

**Ref. No. AIX-T/6600/EOI/19-20/2**

**Date: 26.09.2019**

**Notice for 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 turbo generators, condenser and so on.

We are looking for indigenous vendors who are capable of **machining of (Milling operation) of single Mono-block Casted NAB Marine Propellers** as below:

Sl. No.	EOI No.	Description of Job work	Opening date & Time
1.	AIX-T/6600/EOI/19-20/2	Machining of (Milling operation) of single Mono-block Casted NAB Marine Propellers (photographs attached)	19.10.2019 14:00 Hrs. (IST)

The offers received will be technically evaluated by BHEL & successful short listed parties will be considered for our future requirements. Vendors shall confirm that there is no deviation with respect to BHEL PQR. However, deviations, if any are to be listed as a separate attachment. The offers that do not meet the substantial requirements of our specifications/PQR are liable to be ignored.

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

1. Details/ Documents in support of PQR/ Technical Requirement as per Annexure-1.
2. Details of Manufacturing Facility (Vendor is required to submit detailed specification, make, model, type of machine, year of manufacturing of machine and a technical brief regarding the process/sequence of carrying out for required operation on component, to be provided by BHEL).
3. Company Profile.
4. Financial report of the company.
5. Past experience along with documentary proof.
6. Vendor to inform estimated delivery time for carrying out complete operation.

Only Technical BID along with the documents mentioned above should be sent and the envelope containing the offer shall be duly sealed and super scribed as "Technical Offer for (ITEM NAME) AGAINST Tender No. **AIX-T/6600/EOI/19-20/2**, Due Date-19.10.2019, SUBMITTED BY (Name of company)".

- This notification shall be published on [www.bhel.com](http://www.bhel.com), [www.eprocure.gov.in](http://www.eprocure.gov.in) and [www.bhelhwr.co.in](http://www.bhelhwr.co.in).
- Last date for downloading tender documents shall be 19.10.2019 till 13:30 Hrs. (IST). Tenders will be received up to 13:45 Hrs. (IST) on 19.10.2019 will be considered and opened on the same day at 14:00 Hrs. (IST) in the Tender Room BHEL HEEP, Haridwar.
- Technical Offers complete in all respect must be addressed to "The Tender Room, 4<sup>th</sup> floor, Main Adm. Building, HEEP, BHEL, Ranipur, Haridwar, Uttarakhand-249403".
- No EMD & Tender fee are to be submitted.
- The Quotation should be from the Principal / Original Manufacturer, failing which the quotation may likely to be ignored. In Case the quotation is submitted through agent, the quotation must accompany original authorization letter.
- Late offers will not be considered in any case. BHEL will not be responsible for any type of postal delay / incomplete information from vendor.
- Amendments / Corrigendum, if any, will be hosted on our web site only.
- For any further details please log on to [www.bhel.com](http://www.bhel.com) or [www.eprocure.gov.in](http://www.eprocure.gov.in) or [www.bhelhwr.co.in](http://www.bhelhwr.co.in).

Registration process for items required by BHEL is always open at <https://supplier.bhel.in>. Prospective suppliers (including MSEs & owned by SCs/STs) may visit this site and apply for registration in the respective unit.

For & ON BEHALF OF BHEL, HARDWAR

**Parvind Singh**  
**Sr. Engineer (AIX-T)**

SL.NO.	DESCRIPTION FOR REQUIREMENT	
<b>1.0</b>	<b>PRE- QUALIFYING REQUIREMENTS :</b>	
<b>1.1</b>	<p>Only those vendors, who are capable to take up machining of large size Single mono-block marine propeller of size/ requirement as below:</p> <p><b>Propeller construction:</b> Single Mono-Block Casting with integral highly skewed blades (7 nos) with its Hub.</p> <p><b>Propeller diameter</b> (Finished): 5.4 meter</p> <p><b>Hub height</b> (Finished): 1.2 meter</p> <p><b>Hub Bore diameter:</b> 500 mm</p> <p><b>Hub outer diameter:</b> 800 mm</p> <p><b>Propeller casting Weight:</b> approximately 40 Tons</p> <p><b>Material:</b> NAB (Nickel, Aluminium Bronze)- NES 747 part 2, Tensile strength: 586 MPa, Yield strength: 241 MPa, Elongation: 18%</p> <p><b>Chemical composition:</b> Ni: 4-5%, Cu: 79% (Max), Pb: 0.03%(Max), Fe: 3.5-4.5%, Al: 8.5-9.5%, Mn: 0.8-1.5%, Si: 0.1% (Max), (Fe content &lt; Ni Content)</p> <p><b>Machining scope:</b> Rough and Finish machining of highly skewed 7 no of propeller blades, Hub &amp; Cone. All boring operation on Hub shall be carried out by BHEL prior to sending it to vendor. The machining allowance all over shall be approximately 20 mm. Surface finish after machining should be Ra 3.2 or better.</p>	Vendor to confirm & submit details/ documents showing the required capability.
<b>1.2</b>	Vendor is required to submit following details in regard to the machine to be used for machining of propeller.	
	(a) Type of Machine	Vendor to inform
	(b) Maximum Diameter of job which can be accommodated on machine table	Vendor to inform
	(c) Maximum height of the job which can be accommodated on machine table	Vendor to inform
	(d) Traverses of different axes available on the machine.	Vendor to inform
	(e) Milling head/ Attachments	Vendor to inform
	(f) No of axes for simultaneous programmed machining.	Vendor to inform
	(g) Weight carrying capacity	Vendor to inform
	(h) Table type (Fixed or Rotary)	Vendor to inform
	(i) Detail of CAM software to be used for 5-axes machining.	Vendor to inform
<b>1.3</b>	If a vendor participates on behalf of their principal, the vendor should submit an authority letter from the principal company, authorizing the vendor through a properly signed documents.	Vendor to accept & confirm
<b>1.4</b>	BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false/incorrect, the offer shall not be considered.	Vendor to accept & confirm