



BHARAT HEAVY ELECTRICALS LIMITED
HEEP HARIDWAR INDIA-PIN 249403
FAX NO: 0091 1334 226462/223948
PHONE NO: 0091 1334 284144

Tender No.: F/F219/6/0533/K1

Due Date: 16.06.2016

Sub: BHEL-HEEP/OPEN-TENDER (Steel Bars Alloy 783)

The Heavy Electricals Equipment Plant (HEEP) located in Haridwar, India is one of the major manufacturing plants of Bharat Heavy Electricals Ltd. The core business of HEEP includes design and manufacture of large steam and gas turbines, turbo generators and so on.

Sealed tenders with the Tender No. and opening date clearly super scribed on the cover are invited from the manufacturers (registered as well as unregistered) for the supply of the following items:-

Tender No.	Item Description	Mat. Code	Size	Qty. (Kg)
F/F219/6/0533K/1	Steel Bars Alloy 783 Specification- HW12785 Rev: 00	HW1270285041	Dia- 95 mm, L= 3000 mm	3500
		HW1270285017	Dia- 80 mm, L= 1500 mm	2100

The tender documents & Specification of item can be down loaded from our web site www.bhel.com or www.bhelhwr.co.in or www.tenders.gov.in submitted with requisite EMD. **Only those vendors who fulfill the Minimum Qualifying Requirements (as per Annexure-II) will be considered for further technical evaluation.**

This notification shall be published in national newspaper. **The last date for downloading tender documents shall be 15.06.2016 & opening of tender shall be 16.06.2016.** Tenders will be received up to 01.45 P.M. on **16.06.2016** and opened on the same day at 2.00 P.M. in the Tender Room. **Please note that tender received after due date & time (01.45 PM on 16.06.2016) will not be opened.** BHEL will not be responsible for any type of postal / courier delay.

Intending vendors must remit requisite EMD Rs. 2,00,000 (Rupees Two Lac Only) for indigenous vendors (or equivalent amount in foreign currency for foreign vendors) in the form of pay order or bank draft while submitting the tender documents as detailed in "Instruction to Bidders", after downloading from this web site.

EMD is waived off for-

- Central/ State – PSUs/ Government departments
- As per government guidelines, MSE suppliers are exempted for submission of EMD (Valid Documentary proof against MSE must be submitted along with offer to avail the benefits).
- The vendors registered for item Steel Bars Alloy 783 as per Spec. HW12785 Rev: 00 with BHEL, HEEP, Haridwar are also exempted from EMD.

The total quantity may undergo change at the time of ordering.

The details of each item with required delivery are given in **Annexure-III (Details of Items)**

Please submit your Techno-Commercial offer only for the above requirement subject to our terms and conditions.

IN ADDITION TO VENDORS MENTIONED ABOVE, OFFERS SHALL ONLY BE CONSIDERED OF THOSE VENDORS WHO WILL SUBMIT EMD. PLEASE SUBMIT DRAFTS FOR EMD DRAWN IN FAVOUR OF BHARAT HEAVY ELECTRICALS LTD. HEEP, HARIDWAR IN ANOTHER ENVELOPE SUPERSCRIBED WITH BOLD LETTERS "EMD". The tender will be opened at 2 PM on the due date in the presence of authorized representative of the bidders who may like to be present. The authorized representative should bring authority letter from their parent company (Manufacturer) for attending the bid opening.

KINDLY READ "INSTRUCTIONS TO BIDDERS." QUOTATION NOT IN ACCORDANCE WITH THE INSTRUCTIONS ARE LIABLE TO BE DISQUALIFIED AND IGNORED.

INSTRUCTIONS TO BIDDERS FOR OPEN TENDER

DEFINITION

Registered Vendors - Are those who are registered with BHEL, Haridwar for procurement of Steel Bars Alloy 783.

Un-registered Vendors - Are those who are not registered with BHEL, Haridwar for procurement of Steel Bars Alloy 783.

Vendors must fill up Annexure– II in confirmation to above Minimum Qualifying Requirements and quality requirement.

ESSENTIAL INSTRUCTIONS

1. **Only those bids will be opened which have been submitted with requisite EMD.**
2. **All un-registered vendors shall be approved by BHEL, if found suitable, on the basis of data furnished by them in Supplier Registration Form (SRF) Foreign Vendors or Indigenous Vendors. Vendor (s) shall not be considered for ordering if not approved by BHEL.**
3. **BHEL team may visit the vendor (s) works for verification of capability and capacity claimed in tender documents/offer (s).**
4. **The tender document must comprise of four envelopes:**
 - i) **Envelope I : EMD or Valid documentary proof for exemption of EMD.**
 - ii) **Envelope II : Pre- Qualifying Requirement & Supplier Registration Form.**
 - iii) **Envelope III : Techno -Commercial Bid.**
 - iv) **Envelope IV : Price Bid.**
5. The tenders shall be submitted in three parts
 - i. Part I - Techno -Commercial Bid,
 - ii. Part II - price Bid &
 - iii. Part III - Vendor Registration Formas described below on or before the due date. Vendor Registration Form shall be submitted by unregistered vendors only.
6. **The Quotation should be from the Principal / Original Manufacturer, failing which the quotation is likely to be ignored. In Case the quotation is submitted through agent, the quotation must accompany original authorization letter.**
7. Documents submitted with the offer/bid by the bidder shall be signed and stamped in each page by authorized representative of the bidder. In case the bid is submitted by FAX, the bidder shall simultaneously ensure submission of signed and stamped (in each page) original bid to BHEL. If the documents are received in soft form, the same should be transmitted through vendor's authorized e-mail followed by the signed and stamped copy of the same documents. Documents not signed and stamped in each page by the authorized signatory of the bidder, shall not be accepted and considered for evaluation of the bid.
8. Any corrections / amendments shall be properly & fully authenticated with signature. No overwriting is acceptable.
9. In case of ordering, manufacturing plan should be submitted for BHEL approval.
10. Part-I containing techno-Commercial bid and part-III containing Vendor Registration Form will be opened on the date and time specified in the tender notice in the presence of those tenders who wish to attend.
11. Part-II (Price Bids) along with supplementary price bids, if necessary, will be opened at a later date of only those bidders whose techno-commercial bid has been found acceptable.
12. Suitability of delivery shall be the important criteria for evaluation of techno commercial bid and the bids falling within the delivery period and meeting the last delivery requirement.
13. Currency exchange rate will be applicable on the date of opening of Part-I (Techno-commercial Bid) for evaluation purpose.
14. **Evaluation of Bid: - The bid shall be evaluated**
 - a. **Cost to BHEL basis. (Basic Cost + Insurance + Inspection + Transportation + Duty)**
 - b. **The loading, if any, on account of LD penalty, payment terms or any other cost determined at later stage, which shall be communicated to the vendor.**
 - c. **Evaluation of comparative statement will be done on item wise basis after combining DEEC & PI quantity and order will be placed accordingly.**
15. Tenders when finalized shall be in the name of the bidder only and change of name during tender evaluation (without certificate from registrar of company) and after submission of the tender is liable to make the offer ineligible for participation.
16. All test certificates / Guarantee certificates to be submitted in TRIPLICATE along with dispatch documents.
17. BHEL reserves the right to open the price bid (part-II) along with the opening of techno-commercial offer at its option and in that case vendor will be informed accordingly.
18. Total weight--/Gross/Net in Kg & also package size essentially should be indicated if not exact then approximate.
19. BHEL will evaluate the technical bids against essential criteria/requirements. BHEL may seek clarifications, if required, from the qualified bidders only. These clarifications will be communicated to the eligible vendors. **The offers of those bidders, who are unable to respond in specified time frame, are likely to be ignored.**

Note: Please visit our site www.bhelhwr.co.in for General Instructions and Standard Terms & Conditions (GISTC) for Tender Enquiries for Indian & Foreign Vendor. All the bidders / vendors must ensure compliance of these GISTC. GISTC can also be referred by login to B2B Portal for BHEL approved Vendors.

IN CASE YOU ARE NOT MAKING AN OFFER AGAINST THIS ENQUIRY, THEN PLEASE ARRANGE TO SEND A LETTER OF REGRET.

DETAILS OF COMPOSITION OF PART-I (TECHNO-COMMERCIAL BID), PART-II (PRICE BID) & PART-III (VENDOR REGISTRATION FORM)

PART-I (TECHNO-COMMERCIAL BID) shall comprise of following documents:

- a. Confirmation to Minimum Qualification Requirement and Quality Requirement as per Annexure-II.
- b. Complete technical offer as per specification, drawings, technical requirement along with un-priced bid.
- c. Delivery schedule.
- d. Inspection charges by LRS/TUV/BV separately for foreign vendors.
- e. Validity of offer to be indicated.
- f. **Annexure- I** - Compliance sheet for technical/commercial terms and conditions for two part tender.
- g. **Deviation with reference to specification/drawing, if any, should be clearly indicated on a separate sheet.**
- h. Details of activity outsourced.
- i. Copy of Quality Plan (Quality Plan Format placed at Annexure- V).

PART –II (Price Bid)

- a. Price bid with prices to be submitted as part-II of the tender.
- b. Prices should remain firm till the execution of the order.
- c. **In case of foreign vendors, Please quote your rates with both the options (a) FOB dispatching port & (b) C&F Landing Port. In case of FOB, Loading port must be mentioned.**
- d. **In case of Indigenous vendor, prices may be quoted on FOR- Destination- Store-HEEP-BHEL basis.** Insurance – Marine in case of foreign vendor & inland in case of Indigenous vendor shall be taken care by BHEL.
- e. LRS/TUV/BV inspection charges to be quoted separately in case of foreign vendors.
- f. **Prices are to be written in both Figures & Words. In case of any difference between the two, the figure written in words shall be considered for evaluation. No over writing in this is acceptable.**
- g. LD Penalty shall be applicable at the rate of ½ % (half percent) per week or part thereof subject to a maximum of 10% of the value of unexecuted portion of order. In case of any variation in LD penalty, your prices shall be loaded to the extent LD penalty not accepted by you.

Part-III - Vendor Registration Form (SRF)

(SRF-Foreign Suppliers or SRF-Indian Suppliers)

- a. **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.
- b. The SRF (as applicable) duly filled up will be assessed for manufacturing capability quality systems being followed, organizational soundness and financial worthiness. The same shall be submitted with Part-I (Techno-Commercial Bid) by un-registered vendor only with BHEL, HEEP, Haridwar.

MARKING OF ENVELOPE:

- Each envelope is to be super scribed as “TENDER FOR (ITEM NAME) AGAINST TENDER NO. **F/F219/6/0533/K1** DUE ON **16.06.2016**.
- Drafts for EMD to be kept in one envelop – Envelop –A. On the Top of the envelope, please write Draft No., Issuing Bank Details & Amount. Those vendors who are quoting for more than one tender must submit a statement in the envelopes of all those tenders giving details of all the tenders being quoted. However, the draft of each tender should be kept in individual tender envelop.
- Techno-Commercial - Part-I to be kept in another envelop – Envelop-B & to be marked as Techno-Commercial Offer.
- Vendor Registration Form - Part –III to be kept in another envelop – Envelop – C & to be marked as Vendor Registration Form.
- Price Bid – Part-II to be kept in another envelop – Envelop-D & to be marked as Price Bid.
- Envelop-A, Envelop-B, Envelop-C & Envelop-D are to be kept in one envelop super scribed as above

Envelopes not marked as above are liable to be ignored and will not be opened.

ANNEXURE-I

COMPLIANCE SHEET FOR TECHNICAL/COMMERCIAL TERMS AND CONDITIONS FOR TWO PART TENDER

PLEASE FILL THIS ANNEXURE & ATTACH WITH YOUR TECHNO-COMMERCIAL BID.

Offer must be sent in two separate sealed envelopes containing techno-commercial offer in one envelope marked "TECHNO-COMMERCIAL BID" and prices in second envelope marked "PRICE-BID". Both the envelopes must be contained in the main envelope. Tender name and due date to be marked on all the envelopes.

You are requested to kindly confirm /clarify the following:-

S. No.	Description	Vendor's Confirmation
1	Vendor to confirm that they meet each & every clause of our specifications/Drawings.	YES / NO
2	If "No" to serial number 1, vendor to specify each deviated clause & submit in a separate sheet.	
3	Vendor to list out on a separate sheet any activity which is outsourced. Please furnish details of out sourced vendor.	
4	Validity: confirm that validity of the offer shall be 90 days from the date of tender opening	YES / NO
5	Confirm that un-priced part of price bid is enclosed with technical commercial offer	YES / NO
6	Confirm delivery quoted as per enquiry	YES / NO
7	For Foreign Vendors- Confirm that you have quoted your rates with both the options (a) FOB dispatching port & (b) C&F Landing Port with third party inspection charges separately. For Indigenous Vendors- Confirm that you have quoted your rates on FOR Destination basis.	YES / NO
8	Confirm that Loading Port has been mentioned.	YES / NO
9	Confirm that prices shall be firm and fixed throughout delivery period.	YES / NO
10	For Foreign Vendors- Confirm that payment term shall be "On collection basis through SBI/PNB Ranipur, Hardwar" (CAD). For Indigenous Vendors- Confirm that payment term shall be "100% payment after receipt and acceptance of material.	YES / NO
11	For Foreign Vendors- Third party (LRS/TUV/BV) inspection charges need to be mentioned separately. In case same is not mentioned separately, it will be presumed to be inclusive in your offer and no further confirmation will be taken after opening of techno-commercial bid part-1.	YES/NO
12	LD Penalty shall be applicable at the rate of ½ % (half percent) per week or part thereof subject to a maximum of 10% of the value of unexecuted portion of order.	YES / NO
13	Confirm that all test certificates to be submitted as per BHEL specification. in TRIPLICATE along with dispatch documents	YES / NO
14	Right of acceptance – BHEL reserves the right to reject any or all quotations without assigning any reasons thereof. BHEL also reserves the right to increase or decrease the tendered quantities. Vendors should be prepared to accept order for reduced quantities without any extra charges. Vendor should also be prepared for giving discount in case of increase in quantity.	YES / NO
15	Confirm specifically that material shall be supplied as per tender documents.	YES / NO
16	Ink signed order acceptance shall be furnished within 15 days of order placement.	YES / NO
17	Confirm if there is Indian agency commission.	YES / NO
18	Confirm acceptance of Risk Purchase clause.	YES / NO
19	Confirm to send original ink signed copy of offer, if offer has been sent through email or FAX or photocopy has been submitted.	YES / NO

ANNEXURE-II

Pre / Minimum Qualification Requirement

➤ **Technical Requirements-**

Sl. No.	Technical Requirement	Vendor's confirmation (Y/N)												
01	Vendor must have experience of manufacturing and supplying bars of material grade Alloy 783. Vendor must have successfully executed at least one purchase order in grade Alloy 783 on the tender opening date.													
02	<p>(a) In support of above details of the experience to be submitted with offer for past three supplies in the format given below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Sl. No.</th> <th style="text-align: center;">Name of customer</th> <th style="text-align: center;">Purchase order No</th> <th style="text-align: center;">Dia</th> <th style="text-align: center;">Year of supply</th> <th style="text-align: center;">Quantity</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>(b) Vendor to submit documentary evidence in support of experience, like test certificates, un-priced PO copies for the above supply.</p>	Sl. No.	Name of customer	Purchase order No	Dia	Year of supply	Quantity							
Sl. No.	Name of customer	Purchase order No	Dia	Year of supply	Quantity									
03	Vendor must have in-house facilities like melting, secondary refining (VIM + ESR or VIM + VAR), rolling / forging / extrusion, heat treatment etc. to manufacture round bars as per BHEL specification HW12785 and enquiry size. Details of manufacturing facilities like melting, secondary refining, rolling / forging, heat treatment etc. are to be provided.													
04	Vendor to furnish in house testing facilities to carry out testing as per the requirements of BHEL specification HW12785. Outsourcing of special tests like Creep Rupture, Linear expansion in a Government approved laboratory is also acceptable. Vendor to submit details of outsourced tests and details of Government approved lab with offer.													
05	Vendor to confirm that they will manufacture and supply enquiry items meeting all requirements specified in BHEL specification HW12785													
<p><i>Note- This is applicable for both registered as well as un-registered vendors.</i></p>														

➤ **Quality Requirements-**

Sl. No.	Quality Requirement	Vendor's confirmation (Y/N)
01	Vendor to furnish quality plan in the enclosed format along with offer for BHEL approval.	
02	Inspection by third party inspection agency (LRS/TUV/BV) for import & BHEL nominated agency 'TUV' for indigenous as per BHEL approved quality plan.	
03	Scope of inspection agency shall be- - Witnessing of i) Hardness in solution heat treated condition (10% per heat per HT batch or minimum 10 bars whichever is maximum). ii) Mechanical testing at room temperature on 100% lab heat treated samples. iii) Tensile test at 650°C for 100% of lab heat treated samples. iv) Creep rupture test at 650°C. v) Check for coefficient of linear expansion. vi) UT- 10%. vii) Material identification / verification check- 10%. viii) Visual & dimensional check- 10%. - Review of remaining TCs as per ordering specification / documents.	
Note- This is applicable for both registered as well as un-registered vendors.		

Signature with stamp

Name:

Name of Firm:

Designation:

Date:

ANNEXURE-III

(Item Details and Delivery Schedule)

Tender No.	Item Description	Mat. Code	Size	Qty. (Kg)	Delivery
F/F219/6/0533/K1	Steel Bars Alloy 783 Specification- HW12785 Rev: 00	HW1270285041	Dia- 95 mm, L= 3000 mm	3500	30/12/2016
		HW1270285017	Dia- 80 mm, L= 1500 mm	2100	30/12/2016


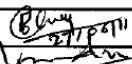
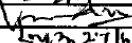
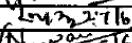
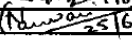
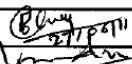
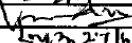
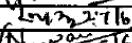
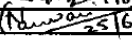
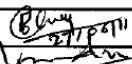
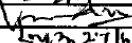
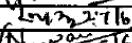
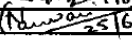
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

1. Quantity tolerance $\pm 5\%$ acceptable.
2. Material Code HW1270285041, Dia- 95 mm required in fixed length i.e. L= 3000 mm.
3. Material Code HW1270285017, Dia- 80 mm required in fixed length i.e. L= 1500 mm
4. Length tolerance of +10/-0 mm per piece is acceptable.
5. Comparative Statement will be evaluated on item wise basis after combining DEEC and PI Quantity.
6. After placement of order vendor should submit their invoices against goods and services immediately after supply of goods & services but not later than 30 days from the invoice date. In case of any delay, consequential losses like loss of input credit and non-availability of concessional forms etc, shall be to the vendor account.





NOTE: THE QUANTITY INDICATED ABOVE CAN BE INCREASED/ DECREASED.



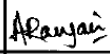
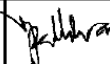
ANNEXURE-IV

(Specification)

SUPERSEDES INVENTORY NO TLV 9540(01.07/04		संस्थान क्रय विनिर्देश (हीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARDWAR)	HW 12785 पृष्ठ का Page 1 Of 4																																				
STEEL BARS, ALLOY 783																																							
1.0 GENERAL: This specification governs the quality of steel Bars of Alloy 783, material no. UNS R30783. General requirements as per AMS 5940.																																							
2.0 APPLICATION: For steam turbine bolts.																																							
3.0 CONDITION OF DELIVERY: Rolled / forged and Solutionized.																																							
4.0 DIMENSION AND TOLERANCES : Bars shall be supplied to the dimension specified on the purchase order.																																							
5.0 MANUFACTURE: The alloy shall be multiple vacuum melted using consumable practices in the re-melt cycle e.g. VIM + VAR or VIM +ESR. The bars can either be rolled or forged provided that the requested mechanical properties are met.																																							
6.0 HEAT TREATMENT: Bars shall be delivered in solutionized condition: Solution treatment: 1105 – 1120 °C /air *) *) The furnace cooling rate must be equivalent to an air cool.																																							
7.0 CHEMICAL COMPOSITION: Heat analysis in weight % :																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Al</th> <th>B</th> <th>Cu</th> </tr> <tr> <td>≤0.03</td> <td>≤ 0.50</td> <td>≤ 0.50</td> <td>≤ 0.015</td> <td>≤ 0.005</td> <td>5.00 - 6.00</td> <td>0.003 - 0.012</td> <td>≤ 0.50</td> </tr> </table>				C	Si	Mn	P	S	Al	B	Cu	≤0.03	≤ 0.50	≤ 0.50	≤ 0.015	≤ 0.005	5.00 - 6.00	0.003 - 0.012	≤ 0.50																				
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Cr</th> <th>Ni</th> <th>Ti</th> <th>Fe</th> <th>Nb</th> <th>Co</th> </tr> <tr> <td>2.50 - 3.50</td> <td>26.0 – 30.0</td> <td>0.10 – 0.40</td> <td>24.0 – 27.0</td> <td>2.50 – 3.50</td> <td>Rest</td> </tr> </table>				Cr	Ni	Ti	Fe	Nb	Co	2.50 - 3.50	26.0 – 30.0	0.10 – 0.40	24.0 – 27.0	2.50 – 3.50	Rest																								
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2.50 - 3.50	26.0 – 30.0	0.10 – 0.40	24.0 – 27.0	2.50 – 3.50	Rest																																		
8.0 METALLOGRAPHY: The ASTM grain size per melt and heat treatment batch in solution annealed condition shall be determined in accordance with ASTM E 112.																																							
<ul style="list-style-type: none"> Bars with D ≤ 85mm shall exhibit a homogeneous microstructure along the whole bar section with a grain size 5 or finer. Bars with D > 85mm shall exhibit a homogeneous microstructure along the whole bar section with an average grain size 4 or finer. 																																							
स्वतंत्रता एवं गोपनीय इस दस्तावेज़ में दी गई सूचना भारत की सुरक्षा के लिए अत्यंत महत्वपूर्ण है। इस दस्तावेज़ को बिना अनुमति के किसी भी व्यक्ति को देना या प्रकट करना कानून के अंतर्गत दंडनीय है।	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">TSX</td> <td style="width: 20%;">B. CHAUDHARY</td> <td style="width: 20%; text-align: center;"></td> <td style="width: 15%;"></td> <td style="width: 15%;">नाम</td> <td style="width: 15%;">विभागीय एवं स्थावर</td> </tr> <tr> <td>MTC & PSC</td> <td>V.K. CHAUHAN</td> <td style="text-align: center;"></td> <td></td> <td>NAME</td> <td>SIGNATURE & DATE</td> </tr> <tr> <td>STE</td> <td>REAR ARUSHI</td> <td style="text-align: center;"></td> <td>अनुवादक</td> <td>TRANSLATED BY</td> <td></td> </tr> <tr> <td>QAX</td> <td>N.K. MANWANI</td> <td style="text-align: center;"></td> <td>निरीक्षणकर्ता</td> <td>WORKED BY</td> <td>Pankaj Agarwal</td> </tr> <tr> <td></td> <td></td> <td></td> <td>जांचकर्ता</td> <td>CHECKED BY</td> <td>Ashish Ranjan</td> </tr> <tr> <td></td> <td></td> <td></td> <td>पर्यवेक्षणकर्ता</td> <td>SUPERVISED BY</td> <td>Gopal Krishnan</td> </tr> </table>			TSX	B. CHAUDHARY			नाम	विभागीय एवं स्थावर	MTC & PSC	V.K. CHAUHAN			NAME	SIGNATURE & DATE	STE	REAR ARUSHI		अनुवादक	TRANSLATED BY		QAX	N.K. MANWANI		निरीक्षणकर्ता	WORKED BY	Pankaj Agarwal				जांचकर्ता	CHECKED BY	Ashish Ranjan				पर्यवेक्षणकर्ता	SUPERVISED BY	Gopal Krishnan
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सामग्री संख्या INVENTORY NO. P-4099	संस्थान मानक समिति APPROVED : PLANT STANDARDS COMMITTEE			Gr.No 2.60																																			
REV. NO. 00 Dt. 14.06.11	निर्माण : PREPARED : MTE		जारी : मानक विभाग ISSUED : STANDARDS DIVISION																																				
			दिनांक : DATE : 14.06.2011																																				

पत्रिका का संख्या SIGN & DATE		संस्थान क्रय विनिर्देश (डीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARDWAR)	HW 12785 पृष्ठ का Page 2 of 4											
सुपरस्टोर्स INVENTORY NO. सामग्री सूची संख्या की अधिकारिता संख्या है	9.0 MECHANICAL PROPERTIES: 9.1 As solution heat treated: A hardness test shall be performed to verify the uniformity of the strength within a delivery lot (per melt and heat treatment batch). The test amount shall be 10% of the bars with a minimum of 10 bars. When the lot consists of less than 10 bars all bars shall be tested. A maximum hardness in solid solution condition of HRC 29 shall be achieved. 9.2 Testing of Representative Mechanical Properties in Precipitation Heat Treated Condition The mechanical properties are to be determined for each heat treatment batch. The test pieces are to be heat treated according to the following: 1. 843°C ± 8°C/ 2-4 h/ air *) down to RT 2. 718°C ± 8°C/ 8 h/ furnace cool with 55°C/h down to 621°C/621°C ± 8°C/ 8h/ air *) *) The furnace cooling rate must be equivalent to an air cool 9.2.1 Mechanical properties at Room Temperature The following properties shall be reached at room temperature:													
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be sold, leased, or indirectly, in any way, detrimental to the interest of the company.	<table border="1" data-bbox="488 751 1333 894"> <thead> <tr> <th>0.2% Proof strength (N/mm²)</th> <th>Tensile strength (N/mm²)</th> <th>Elongation (l=4d) (%)</th> <th>Reduction of area (%)</th> <th>Hardness HRC</th> </tr> </thead> <tbody> <tr> <td>≥ 724</td> <td>≥ 1103</td> <td>≥ 12</td> <td>≥ 20</td> <td>≥ 27</td> </tr> </tbody> </table>				0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (l=4d) (%)	Reduction of area (%)	Hardness HRC	≥ 724	≥ 1103	≥ 12	≥ 20	≥ 27
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स्वत्वधिकार एवं गोपनीय इस दस्तावेज़ में दी गई जानकारी भारत भारती इलेक्ट्रिकल्स की संपत्ति है इसका प्रकाश एवं प्रसारण के बिना नहीं होना चाहिए।	9.2.2 Tensile test at 650°C The following properties shall be reached at 650°C:													
संख्या का दिनांक SIGN & DATE 23/6/11	<table border="1" data-bbox="570 951 1252 1094"> <thead> <tr> <th>0.2% Proof strength (N/mm²)</th> <th>Tensile strength (N/mm²)</th> <th>Elongation (l=4d) (%)</th> <th>Reduction of area (%)</th> </tr> </thead> <tbody> <tr> <td>≥ 621</td> <td>≥ 896</td> <td>≥ 15</td> <td>≥ 25</td> </tr> </tbody> </table>				0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (l=4d) (%)	Reduction of area (%)	≥ 621	≥ 896	≥ 15	≥ 25		
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सामग्री सूची संख्या INVENTORY NO P-4099	REV.NO. 00		निर्माणकर्ता WORKED BY A. Ranjan		23.06.11									
			जांचकर्ता CHECKED BY Gopal Krishnan		22.6.11									

दिनांक व हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप - हार्डवयर) PLANT PURCHASE SPECIFICATION (HEEP - HARDWAR)		HW 12785 पृष्ठ का Page 3 of 4	
सुपरसेड्स INVENTORY NO कार्यालयी संज्ञा को अपेक्षाकृत करण है	<p>10. OUTER AND INNER QUALITY / NDE:</p> <p>10.1 Scope of Inspection:</p> <p>Following NDE shall be performed in delivery condition (as solution heat treated):</p> <ul style="list-style-type: none"> - Verification inspection of all bars - Complete ultrasonic inspection (UT) of all bars according to EN 10308 type 1a-1c (table 1) <p>10.2 Criteria for registration and decision:</p> <p>Regarding UT inspection quality class 3 according to EN 10308 (table 3) shall be applied.</p> <p>The decision limit for loss of back wall echo is 3 dB for all bar dimensions. Any linear or surface like in-homogeneity larger than 10mm in any direction is not acceptable.</p> <p>11.0 MARKING:</p> <p>The manufacturer has to mark the products in such a way that it is possible to identify the heat, heat treatment batch, steel quality and origin of the delivery. With that purpose following marking shall be provided:</p> <ul style="list-style-type: none"> - ID-no. - Name of the manufacturer, trademark or logo - Material designation - Manufacturer identification number. This number shall allow for the identification of the heat treatment batch. The marking of the materials shall be such that heat no., steel quality & manufacturer name / identifications are legible. <p>12.0 TEST CERTIFICATES:</p> <p>The supplier shall supply four copies of test certificates as per EN 10204, certificate 3.1 B, unless otherwise stated on the order. The test certificates shall contains the following:</p> <ul style="list-style-type: none"> - BHEL References: Specification no., Purchase orders no. - material designation - heat no, heat analysis, and melting method - lot and test no. - Complete information on all heat treatments performed, - result of the grain size determination 				
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used, copied, or disclosed in any way detrimental to the interest of the company.					
स्वाभाविक एव गोपनीय इस दस्तावेज में दी गई सूचना भारत हीवी इलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं प्रसारण के बिना भारत हीवी इलेक्ट्रिकल्स की अनुमति के बिना नहीं किया जा सकता है। इस दस्तावेज को किसी भी रूप में प्रसारित, प्रकट, प्रतिलिपि बनाना, प्रसारित करना या किसी भी रूप में प्रकट करना, जो कि कंपनी के हितों में बाधा डाले, उसे निषेधित है।					
दिनांक व हस्ताक्षर SIGN & DATE 	23/6/11				
कार्यालयी संज्ञा INVENTORY NO. P-4099	REV.NO. 00		निर्माणकर्ता WORKED BY	A. Ranjan	 23.06.11
			जांचकर्ता CHECKED BY	Gopal Krishnan	 23.6.11

प्रमाणित की तिथि SIGN & DATE		संस्थान क्रय विनिर्देश (हीप - हार्डवयर) PLANT PURCHASE SPECIFICATION (HEEP - HARDWAR)		HW 12785 पृष्ठ का Page 4 of 4	
सुपरसेड्स INVENTORY NO (अपनी सूची में अंतर्गत की अतिरिक्तित्व प्रमाण है)	<ul style="list-style-type: none"> - Hardness measurements in solution heat treated condition. All individual values shall be reported - Coefficient of linear expansions - Confirmation of the verification test - Results of non destructive inspection 				
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.	13.0 CLEARANCE FOR DELIVERY : The total results of the tests carried out are the deciding factor for clearance for delivery. BHEL shall evaluate the total results taking into consideration the intended use of the material and examines accordingly the permissibility of deviation (if any) from the specified properties. The clearance however does not relieve the supplier of his responsibility for the hidden non-permissible defects, which are found later. 14.0 CROSS REFERRED STANDARDS: AMS 5940, ASTM E 292, ASTM E 112, EN10204, EN 10308				
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प्रमाणित की तिथि SIGN & DATE 	28/6/11				
शीट की संख्या INVENTORY NO P-4099	REV.NO. 00		निर्माणकर्ता WORKED BY	A. Ranjan	 23.06.11
			जांचकर्ता CHECKED BY	Gopal Krishnan	 (23-6-11)

ANNEXURE-V

(Quality Plan Format)

ANNEXURE- VI

Certificate by Chartered Accountant on letter head

This is to Certify that M/s
(hereinafter referred to as 'company') having its registered office atis
registered under MSMED Act 2006, (Entrepreneur Memorandum No (Part- II)
.....dtd:.....,
Category:.....(Micro/Small).(copy enclosed).

Further verified from the Books of Accounts that the investment of the company as
on dateas per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No. S.O.1722(E) dated October 5, 2006:
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED act, 2006:
Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of RsLacs is within permissible limit of Rs..... Lacs for
.....micro / small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro / Small) (**Strike off whichever is not applicable**) and the date of graduation of such enterprises from its original category is
(dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprises from
its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification
dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name-

Membership Number-

Seal of Chartered Accountant