



BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (UA)
Phone : 01334 – 28 5203/5479
E-mail : agoyal@bhel.in

Due Date: 30.11.2020

Ref: PPX/EM/EOI/20-21/Mica Paper Glass Tape with Accelerator

Notice Inviting Expression of Interest for empanelment of New Vendors

The Heavy Electrical Equipment Plant (HEEP) located in Haridwar, is one of the major manufacturing plants of BHEL. The core business of HEEP includes design and manufacture of large steam and gas turbines, turbo generators, hydro turbines and generators and so on. **We are looking for manufacturing and supply of mica paper glass tape with accelerator which is used as a main wall insulation in manufacturing of Turbo Generator winding bars. This tape consists of a mica paper bonded to thin glass fabric with the help of a small quantity of adhesive. The tape shall be cut in the direction of fibres from the sheet. The rolls should be supplied with mica paper side towards outside. Follow pre-qualification requirement as mentioned in last page**

The specification of these items may be obtained from BHEL after submission of Ink Signed Non-Disclosure Agreement (Annexure-2). The Non-Disclosure Agreement is to be submitted to the following person (s) for obtaining Specifications:

Contact Person 1:

Mr Ankur Goyal
Designation: Dy. Manager (PPX/EM)
Email ID: agoyal@bhel.in
Tel: +91 1334 28 5203

Contact Person 2:

Mr Ashim Dalui
Designation: Engineer (PPX/EM)
Email ID: ashim.dalui@bhel.in
Tel: +91 1334 28 5203

The offers received will be technically evaluated by BHEL & successful short listed parties will be asked to submit their detailed Techno-Commercial offers through formal NIT/Enquiry, for our future requirements. Vendors shall confirm that there is no deviation with respect to BHEL Specifications. However, deviations, if any, are to be listed as a separate attachment. The offers that do not meet the substantial requirements of our specifications are liable to be ignored.

Following documents are to be necessarily filled and submitted along with the technical offer:

1. Details/ Documents in support of Pre-Qualification Requirement (**Annexure-1**)
2. Non-Disclosure Agreement (**Annexure-2**)
3. Company registration certificates (PAN card/D&B/ROC/CBEC etc)
4. Quality control documents / procedure.
5. Details of Manufacturing Facility
6. Company Profile.
7. Financial report of the company.
8. Past experience along with documentary proof.
9. Details such as technical features, experience details, product catalogues, reference lists or any other relevant information.
10. List of equipment manufactured in-house.
11. List of Bought out items along with vendor's list equipment with experience details with respect to size rating and year of operations.



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Only Technical BID along with the documents mentioned above should be sent & the envelope containing the offer shall be duly sealed and super scribed as **“Technical Offer for (ITEM NAME) AGAINST Reference No. PPX/EM/EOI/20-21/ Thermosetting Epoxy Glass Fleece Sheet SUBMITTED BY (Name of company)”**

The last date for submission of Technical offers is 30.11.2020.

- The Technical Offers complete in all respect must be addressed to “Shri S. Bajpai, AGM (BL-1&PPX-EM)” **and should reach before 13:45 Hrs (IST) on 30.11.2020.** Tenders will be opened on the same day at 14:00 Hrs (IST) in the Tender Room.
- Late offers will not be considered in any case. BHEL will not be responsible for any type of postal delay / incomplete information from vendor.
- EMD & Tender fee are not applicable.
- The Quotation should be from the Principle / Original Manufacturer, falling which the Quotation is likely to be ignored. In case the quotation is submitted through agent, the quotation must accompany original authorization letter from Principle / Original Manufacturer.
- Amendments / Corrigendum, if any, will be hosted on our website only.
- For any further clarifications, feel free to contact the undersigned or log on to www.bhel.com or www.hwr.bhel.com or www.tenders.gov.in

Ankur Goyal
(Dy. Manager PPX-EM)



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ANNEXURE-1

PRE-QUALIFICATION REQUIREMENTS (TECHNICAL) FOR EOI OF FINE MICA PAER GLASS TAPE WITH ACCELERATOR (TG60360)

- ITEM DESCRIPTION:** Mica paper glass tape with accelerator is used as a main wall insulation in manufacturing of Turbo-Generator Winding bars. This tape consists of a mica paper bonded to thin glass fabric with the help of a small quantity of adhesive. The tape shall be cut in the direction of fibres from the sheet. The rolls should be supplied with mica paper side towards outside. Mica paper must be manufactured from muscovite mica. Glass fabric must be E-Glass (Low alkali glass $\leq 1\%$ alkali metal oxide expressed as Na_2O , as per IS 11320:1997, Dexol content $\leq 3\%$). Bisphenol A type Epoxy Resin should be used as binder. Fabric should have Warp ($\sim 25/\text{cm}$) and Weft ($\sim 15/\text{cm}$). Zinc Naphthenate accelerator (Zinc content = 11.5%) should be used for manufacturing the tape. Mica paper and glass fabric must be bonded to each other firmly and wrinkle free and must not loosed during taping. Cracks and foreign ingredients are not permissible. The binder in the tape must be volumetrically separable from the accelerator. Mica in the tape should not flake off when the roll is unwound. Mica tape should not be too stiff or difficult to roll up. Tape must be colored red by application of dye" Sudan Red".
- EXPERIENCE:** The vendor should have manufactured and supplied Mica paper glass tape with accelerator for Turbo-generators to reputed power plant equipment manufacturers world-wide during the last 7 years. The supplied material should have following properties:

Thickness (in mm)	Width (in mm)	Composition (g/m ²)				Tensile Strength (N/mm width)	Penetration (in sec)	Weight in g/m ² (± 20)
		Fine Mica	Glass Fabric	Accelerator	Binder			
0.15 $\pm$ 0.01	25 $\pm$ 1	160 $\pm$ 16	23 $\pm$ 2	4 $\pm$ 1	≤ 14	≥ 8	≤ 45	~ 198
0.15 $\pm$ 0.01	35 $\pm$ 1	160 $\pm$ 16	23 $\pm$ 2	4 $\pm$ 1	≤ 14	≥ 8	≤ 45	~ 198
0.15 $\pm$ 0.01	40 $\pm$ 1	160 $\pm$ 16	23 $\pm$ 2	4 $\pm$ 1	≤ 14	≥ 8	≤ 45	~ 198
0.15 $\pm$ 0.01	985 $\pm$ 60	160 $\pm$ 16	23 $\pm$ 2	4 $\pm$ 1	≤ 14	≥ 8	≤ 45	~ 198

Penetration test as per ASTM – D202-55T or Impregnability Test on sample bar with 20 layers in half overlap in Impregnating Epoxy Resin at 60°C.

In support of which, vendor to submit the following documents:-

- Vendor should have manufactured and supplied the above material (of any width) against at least 3 Purchase Orders in last 7 years from the date of enquiry. Vendor to furnish copies of Purchase Orders of the same.
 - Vendor to furnish Test Certificates (for dimensional, mechanical and composition, etc.) for the Purchase Orders furnished against Clause a).
 - End User Certificate: Vendor to furnish at least one Certificate from End User or Generator Manufacturer certifying that the Mica paper glass tape with accelerator supplied by the vendor has been successfully used in manufacturing of winding bars of TG stator and the said Turbo-generator has been in operation for at least 3 years. The End User Certificate should be pertaining to any one of the above Purchase Orders.
- MANUFACTURING FACILITY:** The Vendor to confirm that they have all the in-house facilities for manufacturing this item.
 - TESTING FACILITIES:** The Vendor to confirm that they have all the in-house facilities for testing this item. If the vendor intends to outsource any testing activity, particulars of the same along with details of the laboratory to be furnished to BHEL.
 - BHEL reserves the right to verify the information submitted by the vendor. In case the information is found to be false or incorrect, the offer shall be rejected. All the documents should be furnished in English language only. If the documents are not in English, then they must be accompanied by duly certified English translations of the same.