



Due Date: 11-April-2020

Ref: PPX/EM/EOI/20-21/ Rotor Slot Angle

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 reputed Vendors having capability to supply Rotor Slot Angle used in TG rotors.**

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, Page-3**)
2. Non-Disclosure Agreement (**Annexure-2**)
3. Supplier/Vendor Registration Form. (Indigenous/Foreign as applicable)
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 catalogue, reference list or any other relevant information.
10. List of equipment's manufactured in-house.
11. List of Bought Out items along with vendors list of each equipment's with experience details with respect to size rating and years of operation.

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/ Rotor Slot Angle, SUBMITTED BY (Name of company)”**

The last date for submission of Technical offers is 11-April-2020.

- The Technical Offers complete in all respect must be addressed to “Shri B K Roy, AGM (PPX/EM)” **and should reach before 1345 Hrs (IST) on 16-March-2020.** Tenders will be opened on the same day at 1400Hrs (IST) in the Tender Room.



BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249 403 (UA)

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- 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, otherwise 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.bhelhwr.co.in or www.tenders.gov.in

(Anil Kumar)
DGM (PPX-EMI)



PRE-QUALIFICATION REQUIREMENTS (TECHNICAL) FOR ROTOR SLOT ANGLE

ITEM DESCRIPTION: The Rotor Slot Angle is an L-shaped Epoxy Resin Glass Fabric Laminate reinforced with sandwiched polyamide fiber paper (Nomex) and is used as main Slot Insulation for Rotor Winding of Turbogenerators. The main features of these Slot Angles are:

- i. The Slot Angles have PTFE layers over a length of about 250mm at both the ends.
- ii. They are required to have a Temperature Index of 155°C.
- iii. Dimensions of the Slot Angle for the current case:
 - a. Dimension of bigger limb of 'L': 130mm approx.
 - b. Dimension of smaller limb of 'L': 20mm approx.
 - c. Length of Slot Angle: 6780mm approx.
 - d. Thickness: 1.4+0.05/-0.15 mm
 - e. Outer Corner Radius: R3 0.5/-0.2

1. EXPERIENCE:

The vendor should have manufactured and supplied similar Slot Angles meeting the above requirements to power plant equipment manufacturers worldwide during the last 10 years.

In support of above, the vendor should furnish the following:

- a) Vendor should have manufactured and supplied the above material against at least 5 Purchase Orders in the last 10 years. Vendor to furnish copies of Purchase Orders of the same.
- b) Vendor to furnish Test Certificates (for Dimensional, Mechanical Tests, Electrical Tests, etc.) for the Purchase Orders furnished against Clause a).
- c) End User Certificate: Vendor to furnish at least 2 Certificates pertaining to any of the above Purchase Orders from Generator Manufacturer certifying that the Slot Angles supplied by the vendor have been successfully used in manufacturing of Rotors for Turbogenerators and the same have been in operation for at least 3 years.

2. **MANUFACTURING FACILITIES:** The vendor to confirm that they have all the facilities in-house for manufacturing this item. Vendor to furnish details (make, model and year of manufacture) and technical specifications of their manufacturing facilities.
3. Vendor to provide Manufacturing, Inspection and Testing Plans giving particulars of the manufacturing processes and testing at various stages.
4. **TESTING FACILITIES:** The vendor to confirm that they have all the facilities in-house for testing this item. Vendor to provide details (including make, model and year of manufacture) of their testing facilities. The testing facilities should be duly calibrated against measurement standards traceable to national or international measurement standards. If the vendor intends to outsource any testing activity, particulars of the same along with details of the sub-vendor/laboratory to be furnished to BHEL.



Vendors to provide a sample of Slot Angle of dimensions as mentioned above in the 'Item Description' clause of length 1m along with Test Certificates for testing at BHEL works. The sample should have PTFE coating at one end on a length of 250mm.

5. Vendor to confirm detailed technical requirements given in the ordering specifications and drawings.

Notes:

1. 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.
2. The vendor must furnish all the documents in English language only. If the documents are not in English, then they must be accompanied by duly certified English translations of the same.