



BHARAT HEAVY ELECTRICALS LIMITED
HEEP: HARDWAR-249403 (UK)
Fax: 01334-226462, Phone: 01334-284144
E-mail: ajayk@bhelhwr.co.in

Tender no: PPX-F&HE/EOI/SL/17-18/02

Due Date: 30.12.2017

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 reputed vendors having capability to supply of 13% MN Non-Magnetic Steel Flat Bars as per Grade X120Mn12 (Specification HW10578 Rev: 01)

Approx. Sizes-70x15 mm, 70x18 mm, 80x15 mm & 80x20 mm

Annual Requirement- 25 MT Approx.

Contact persons:

Mr. Yashpal Yadav
Designation: Sr. Engr (PPX-F & HE)
Email: yash-pal@bhelhwr.co.in
Phone No: +91 1334-284144
Mobile: +91 9012227802

Mr. Ajay Kr Gupta
Designation: AGM (PPX & AIX-F)
Email: ajayk@bhelhwr.co.in
Phone No: +91 1334-284570
Mobile: +91 9410395962

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 Specification/PQR (Annexure-I up-loaded)**
- 2. Supplier/Vendor Registration Form- Go through online supplier registration portal <https://supplier.bhel.in/>. After filling the online registration form send the copy of same along with your offer within due date.**
- 3. Details of Manufacturing Facility**
- 4. Company Profile.**
- 5. Financial report of the company.**
- 6. Past experience along with documentary proof.**



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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. PPX-F&HE/EOI/SL/17-18/02 Due Date-30.12.2017, SUBMITTED BY (Name of company)**”

- This notification shall be published on www.bhel.com, www.tenders.gov.in and www.bhelhwr.co.in
- Last date for downloading tender documents shall be 29.12.2017 till 23:45 Hrs.(IST). Tenders will be received up to 13:45 Hrs. (IST) on 30.12.2017 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 “Shri Ajay Kr Gupta, AGM (PPX & AIX- F)”.
- EMD & Tender fee are not applicable.
- 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 or www.tenders.gov.in or www.bhelhwr.co.in

(Ajay Kr Gupta)
AGM (PPX & AIX-F)



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ANNEXURE-I

Expression of Interest

BHEL Requirement: of 13% MN Non-Magnetic Steel Flat Bars

Sizes: 70x15 mm, 70x18 mm, 80x15 mm & 80x20 mm

Sl. No.	Technical Requirements	Vendor Confirmation (Yes/No)																								
1	<p>Vendor must have experience of manufacturing and supplying round/flat bars of material grade X120Mn12 (material number 1.3401) or near equivalent high carbon and high manganese steel. Details of the experience for material grade X120Mn12 or near equivalent is to be submitted in the format given below:</p> <table><tr><th>Sl. No</th><th>Name of customer</th><th>Purchase order No</th><th>Dimensions</th><th>Year of supply</th><th>Quantity</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <p>Test certificates covering chemical composition, mechanical properties, non-destructive test report and dimension reports of above purchase orders of bars of material grade X120Mn12 are to be submitted with offer.</p>	Sl. No	Name of customer	Purchase order No	Dimensions	Year of supply	Quantity																			
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2	Vendor must have in-house rolling / forging & milling, heat treatment facilities to manufacture rectangular flat bars of size 70X18, 70X15, 80X15 & 80X20 in material grade X120Mn12 as per BHEL specification HW10578. Details of above manufacturing and heat treatment facility to be submitted. Straightness and tolerance on thickness and width are critical.																									
3	Vendor to submit in house steel melting including secondary refining facility details as per the requirement of specification. In case steel melting facility not available in house, vendor to inform their source for raw material. Details of steel melting with secondary refining facility and experience for material grade X120Mn12 or equivalent of their sub supplier is to be submitted.																									
4	Vendor to submit details of the in-house testing facilities as per the requirements of Specification & the enquiry. If testing facilities are outsourced – Vendor to agree to carry out testing at Government approved/accredited testing laboratory.																									
5	Vendor to confirm that they will meet all the requirements of BHEL specification HW10578.																									

Note: All documents submitted must be in English language only.

➤ Quality Requirements-


Sl. No.	Quality Requirement	Vendor's confirmation (Y/N)
01	Testing and Certification as per ordering Standard / Specification	











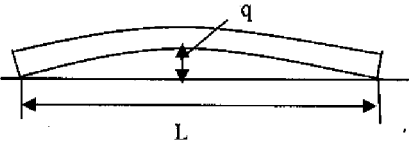
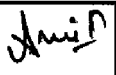

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ANNEXURE-II



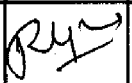
SPECIFICATION

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		HW 10578	
				पृष्ठ	का
SUPERSEDES INVENTORY NO.				Page 1 of 7	
सामग्री सूची संख्या को	Non-magnetic Steel Flat Bars. Steel Grade X120Mn12				
1. GENERAL: This specification governs the quality of hot rolled flat bars of non-magnetic steel. Steel grade X120Mn12, Material no-1.3401.		BASED ON: TLV 9381-01			
2. APPLICATION: For the manufacturing of Press Fingers and terminal box components of large Turbo-generators.					
3. CONDITION OF DELIVERY: Hot rolled bars, quenched and straightened.					
4. COMPLIANCE WITH NATIONAL STANDARDS: There is no Indian standards covering this material.					
5. DIMENSIONS & TOLERANCES: 5.1 SIZES: Material shall be supplied to the dimensions specified in the order.					
5.2 TOLERANCES: The tolerances would be generally as given below unless agreed otherwise between BHEL and the supplier.					
5.2.1 Length: Tolerances on lengths for deliveries of hot rolled flat steel are as follows:					
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत के दो इस्तेमालकर्ता की सम्पत्ति है। इसका प्रयोग एवं आवाक रूप से किसी भी प्रकार में बिना लिखित अनुमति के किया जाना नहीं चाहिए।				
दिनांक एवं हस्ताक्षर SIGN & DATE 15/12/08	सामग्री सूची संख्या INVENTORY NO. P-2287	अनुवादक TRANSLATED BY QAX B.B. TRIPATHY MTE J.P. MEENA	कार्यकर्ता WORKED BY जांचकर्ता CHECKED BY पर्यवेक्षणकर्ता SUPERVISED BY	नाम NAME Amit Mittal Rakesh Kr. RAKESH KR.	दिनांक एवं हस्ताक्षर SIGNATURE & DATE 15/12/08 15/12/08 15/12/08
सहायक विभाग GREED DEPT		नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	स्वीकृति APPROVED : PREPARED : EME ISSUED : TSX	
REV.NO. 01 DI. 15-7-08		स्वीकृति APPROVED : PREPARED : EME ISSUED : TSX		दिनांक : DATE: 15-12-80	

दिनांक एवं हस्ताक्षर SIGN & DATE:		उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION	HW 10578 पृष्ठ का Page 2 of 7																																																																																																																							
सामग्री सूची संख्या को INVENTORY NO.	5.2.2: Width and Thickness. The width and thickness in which flat steel is generally to be supplied with the permissible variation on these dimensions are contained in the tables given below:																																																																																																																									
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		5.2.3: <u>Straightness:-</u> Flat steel according to this specification shall be straight to within the permissible variations according to following table. Straightness requirements more stringent than the given below shall be agreed to at the time of ordering.														
		<table border="1"> <tr> <th colspan="2">Cross sectional area mm²</th> <th rowspan="2">permissible variation 'q' from straightness.</th> </tr> <tr> <th>over</th> <th>to</th> </tr> <tr> <td>-</td> <td>1000</td> <td>0.004 x L</td> </tr> <tr> <td>1000</td> <td>-</td> <td>0.0025 x L</td> </tr> </table>				Cross sectional area mm ²		permissible variation 'q' from straightness.	over	to	-	1000	0.004 x L	1000	-	0.0025 x L
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		6. MANUFACTURE Steel shall be manufactured by the basic open hearth or basic electric furnace and subsequently subjected to electro-slag refining or vacuum treated.														
		7.FREEDOM FROM DEFECTS : The material shall be free from laminations, traces of shrinkage, porosity and other harmful defects. The surface of bars shall be free from scabs, laps, cracks, hairline cracks and inclusions.														
		8. FINISH: The surface of material shall be smooth. Note:- Dents, roll marks or scratches are permissible if their depth does not exceed half the tolerances specified in clause 5.														
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत के सभी इलेक्ट्रिकल को सम्पत्ति है इसका प्रसारण एवं आयातक रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	दिनांक SIGN & 19/11/08															
सामग्री सूची संख्या INVENTORY NO. P-2287	REV.NO. 01	निर्माणकर्ता WORKED BY Amit	19.6.08													
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SUPERSEDES INVENTORY NO.	9. CHEMICAL COMPOSITION: The analysis of the material shall be as follows :																										
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10. HOT WORKING & HEAT TREATMENT:																											
10.1: During hot working (temperature 1100°C upto 750°C and cooling in air for guideline) the material is to be carefully heated to the stipulated temperature in view of the low heat conductivity of the material. High temperature should not be maintained for long.																											
10.2: for quenching (temperature 1000 to 1050°C for guideline) the material as per their length and cross-section is to be heated carefully and thoroughly to the quenching temperature and then quenched in air or water depending upon their thickness.																											
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				सामग्री सूची संख्या INVENTORY NO.	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	स्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत भारती इलेक्ट्रिकल्स लि. की संपत्ति है इसका प्रसार एवं प्रकाशन बिना लिखित अनुमति के किये जाने पर कानून के तहत कार्रवाई की जायेगी।	हस्ताक्षर एवं दिनांक SIGN & DATE 	सामग्री सूची संख्या INVENTORY NO. P-2287	REV.NO. 01	
जांचकर्ता CHECKED BY	Rakesh Kr.		19.6.08							

11 . MECHANICAL PROPERTIES :

The Mechanical properties shall be determined in the delivery condition. The specimens are to be taken per heat and heat treatment batch in longitudinal direction (upto 10 mm round specimen or flat tensile specimen). The following properties shall be achieved at room temperature:

11.1 Tensile : When tested in accordance with IS:1608 or equivalent standard the material shall meet the tensile requirements specified below:

Tensile strength : 800 to 1100 N/mm².

0.2% proof stress : ≥ 350 N/ mm²(min)

Elongation 5.65√ so: $\geq 40\%$

Impact value: ≥ 150 J

11.2 Impact test :- Test specimen when tested in accordance with IS:1757 or equivalent standard shall show a minimum impact value of 150 J(Average of 3 V-notch tests).




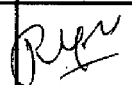
12. TESTING OF



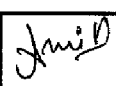
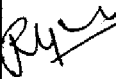
SIZE ACCURACY :

The number of bars which shall be inspected for accuracy to size by measurements made at the manufacturer's works prior to dispatch shall be agreed to at the time of ordering.

13.1: The thickness and width according to clause 5.2.2 shall be measured at a distance of not less than 150 mm from the end of the bars when delivery is made in manufacturing lengths and at any point desired when delivery is made in fixed lengths, and exact lengths.

13.2: When testing straightness according to clause 5.2.3 the dimension 'q' shall be measured over the full length of the bars .

निर्देश एवं हस्ताक्षर SIGN & DATE				उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		HW10578 पृष्ठ का Page 6 of 7	
सामग्री सूची संख्या को SUPERSEDES INVENTORY NO अधिकारित करता है		<p>13. WELDABILITY: The material is weldable by arc and resistance welding and in some cases also by gas welding. Since the weldability is not that good the material is to be welded under consideration of special pre-ventive measures. Care should be taken that in weld seam and hot HAZ there may be a decrease in the strength/mechanical properties.</p> <p>14. FREE CUTTING MACHINING : Machining of this material is difficult in view of its higher stiffening property, so that low cutting speeds and corresponding cutting angles are earmarked. Special tool materials are to be chosen for their machining.</p> <p>15. ULTRASONIC TEST: Prematerials for bars shall be ultrasonically tested to ensure freedom from defects such as cracks , piping and line segregation . The method followed shall be reported in test certificate.</p> <p>16. TEST CERTIFICATES: Three copies of test certificate shall be supplied unless otherwise specified in the order. The test certificates shall bear the following information:- BHEL,Reference: plant purchasing specification no.HW-10578 Our order no. Supplier's Reference. Supplier's name Identification No. Cast no. Process of manufacture. Complete heat treatment details. Size and quantity. Test results . Chemical analysis. Mechanical properties. Ultrasonic test. Size accuracy test.</p>					
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company		स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की संपत्ति है इसका प्रयोग एवं प्रसारण के बिना भारत भारती इलेक्ट्रिकल्स की लिमिटेड की लिखित अनुमति के बिना नहीं किया जा सकता है					
हस्ताक्षर एवं दिनांक SIGN & 		दिनांक एवं दिनांक DATE & 					
सामग्री सूची संख्या INVENTORY NO P-2287		REV.NO. 01		निर्माणकर्ता WORKED BY Amit		19.6.08	
जांचकर्ता CHECKED BY 		जांचकर्ता Rakesh Kr.		19.6.08			

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद क्रय विनिर्देश		HW 10578	
		PRODUCT PURCHASE SPECIFICATION		पृष्ठ का Page 7 of 7	
SUPERSEDES INVENTORY NO. संपर्कित सूची संख्या को अधिस्थानित करता है	17. PACKING & MARKING: <p>All bars shall be stamped with the heat number and HW10578 the material shall be suitably packed to prevent corrosion and damage during transit. A metal label shall be securely attached to each bundle and shall bear the following information: HW 10578 Our order no..... Consignment or identification no..... Cast no..... Size..... Weight..... Supplier's name..</p>				
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	18. CLEARANCE FOR DELIVERY: <p>20.1: Cross results of tests are to be sent to BHEL before the clearance for delivery. 20.2: BHEL evaluate these gross results under consideration of working stresses prescribed for bars and judge thereafter the admissibility of deviation, if any, from the properties required from this specification. 20.3: The clearance does not release the suppliers from the responsibility of hidden defects which are detected later on.</p>				
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं अवलोकन इस से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हो निकायक हो न किया	19. CROSS REFERRED STANDARDS <p>1. IS:1608 2. IS:1757</p>				
दिनांक एवं SIGN & DATE 	REV.NO. 01				
संपर्कित सूची संख्या INVENTORY NO. P-22287	निर्माणकर्ता WORKED BY Amit				19.6.08
		जांचकर्ता CHECKED BY Rakesh Kr.			19.6.08