

**Government of India  
Bhabha Atomic Research Centre  
Reactor Design & Development Group  
Structural & Seismic Engineering Section**

Mumbai-85  
Engg. Hall No. 7

Ref: RDDG/SSES/GRR/2019/ *30123*

Feb. 11, 2019

Dear Sir,

Sealed quotations are invited by Head, SSES, RD&DG, BARC for the minor fabrication job as per enclosed Annexure - I (specifications and quantities).

**SCOPE:**

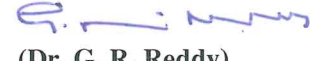
The scope of work involves manufacturing, testing and supply of qualified isolator for a joint experimental study to be carried out by IIT Guwahati, BARC and IGCAR. The fabricator shall quote the cost of manufacturing, testing and supply at IGCAR, Kalpakkam in lump sum.

**Notes to fabricator:**

1. The taxes and excise duty shall be quoted separately.
2. **The bidder should mention PAN No./GST No. in the quotation.**
3. The Quotations must reach Head, SSES, Engg. Hall # 7, BARC, TROMBAY, MUMBAI-400 085 by **25-02-2019**.
4. Supplier should submit their offers in their letterhead, placed in sealed envelope super scribed with "MINOR FABRICATION" and indicate this **office reference number** and **due date** of opening clearly. The quotations will be opened on **25-02-2019 at 14:00 hrs.**
5. Quotations must be send by ***registered post/speed post*** only.
6. The items shall conform strictly to the specification and standards. **The fabricator should submit test certificate in standard format along with the items.**
7. **In case the bidder need to clarify and understand the full scope of his work before submitting the quotation, he may do so by prior appointment with Shri Nagender T, SO/D, Engg. Hall No. 7, BARC, Trombay, Mumbai- 400 085 on phone no. 25591530.**
8. The fabricator should inform SSES at the appropriate stage for inspection. Inspections shall be witnessed by our concerned engineer/ his authorized representative.
9. The fabrication work shall be subject to inspection at bidder's work by our concerned engineer or his authorized representative. The finished material shall not be dispatched without approval of our engineer/ authorized representative. Necessary inspection facilities shall have to be provided to our representative during fabrication job at bidder's premises.
10. Work should be completed within **30 days** from the date of receipt of the order.
11. The price quoted should be valid for at least 90 days from the date of opening of the quotation.
12. The work for which this quotation is being invited is meant for research purpose of a research institute under Department of Atomic Energy and therefore the price to be quoted for the work should be exclusive of excise duty. The purchaser will make available to the successful bidder with whom a work order is placed, the excise duty exemption certificate duly signed by the authorized officer in the Department of Atomic Energy, well before the completion of work by the supplier. While submitting the offer, the bidder should specify in his

offer that the price quoted by him does not include any element of excise duty, subject to production of exemption certificate. Where, however the prices quoted are inclusive of excise duty, the percentage/quantum of excise duty included in the quoted price should be specifically indicated in the Tender.

13. The payment shall be made as per rules after completion of the job satisfactorily and acceptance by the user.
14. Proof of ability: A brief list of similar jobs executed, if any, and the name of the organization should be furnished.
15. Head, SSES reserves the right to accept/ reject any or all the quotations received without assigning any reason whatsoever.
16. The fabricator should strictly follow "confidentiality clause" as per Annexure - II.

  
11/2/19

(Dr. G. R. Reddy)  
OS & Head, SSES, RDDG

डॉ. जी. आर. रेड्डी  
Dr. G. R. REDDY  
अध्यक्ष, संरचनात्मक एवं भूकंप इंजिनियरी अनुभाग  
Head, Structural and Seismic Engineering Section  
भा.प.अ. केंद्र/BARC

Copy to:

1. Shri Nagender T, SSES
2. Asstt. Stores Officer, Zonal 9, Engg. Hall 7

## Annexure- I (Specifications and Quantities)

Details of the six Un-bonded Fiber Reinforced Elastomeric Isolators (U-FREIs)

### 1. Details of Un-bonded Fiber Reinforced Elastomeric Isolators (U-FREIs)

The geometrical details / properties of model U-FREI in the figure shown below. Shear modulus of the elastomer may be considered 0.75 MPa. Six nos. of the isolators are required as per prescribed specifications for a joint experimental study to be carried out by IITG, BARC and IGCAR. And all the six isolators would be tested at manufacturers' lab to evaluate horizontal stiffness and damping of these isolators under vertical load of 100 kN and horizontal displacement (cyclic) amplitude up to 70 mm (+/-).

DETAILS OF UN-BONDED FIBER REINFORCED ELASTOMERIC ISOLATORS (U-FREI)

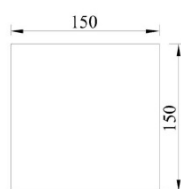


Fig: Plan of the isolator (in mm)

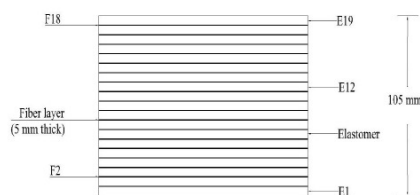


Fig: Elastomer and fiber layers (18 layers) in U-FREI

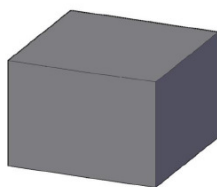


Fig: 3D view

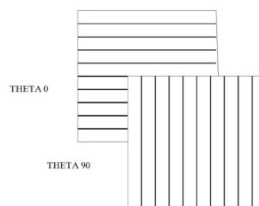


Fig: Details of FRP stacking: 0 and 90 degree layers in each of the 18 FRP lamina

### Important Notes to Bidder:

1. The manufacturer should possess experience in manufacturing and testing of isolators.
2. Material should strictly follow the ASTM standards for mechanical and chemical composition.
3. Bidder shall submit the material test certificate for chemical and mechanical specifications and only after getting clearance from the indenter or his representative, fabrication shall be started.
4. In case any ambiguity or doubt, the bidder shall not assume anything and shall contact the indenter to clarify the same.
5. **Inspection:** The supplier shall arrange to have all the components covered in the scope of supply inspected by the indenter or his representative.
6. **Warranty:** The supplier shall provide an onsite component warranty (including maintenance and service related jobs if any) for at least one year.
7. Work should be completed within **30 days** from the date of receipt of the order. Any delay which is attributable to the contractor is liable for penalty @ 1/2 % per week (max. 5%) to be imposed on the contractor.
8. All the items need to be supplied at 100 ton Shake Table Facility, Reactor Design Group, IGCAR, Kalpakkam, Tamilnadu at bidder's cost and risk.

## Annexure - II

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 also apply to the sub-contractors consultants, advisers or the employees engaged by a party with equal force.
  
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.
  
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.