

तार बार्क बम्बई  
Telegrams: BARC-Bombay, Chembur  
फैक्स न : 91-22-2550 5151  
Fax No : 91-22-2551 9613

Telephone: 25595637/17  
E-mail: [prashantg@barc.gov.in](mailto:prashantg@barc.gov.in)  
[shindesy@barc.gov.in](mailto:shindesy@barc.gov.in)



ट्रॉम्बे,  
मुम्बई ४०० ०८५

Trombay  
Mumbai 400 085

भारत सरकार  
GOVERNMENT OF INDIA

भाभा परमाणु अनुसंधान केन्द्र  
BHABHA ATOMIC RESEARCH CENTRE  
INTEGRATED FUEL FABRICATION FACILITY

Ref: IF3/09/2022/ 31/49037

13<sup>th</sup> June 2022

**Sub: Tender Enquiry for Refurbishing of 13mm EPDM insulation on Chilled Water pipe lines at IF3**

Sealed Offers are invited for and on behalf of the President of India for the work as described below, super scribing "Refurbishing of 13mm EPDM insulation on Chilled Water pipe lines at IF3", Due Date, Tender No., Firm's Name & Address and Kind Attention "Sh. V.K. Gautam, Head, ESTSS, IF3" on top of envelope. Sealed offers should reach the undersigned by normal or speed post only on or before DUE DATE: **30<sup>th</sup> June 2022 before 17:30hrs.**

The Scope of Work, Schedule Quantity and Technical Specifications are given below:

Sr.	Description	Qty	Rate	Amount
1.	Refurbishing of 13mm EPDM insulation sheet and EPDM tape provided as an additional second layer insulation on chilled water valves and pipe lines as follows			
1.a	3" dia. pipe	200 Run. Mtrs.		
1.b.	2" dia. pipe	100 Run. Mtrs.		
1.c.	3/4" dia. pipe	50 Run. Mtrs.		
1.d.	1/2" dia. pipe	20 Run. Mtrs.		
2.	Refurbishing of 13mm EPDM insulation sheet and EPDM tape which is provided in two layers i.e. total thickness of 13+13mm on chilled water valves and pipe lines as follows			
2.a	2" dia. pipe	40 run. mtrs		
2.b.	3/4 " dia. pipe	20 run. mtrs		
Basic Cost				
Any other charges				
Total Cost				

**Scope of Work:**

- Refurbishing of 13mm thick EPDM insulation provided on Chilled Water pipe lines at IF3**
  - Refurbishing of 13mm EPDM insulation sheet the same has to be sealed with EPDM tape.  
The Specifications for EPDM Sheet is as below: -  
Cell Structure- Closed Cell, Density (g/cm<sup>3</sup>)- 50±20% g/m<sup>3</sup>,  
Tolereance -+2/-0mm, Service temperature- -50 C to 125 C\*, Thermal Conductivity- ≤ 0.035

W/m K at 24 C, Flammability- Class V-0, Flame Spread and Smoke Density Test - Class A, Water absorption (%) (Max)- 5% by weight, Water Vapour diffusion resistance index - >7000(For 25mm thickness).

b. The Specification for EPDM Tape is as below: -

Closed cell, elastomeric EPDM thermal insulation material density: 50kg/m  $\pm$ 20%, ASTM D-1667, Color: Black, Thermal Conductivity: 0.04 W/m·k at 24°C (ASTM C-177), Water Vapor Permeability: 0.17 x 10 kg/Pa·m·s (ASTM E-96), Water Absorption: Max 5% by weight (ASTM D-1056), Temperature Range: -29°C to +93°C

Size: 3mm(T) x 50mm (W) x 9.1m (L)  $\pm$ 3%

- c. The refurbishment shall be done by Cleaning of existing installed insulation on pipes thoroughly. Removing of excess water from it and drying it properly.
- d. Installing a layer of insulation of 13mm EPDM Sheet on it. EPDM Tape shall be used as an adhesive. EPDM Tape shall be installed with 50% overlap Care shall be taken on joints so that joints so as to ensure proper sealing, no air pockets between the two insulated layers, no cuts, breaks etc.
- e. These insulation refurbishment shall also be carried out on 3" , 2" , ¾", ½" dia. Chilled water pipes installed.
- f. Testing of system for any condensation and rectification if any.

**2. Refurbishing of 13+13mm EPDM insulation sheet and EPDM tape which is provided in two layers i.e. total thickness of 13+13mm on chilled water valves and pipe lines as follows**

a. Refurbishing of 13+13mm EPDM insulation sheet the same has to be sealed with EPDM tape.

The Specifications for EPDM Sheet is as below: -

Cell Structure- Closed Cell, Density (g/cm3)- 50 $\pm$ 20% g/m3,

Tolerance -+2/-0mm, Service temperature- -50 C to 125 C\*, Thermal Conductivity-  $\leq$  0.035

W/m K at 24 C, Flammability- Class V-0, Flame Spread and Smoke Density Test - Class A, Water absorption (%) (Max)- 5% by weight, Water Vapour diffusion resistance index - >7000(For 25mm thickness).

b. The Specification for EPDM Tape is as below: -

Closed cell, elastomeric EPDM thermal insulation material density: 50kg/m  $\pm$ 20%, ASTM D-1667, Color: Black, Thermal Conductivity: 0.04 W/m·k at 24°C (ASTM C-177), Water Vapor Permeability: 0.17 x 10 kg/Pa·m·s (ASTM E-96), Water Absorption: Max 5% by weight (ASTM D-1056), Temperature Range: -29°C to +93°C

Size : 3mm(T) x 50mm (W) x 9.1m (L)  $\pm$ 3%

- c. The refurbishment shall be done by Cleaning of existing installed insulation on pipes thoroughly. Removing of excess water from it and drying it properly.
- d. Installing both layers of insulation of 13+13mm EPDM Sheet on it. EPDM Tape shall be used as an adhesive. EPDM Tape shall be installed with 50% overlap Care shall be taken on joints so that joints so as to ensure proper sealing, no air pockets between the two insulated layers, no cuts, breaks etc.
- e. These insulation refurbishment shall also be carried out on 2" & ¾" dia. Chilled water pipes installed.
- f. Testing of system for any condensation and rectification if any.

**NOTE: -**

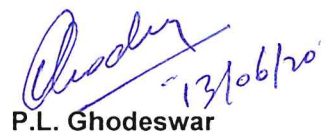
1. All Inspection, Testing (if any) has to be arranged by the Vendor.
2. Firm's are requested to visit the site to get the know-how of work before quoting. Dimensions given are for estimate purpose only.
3. QUOTATION OF ONLY THOSE FIRMS SHALL BE CONSIDERED WHO HAVE VISITED THE SITE TO KNOW HOW OF THE WORK. HENCE, FIRMS HAVE TO CONFIRM TWO DAYS IN ADVANCE OF THEIR VISIT.

4. **ACTUAL DIMENSIONS SHALL BE TAKEN BY THE FIRM BEFORE STARTING WORK TO AVOID ANY MISMATCH.**
5. **Acceptance Criteria:** Final acceptance will be based on spark test report. It should be free from any leakages.
6. Necessary physical protection such as mask, gloves, safety shoes, safety belts are required to be arranged by the contractor and worn by his personnel. Contractor shall take all safety precautions while working in the department and shall be solely responsible for any incident happening while working in the department related to this work.

**TERMS AND CONDITIONS :**

**Note: [Reference: (2/Misc-9/Lgl/2001/92 dated April 30, 2001, BARC)]**

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 "**Propriety**" 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 media like Press, Radio, TV or Internet without the prior written approval of BARC.
2. **Safety:** Contractor shall take all safety precautions while working in the department and shall be solely responsible for any incident happening to his employees during the course of work in the department.
3. **PRICE:** Offered cost shall be for the entire scope of work (including taxes, etc.). Kindly submit your offer in Lumpsum. All the tools tackles and consumables required for refurbishing shall be arranged by the contractor.
4. **VALIDITY:** Price should be valid throughout the currency of the contract.
5. **TAX:** As applicable shall be indicated clearly and separately.
6. **GUARANTEE:** To give guarantee for material and workmanship for at least one year.
7. **COMPLETION PERIOD:** Work completion period is **3 MONTHS** from the date of issue of work order.
8. **DISPOSAL OF WASTE:** Any waste generated during work at site shall be disposed at our disposal site within 300 M
9. **PENALTY:** In case of any delay which is attributable to the contractor, he is liable for penalty @ 0.5 % per week (max. 5%).
10. **PAYMENT:** 100% including taxes after receipt of the unit at our site, satisfactory commissioning and submission of the following documents:  
Delivery Challan, Advance Stamped Receipt, Original Bill in Triplicate and Guarantee Certificate.
11. **Contractor shall obtain Police Verification Certificate for his Supervisor and Workers engaged in the Work.**
12. **Note: Please mention GST No, PAN No. clearly in the quotation, without which the offers will not be considered.**

  
P.L. Ghodeswar

Scientific Officer- E, ESTSS, IF3  
For and on behalf of The President of India