

दूरभाषि :  
TELEPHONE :  
तार : बार्क-मुंबई, चेम्बुर.  
TELEGRAMS: BARC-MUMBAI, CHEMBUR.  
टेलिक्स : ०११-६१०१७/०११-६१०२२ बार्क ईन  
TELEX: 011-61017/011-61022 BARC IN  
फेक्स संख्या : ११ - २२ - ५५० ५१५१  
FAX NUMBER: 91-22- 5505151



सत्यमेव जयते

भारत सरकार  
GOVERNMENT OF INDIA

भाभा परमाणु अनुसंधान केन्द्र  
BHABHA ATOMIC RESEARCH CENTRE  
RESEARCH REACTOR MAINTENANCE DIVISION  
Mechanical Maintenance Section, Dhruva

ट्रॉम्बे,  
मुंबई-४०० ०८५.  
TROMBAY,  
MUMBAI-400 085.

Ref: RRMD/ TN- 34 /2021

November 8, 2021

Sub: **Epoxy coating and FRP Lining of sea water headers in Service Building, Dhruva.**

Sir,

Sealed quotation is invited, for and on behalf of the President of India, for the above job as per the description and scope of work given below.

1.1 **Tender offer is to be submitted in two parts viz. Part-A (Techno- commercial Bid) and Part-B (Price Bid).**

In **Part-A** (Technical Bid) bidder must attach following documents;

- Latest PAN No, GST Certificate / Number.
- List of available plant & machinery.
- List of technical manpower along with organizational structure.
- Proof of having satisfactorily completed similar works.

In **Part-B** (Price Bid) the quotation shall be in the format of attached schedule-B and shall show the basic cost and GST separately, if applicable.

1.2 Tenders are required to be submitted in separate sealed envelopes, containing and indicating the following on outside:

First Envelope	Tender no.	Part-A (Technical Bid)
Second Envelope	Tender no.	Part-B (Price Bid)

The technical bid and the financial bid should be sealed by the bidder in separate covers duly super scribed and both these sealed covers are to be put in a bigger cover which should be sealed and duly super scribed with the name of the work, name and address of bidder, tender notice no. and due date.

1.3 Sealed and super scribed Tenders as mentioned above in 1.2 shall be sent to and will be received up to **16.00 hrs. of 10<sup>th</sup> December, 2021** in the office of **AO III, Reactor Group, Dhruva, BARC, Trombay, Mumbai-400085. The quotation shall be sent through registered post/speed post through Indian postal services only.** Quotation delivered by person or through courier will not be accepted and not considered for bidding process.

1.4 **Bidder Qualification:** After opening of Part-A of the tender, bidders shall be evaluated, for their techno-commercial capability to carry out the work based on;

- Technical capabilities in regard to tendered work
- Organizational structure.

- c) Available resources, skilled man power.
- d) Quality and safety consciousness.
- e) Adherence to time schedule for the completed works.

The bidder shall also submit the documentary evidence of execution of similar work of similar cost preferably in DAE units or other government/PSU sectors. Those who do not satisfy the conditions shall not be considered. Part-B (Price Bid) of tender will be opened at a later date only for the successful bidders who are qualified through technical evaluation.

- 1.5 The acceptance of tender will rest with Director, Reactor Group, BARC on behalf of President of India who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all of the tenders received, without assignment of any reason.

### **1. Introduction:**

Seawater is used in Dhruva reactor as a tertiary coolant. Sea water inlet and outlet headers to PW/SW Heat Exchangers are 1200 mm diameter with inside ebonite rubber lining in service building basement up to outlet expansion joint and after that concrete lined. Pipelines are made of carbon steel IS 226 Grade ST 42. Design pressure of these lines is 6 kg/Cm<sup>2</sup> and test pressure is 9 Kg/Cm<sup>2</sup>. Design temperature of the pipeline is 49<sup>0</sup>C.

Water leakage were observed in main outlet header due to cracks developed in inner concrete lining. Further, external surface of I/L & O/L headers got corroded due to leakage & spillage of sea water from sea water strainer housing vent and drain valves during the strainer cleaning & replacement work. Due to corrosion in the form of flakes / exfoliation, wall thickness of these headers at few locations got reduced to 4~ 5 mm from 10 mm.

Epoxy coating along with FRP / FRE lining on internal surface of outlet header & external surface inlet and outlet headers is to be done to protect headers against further degradation. The FRP lining consists of epoxy resin mixed with suitable hardener, reinforced with fibre glass cloth mat.

### **2. Scope of Work:**

- 2.1 Surface preparation - The surface of the pipes shall be chemically & mechanically cleaned to get a surface which is oil and dust free in addition to being free of all contaminations. This prepares the surface for grit blasting.
- 2.2 Grit blasting - The grit blasting of the surface to SA 2 ½ standard and surface profile of minimum 50 µ.
- 2.3 The treated surface, welded joints and sharp corners will be filled/smoothened with putty, so as to make an even surface suitable for lining.
- 2.4 Applying primer coat if required.
- 2.5 Preparation of resin mixture - Epoxy resin system shall be prepared by mixing the epoxy resin and hardener as per recommended proportion.
- 2.6 Application of first coat of resin mixture - The first coat of resin mixture shall be applied on the cleaned surface within ½ hour of completion of surface preparation. The application shall be done using a brush so as to completely cover the substrate.
- 2.7 Wrapping of fibre glass mat - The chopped strand fibre glass mat cut to appropriate dimensions shall be wrapped onto the surface as soon as the first coat is tacky. The wrapping shall be accompanied by by coat with the resin mixture so that it gets impregnated with the resin. The fibre glass mat shall be levelled with a roller to avoid wrinkles or folds. There shall be an overlay of ends of at least 50 mm of the fibre glass mat. Except on asymmetrically contoured surface the fibre glass mat shall be applied

in a single piece upto the maximum manufactured width. In case of asymmetrically contoured surfaces like valves the maximum no. of pieces of fibre glass mat shall be that which is required to avoid wrinkles.

In order to build the thickness of 3 mm a second layer of fibre glass mat shall be similarly wrapped. The wrapping shall be started when the earlier applied resin is still tacky.

- 2.8 Application of final coat of resin mixture - After wrapping the fibre glass mat a final coat of resin mixture shall be applied over the glass mat before the resin with which it is impregnated sets hard. The top coat must completely cover all the glass fibres. On completion, the resin to glass ratio shall be 2:1 by weight.
- 2.9 Curing - After the final coat the FRE/FRP lining shall be cured by drying in air for at least 24 hours prior to putting it to use.
- 2.10 MOC - The FRP lining of the surface will be done using the following – E class Fibre-glass material, Resin Vinyl Ester from Crest composites, Swancor or Mechemco Industries & with epoxy backbone, UV inhibitor, Accelerator, catalyst and flow control agent.
- 2.11 The colour of the FRP at top coated with a **SILVER** colour.

The nearby site around the area of grit blasting shall be protected by suitably covering while sand / grit blasting. The entire area shall be cleaned after blasting.

### **3. Inspection and Testing:**

- 3.1 Contractor shall submit manufacturer's test certificate for all the materials.
- 3.2 After completion of final coat, lining will be inspected and the entire surface shall be free from cracks, traces of bubbles, lack of adhesion, hollow spaces etc. The hollow spaces shall be checked by tapping with a wooden mallet.
- 3.3 Lining thickness test.
- 3.4 Spark testing: The contractor shall furnish and operate an electric powered holiday detector of 10,000 Volts output for certifying that lining is free from holidays. The same shall be witnessed by Department. Spark testing shall be done only after a minimum of 24 hours after the completion of final coat.
- 3.4.1 The contractor shall arrange for all the testing and will be witnessed by BARC representative. The quotation shall be inclusive of all the charges including testing.

### **4. Terms and conditions.**

- 4.1 **The contractor shall visit the site and familiarize himself with the quantum of work before submitting quotation.**
- 4.2 **Contractor shall submit technical note showing the type/specification of compounds used, the application procedure and curing time required for the job, alongwith the quotation. The materials shall be compatible with silt laden sea water.**
- 4.3 Inside portion of the pipes which are to be coated will be available for work during plant shut down, whose date will be intimated prior. The timing of the job will have to be adjusted accordingly and Contractor shall execute the job within the timeframe.
- 4.4 The entire job shall be of good workmanship.
- 4.5 The contractor shall make arrangements for all the necessary Tools, tackles, equipments etc., required for the job.
- 4.6 Supply & application of FRP material & Epoxy will be in scope of contractor.
- 4.7 All man power required to carry out job will be in contractor's scope.

- 4.8 All required tools, tackles & Compressor for grit blasting, general consumables will be in contractor's scope.
- 4.9 The work shall be started within 15 days after the receipt and acceptance of work order.
- 4.10 All the Personnel brought for the work shall have valid Police Verification Certificates. As per prevailing security regulations, the contractor is required to obtain valid entry passes from the security section for working inside BARC, for which related documents will be required to be submitted.
- 4.11 All the workers arranged by the contractor shall be physically and mentally fit. All the Industrial Safety standards shall be followed and all safety gadgets as per safety engineer shall be arranged by the contractor. Department shall not be responsible for any untoward incident during the work.

## **5. PERFORMANCE GUARANTEE**

- 5.1 Vendor shall provide guarantee the job for material and workmanship for a period of 12 months from the date of the completion of the job.
- 5.2 If within the expiry of the above stipulated guarantee period, the subject goods or any part thereof are found defective because of design, workmanship or materials, vendor shall at his own expenses, repair the parts/components

## **6. Scope of department:**

- 6.1 Necessary power / compressed air supply for general purpose shall be provided. For grit blasting, contractor will have to make his own arrangement.
- 6.2 Municipal water at 3 to 4 Kgf/cm<sup>2</sup> will be provided at the location.

## **7. Commercial Terms and conditions.**

- 7.1 HSN codes of each item shall be specifically mentioned (if applicable). The quotation shall be inclusive of all the charges including the transportation, mobilization and relevant taxes.
- 7.2 The vendor shall quote clearly with item wise break-up in enclosed Schedule B format. Any taxes, duties, levies etc. is to be quoted separately.
- 7.3 GST registration number and PAN number shall be indicated in the quotation. Quotations without these numbers shall be rejected.
- 7.4 The prices quoted by the vendor shall be valid for at least three months from the date of opening of the tender.
- 7.5 Transportation and safe delivery of all the components to BARC shall be done by the vendor at his own expense.
- 7.6 As per notification issued by the Ministry of Finance, Department of Revenue of Government of India, the goods (other than services) specified herein are exempted from GST to certain extent to including Department of Atomic Energy. Interstate transaction for R&D will attract IGST @ 5% only as per notification No. 47/17-Integrated Tax (Rate) dated 14.11.2017. Transaction within the state will attract Central Goods and Service Tax (CGST) @ 2.5% and State Goods Service Tax (SGST) @2.5% as per notification no. 45/2017- dt. 14.11.2017. This limits the total GST component to 5%. A GST exemption certificate approved by Competent Authority will be issued to the firm before dispatch of the items. Hence this limit may be considered while submitting the quotation.

## **8. Payment:**

- 8.1 No advance or part payment is admissible. The full and final payment will be made within 45 days after completion of the job in all respects.
- 8.2 Income tax @ 2% & GST TDS @ 2% will be deducted from the payment amount.
- 8.3 The attached 206AB declaration format along with supporting documents shall be submitted. Otherwise double TDS will be deducted as per IT clause 206AB.
- 8.4 For payment the following shall be provided
  - 8.4.1 Original Bill in duplicate
  - 8.4.2 Taxes need to be shown separately in the bill.
  - 8.4.3 Advance stamped receipt.
  - 8.4.4 GST registration number, PAN number to be indicated in the stamped invoice.
  - 8.4.5 The attached GST undertaking shall be filled and submitted.
- 8.5 Payment will be made **only** through ECS/Core Banking System. Hence, please furnish the bank details such as Bank's name & address, A/c No. and IFSC code in the invoice
- 8.6 BARC is the final consumer of the goods/services procured and does not intend to make any outward supply. BARC will not avail the benefits of Input Tax Credit and hence, the goods can be supplied without quoting the GSTIN of BARC, Mumbai on the invoice. The invoices taxed under GST, as per rates applicable under the GST Schedule of Rates, shall be admitted for payment

## **9. Work Completion Schedule**

- 9.1 The job shall be completed within six months from the receipt of acceptance of the work order by you.
- 9.2 Time is the essence of the contract. If you fail to comply with this condition you shall be liable to pay compensation.
- 9.3 Penalty clause: Any delay in the completion of the job which is attributable to the vendor, is liable for a penalty @ ½ % of the work-order value per week (max. 5%).
- 9.4 In case extension in the job completion period is required, the vendor has to write to BARC & it should be approved.
- 9.5 While the contract is intended to be valid for a period of six months, the department reserves the right to terminate this contract by giving a notice of one month and without any financial obligation on the part of department. In the event of cancellation of the contract for a reason or the other the payment for service carried out will be paid on pro-rata basis.
- 9.6 Proportionate amount shall be deducted from charges for non-compliance of work.

## **10. CONFIDENTIALITY CLAUSES.**

### **10.1 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.

### **10.2 “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.

**10.3 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, T.V. or Internet without the prior written approval of BARC.

**11. SECURITY INSTRUCTIONS**

Please indicate whether any of your relatives are employed in BARC or you or any of your employees were employed in BARC or any other units of DAE.

**12. General:**

- 12.1 The acceptance of the tenders/quotations will rest with Director, RG who does not bind himself to accept the lowest offer, and reserves to him the authority to reject any or all the tenders received without assigning any reason.
- 12.2 Work on inner surface of header requires shut down of Reactor. Hence, contractor shall be prepared to wait for site availability, generally one month.
- 12.3 The quotation shall be inclusive of all the charges including the transportation, mobilization, testing etc.
- 12.4 Quotation received after the due date and time shall be summarily rejected.
- 12.5 You may contact Shri S. K. Tripathi, TO/D, at Telephone No. 25594260, E-mail: santosht@barc.gov.in, for further clarifications.

Encl: i) Format for Quotation  
ii) Annexure-II  
iii) 206 AB declaration

-S/d-  
(Manoj Tilara)  
Maint. Supdt. (Mechanical)  
For & On behalf of President of India  
Tel: 022-25594258

**Format for quotation/Schedule-B**

**Name of Work: Epoxy coating and FRP Lining of sea water headers in Service Building.**

Sr. No.	Name / Description of	Unit	Qty (a)	Rate (b)	Amount C = a x b
1.	Surface flake and paint removal, Grit Blasting, Epoxy coating along with FRP / FRE Lining 3 mm thick on outer surface of Sea water headers and qualification by various tests as per specifications	Sq. Metre	375		
2.	Removal of settled water, surface drying, Grit Blasting, Epoxy coating along with FRP / FRE Lining 3 mm thick on inner surface of Sea water headers and qualification by various tests as per specifications	Sq. Metre	150		
	Sub total				
	Applicable Taxes @ ____%				
	Total cost				

(Signature of contractor with rubber seal)

Annexure-II

UNDERTAKING

(Goods & Service Tax)

The following certificates should be submitted by the suppliers / contractors to the paying authority on the bill itself when Goods & service Tax (GST) is claimed as extra by the contractors / suppliers.

1. **Certified that** the Goods and packing on which Goods & Service Tax (GST) has been charged, have not been exempted under the Goods & Service (GST) or the rules made there under.
2. **Certified further that** we have actually paid Goods & Service Tax (GST) and are being assessed to Goods & Service Tax (GST) and also that where there are statutory exemptions under the GST act concerned we have availed of the same and certify non availability of such provision for Goods & Service Tax (GST).
3. **Certify that** in respect of the amount claimed in the bill, no claim is pending for refund / or is admissible. Certify that in the event of our getting refund in whole or in part of the element of Goods & Service Tax (GST), we shall pass on the benefit of the amount of refund obtained by us.

4. **Certified further that** we (our branch of agent)

\_\_\_\_\_  
(Address) \_\_\_\_\_

\_\_\_\_\_  
are registered as dealer in the State of \_\_\_\_\_ under the  
Central Registration No. \_\_\_\_\_ for  
the purpose of Goods & Service Tax (GST).

(Signature with rubber Stamp)



## 206AB Declaration

To whomsoever it may concern

Undertaking pursuant to Section 206AB of the Income Tax Act, 1961  
Declaration confirming filing of Income Tax Return for immediate two preceding years(  
Section 206AB of Income Tax Act)

I, [ \_\_\_\_\_ ], in the capacity of Individual/ Proprietor/ Partner/  
Director/Authorized signatory of [Entity Name] PAN No \_\_\_\_\_, do hereby make  
the following declaration as required under the relevant provisions of the Income Act, 1961  
(hereinafter referred as 'the Act'):

1. That I/We am/are authorized to make this declaration in the capacity as Individual/  
Proprietor/Partner/Director.
2. I/We hereby declare and confirm that I/We do not fall under the definition of 'specified  
person' as provided in section 206AB of the IT Act.
3. I / We have duly filed return of income for FY 18-19 & FY 19-20 within due date as per  
Section 139(1) of the Income-tax Act, 1961 -Yes/No
4. If return has been filed the details are as follows:

I/We, [ \_\_\_\_\_ ], having PAN No \_\_\_\_\_, do hereby  
confirm that the provision of section 206 AB is not applicable in my/our case as I/We am/are  
regular in filing of Income Tax Return. The details alongwith proof of documents of  
acknowledgement numbers and date of filing of income tax returns for last two financial years  
are furnished below:

Sr no.	Financial year (Assessment year)	Date of Filing IT return	ITR Acknowledgement No.

5. I/We hereby take responsibility for any loss/liability fully including any Tax, interest,  
penalty, etc. that may arise due to incorrect reporting of above information

All the aforesaid representations are true and correct, and we/I agree to furnish any evidence  
required by [ \_\_\_\_\_ ] at any time in support thereof.

On behalf of \_\_\_\_\_

Name of the authorised signatory& Designation:

Name of entity

Seal

Date