

Government of India
Bhabha Atomic Research Centre
Chemical Technology Division

Ref: ChTD/PTS/CY/ 640.

Dtd: 03/08/2022

Tender Enquiry for minor fabrication work

Sealed quotations are invited on behalf of Presidents of India for the work as per following technical specification

Technical specification

1. Scope of Work:

- a) Revamping of scrubber area mezzanine and MS duct of bus bar in transfer area.
Work includes removal of corroded parts of structures followed by patch work using 6 mm MS chequered plate and painting of entire structure using red oxide followed by double coat of epoxy painting.
- b) Fabrication, installation and testing of Monel-400 storage bin along with associated piping.
- c) Free issue material shall be provided by user for storage bin, piping and other fabrication work.

2. Quantity of work:

S.N	Items details & their specification	Qty	Unit
1	Revamping of scrubber area mezzanine and MS duct of bus bar in transfer area	200	Sq meter
3	Fabrication, installation and testing of Monel-400 storage bin along with associated piping in field.	01	set

3. Applicable standards:

List of applicable codes and standards is as follows

- *ASME Sec V: Non Destructive Examination
- *ASME Sec IX: Welding & Brazing Qualification
- *ANSI B 16.11- Socket welded & threaded steel fitting
- * ASTM-E-165 Liquid Penetrant Inspection Method
- *ASTM-A-193 SS bolting material for high temperature service

- * ASTM-A 194 SS nuts and bolt in high temperature service
- * IS: 696- code of practice for general Engineering Drawings
- * IS: 2062 – Structural steel

4. Revamping of MS structural work

- a) The workmanship shall be of high grade quality and in accordance with the best approved method of fabrication of different components. The fabrication work shall conform to the best practices prevalent in the industry for jobs of similar nature. All edges and corners shall be smooth and round. Welding shall be carried out by shielded metal arc process with coated electrodes conforming to AWS A 5.4 or equivalent. All weld joints shall be ground smooth. Weld splatters shall be removed from metal surfaces.
- b) Electrodes of reputed make only shall be employed for MS structural work.
- c) Post removal of corroded portion & patch work on MS structure, the entire structure shall be inspected by the user before putting red oxide followed by painting.
- d) The fabricator shall use his welding machine and other tools/tackles required for carrying out the job.
- e) The user will carry out inspection of the components and assemblies at all stages to ensure quality and workmanship. Completed work shall be inspected by user before giving completion clearance.

5. Fabrication of Monel-400 equipment:

- a) Fabrication drawing shall be prepared by the party based on input provided by the purchaser. Fabrication of equipment shall commence only after final approval from the user.
- b) No part of the work shall be subcontracted without written consent from the purchaser. Stage wise necessary inspection & quality control measures shall be taken to ensure compliance of the work to this specification.
- c) The welding procedure specification shall be as per ASME Section-IX. The welding procedure shall be submitted to the purchaser for prior approval before taking up the fabrication.
- d) All the welding shall be GTAW type.
- e) After the first pass, the weld is to be D.P. tested carefully for cracks, craters, pin holes etc. Craters, cracks & rough spots are to be ground before the next weld pass.

- f) Weld defect shall be removed by suitable mechanical means. No peening will be allowed. If any repair is required vendor shall take prior written approval of the repair from the purchaser.
- g) Any nozzle hole and its reinforcement pad shall not be on any longitudinal or circumference-weld of the shell.
- h) Manufacturing process shall be such so as to have the minimum number of weld joints on equipment.
- i) The equipment shall be neatly finished in a good workmanship manner. All exposed metal surfaces shall be smooth and free from burrs and sharp corners etc.
- j) All Mild steel parts including lug supports shall be thoroughly cleaned to remove mill scales, rust etc. by wire brush and shall be painted two coat of red oxide primer on it.
- k) Before the equipments are closed, they shall carefully be checked to be sure that all extraneous matter such as rags, tools, rubbish, foreign matter, loose scale, dirt and weld rod stub etc have been removed and the surfaces are pickled and dried. All the opening shall be capped.
- l) Bolt-holes of all nozzle-flanges shall be off-center to the principal central line of the equipment.
- m) The nozzle orientation is preliminary and it shall be finalized during final approval of fabrication drawings.
- n) Cleaning, pickling and passivation details shall be given to the purchaser for his approval well before the start of the work:
- o) Inside and outside surface of Monel-400 equipment must be mirror finished.

6. Inspection & testing:

- a) All inspection and testing result shall conform to standard / codes mentioned above.
- b) DP test after root pass & the final pass of the all GTAW welding is must.
- c) In the event of equipment or any part thereof fails to meet the examination or test requirements specified herein, the vendor shall notify the user in writing. The vendor shall obtain written permission from purchaser before repair and subsequent use of the part.
- d) All the edges of MS work shall be smoothened before putting it for painting.

7. Guarantee:

- a) The vendor shall give guarantee that the equipments and other MS work including painting will work trouble free for a period of twelve (12) months from the date of completion..

8. Within the guarantee period as stipulated above, if any part of the same are found defective because of bad quality, improper fabrication or any mistake in the operations carried out by the vendor, then the vendor, at his own expense, to repair them. The entire cost is to be borne by the vendor.

9. Rights and Privileges of Purchaser:

- a) Authorized inspector, from users department, reserves the right to inspect any machinery, material and equipment furnished or used by vendor under this scope of work and to reject any, which is found defective.
- b) Authorized inspector shall be permitted free access to vendor's or his sub-vendor's workshop / stores (if any) at all the working hours, for the purpose of inspecting work at all stages of progress.
- c) Authorized inspector shall be given full assistance in the form of necessary tools, instruments, equipments and qualified operators to facilitate inspection.
- d) The authorized inspector shall have a right to conduct any additional examination, inspection or testing, he feels is necessary.

10. Payment:

- a) No advance payment shall be made.
- b) Income tax @2% shall be deducted from the party's bill
- c) The payment shall be made through Accounts Division, BARC only on satisfactory completion of work and on production of the invoice, the advanced stamp receipt, the completion certificate and the Guarantee Certificate. The price quoted will be firm and final. For clearance of bill is subjected to cleaning the working area and disposal of debris at designated place followed by certified by BSMO.
- d) Any delay which is attributable to the contractor is liable for a penalty @ 0.5 % per week (max 5%) to be imposed on the contractor.

11. Confidentiality Clause:

- 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 third party without the prior written consent of the original disclosing party.
- This clause shall apply to the sub contractors, contractors, advisors or the employees engaged by the 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, 192:**

Any contravention of the above-mentioned provisions by the 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 media like Press, Radio, or Internet without prior written approval of BARC.

12. Party shall furnish PAN No. and GST No along with quotation. Quotation without GST/PAN no will not be considered.

13. The purchaser reserves the right to modify the work order to the extent of +/- 10% of the work order value without any significant implications.

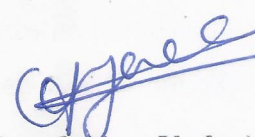
14. Special Notes:

- a) The Vender must have experience of executing similar type of work inside BARC premises. Copy of executed similar type of work order inside BARC premises must be provided with quotation.
- b) All the work as per this specification shall be carried out in CEL-3 plant ChTD, BARC. The place of fabrication shall be continuously monitored for maintaining cleanliness at all times.
- c) The Vender shall submit the copies of police clearance certificate of its worker before taking up the job defined in the work order.
- d) Materials needed for scaffolding for painting at height, shall be in the scope of party.
- e) Final fabrication drawings as required by the user shall be prepared by the party for approval before taking up the job.
- f) In case any extension in delivery is to be granted to the contractor, party's request for extension may be called for before expiry of work order. The same may be justified by the division, whether extension granted is with or without levy of liquidated damages.
- g) The contractor and their workmen shall take all safety precautions as per standard procedure while executing the job.
- h) All the tools & the safety gears required for executing the job shall be arranged by the party.

- i) The user department shall not be held responsible for occurrence of any accident/mishap during the work and therefore, it will not be liable to pay any compensation.
- j) The entire work covered under the specifications shall be completed within **Three** months from the date of issue of work order. Any departure from the prescribed delivery schedule after placement of the work order would be viewed very seriously and the same shall be treated as sufficient reason for canceling the order at any stage without any liability to the purchaser.
- k) The quotation should be detailed with all taxes, excise duty and other charges, if any, with complete breakup. Form "H" will be provided wherever necessary.
- l) Late/fax quotation will not be accepted.
- m) Quotation shall be properly sealed in an envelope. Open or stapled envelopes will not be accepted.
- n) The quantity of job mentioned in this specification is tentative. All the prospective vendors are requested to contact on 02225593840/2585 for detailed scope of work covered in this specification before submitting the quotation. Quotation submitted directly, without understanding the scope of work at site, will not be considered. Vendor can visit the site to know the exact scope and nature of work. One day advance intimation to user department is must for site visit by vendor.
- o) The quotation in the sealed envelope superscribed with the title of work, reference number and the stipulated due date must be dispatched by Indian post (SPEED POST) to reach to Head, Chemical Technology Division by 22/08/2022 at 14:00 hour. The address on the envelop should read

**Head, Chemical Technology Division,
CEL-II, Bhabha Atomic Research Centre,
Trombay, Mumbai-400085
Attn: Chandrajeet Yadav, TO/E, PTS, ChTD**

- p) Head, Chemical Technology Division, BARC reserves the right to accept or reject any or all quotations without assigning any reason thereof.


(Chandrajeet Yadav)
TO/E, PTS, ChTD