use of BARC's name without permission for publicity purposes:- The contractor or sub-contractor, consultant, adviser or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public medial like press, radio, T.V. or Internet without the prior written approval of BARC.



(Arihant Jain)
Scientific Officer (D)

Form of Bid-Security Declaration

Date: (insert date (as day, month and year)
Bid No. : (ADB/ITB/.....)

To :

I/We understand this Bid Security Declaration is in lieu of Bid Security (Earnest Money Deposit) and I/We accept that if the bids are withdrawn or modified during the period of the validity, I/We will be suspended for the time specified in the NIT.

Signature :

Name: (insert complete name of person signing the Bid Security Declaration)

Dated on _____ day of _____, _____ (insert date of signing)

Seal

(On behalf of the President of India)