



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

Tender No.: F/F219/6/0590/K1

Due Date: 02.07.2016

Sub: BHEL-HEEP/OPEN-TENDER (Austenitic Alloy Steel Bars Grade X40 MnCrN19)

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 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/F219/6/0590K/1	Austenitic Alloy Steel Bars as per Spec. HW10784 Rev:02 and Grade-X40MnCrN19	HW1070284068	Dia-16 mm	1450
		HW1070284190	Dia-42 mm. L=7150 mm	8555

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 01.07.2016 & opening of tender shall be 02.07.2016.** Tenders will be received up to 01.45 P.M. on **02.07.2016** 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 02.07.2016) will not be opened.** BHEL will not be responsible for any type of postal / courier delay.

Intending vendors must remit requisite EMD Rs. 1,50,000 (Rupees One Lac Fifty Thousand 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 Grade X40 MnCrN19 as per Spec. HW10784 Rev: 02 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 Grade X40 MnCrN19.

Un-registered Vendors - Are those who are not registered with BHEL, Haridwar for procurement of Steel Bars Grade X40 MnCrN19.

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 for C&F Landing Port. In case of FOB, Loading port must be mentioned and sea freight must be indicated separately.**
- 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/F219/6/0590/K1** DUE ON **02.07.2016..**”
- 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 C&F Landing Port. In case of FOB, sea freight must be indicated in your offer. 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

Minimum Qualification Requirement

➤ **Technical Requirements-**

Sl. No.	Technical Requirement	Vendor's confirmation (Y/N)																								
01	<p>Vendor must have experience of manufacturing and supplying bars of material grade X40MnCrN19 (material number 1.3813). Details of the experience for material grade X40MnCrN19 is to be submitted 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;">Dimensions</th> <th style="text-align: center;">Year of supply</th> <th style="text-align: center;">Quantity</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>Test certificates covering chemical composition, mechanical properties, non-destructive test report and dimension reports of above purchase orders of rounds of material grade X40MnCrN19 are to be submitted with offer.</p>	Sl. No	Name of customer	Purchase order No	Dimensions	Year of supply	Quantity																			
Sl. No	Name of customer	Purchase order No	Dimensions	Year of supply	Quantity																					
02	Vendor must have in-house rolling/forging/cold drawing, heat treatment facilities to manufacture round bars of material grade X40MnCrN19 as per BHEL specification HW10784.																									
03	Vendor to submit in house steel melting including secondary refining facility details. In case in house facility for raw material manufacturing is not available, vendor to submit their source for raw material. Details of raw material source provider covering their material melting and refining facility and at least one mill test certificate in support of experience for material grade X40MnCrN19 is to be submitted.																									
04	Details of the testing facilities (in-house or outsourced) are to be submitted. In case of outsourcing of any test, vendor to submit details of testing house. Testing shall be carried out at Government accredited labs only.																									
05	Vendor to confirm that they will meet all the requirements of BHEL specification HW10784.																									
<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 detailed quality plan in the enclosed format along with offer for BHEL review and approval.	
02	Inspection by third party (LRS/TUV/BV) for import & BHEL nominated agency 'SGS' for indigenous as per BHEL approved quality plan.	
03	Scope of inspection agency shall be- Witnessing of hardness, mechanical properties, verification test, UT, LPT (surface crack examination), visual & dimensional check (including dia, length, straightness, twist) and review of remaining TCs as per ordering specification.	
<p><i>Note- This is applicable for both registered as well as un-registered vendors.</i></p>		

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/F219/6/0590K/1	Austenitic Alloy Steel Bars as per Spec. HW10784 Rev:02 and Grade-X40MnCrN19	HW1070284068	Dia-16 mm	1450	30.10.2016
		HW1070284190	Dia-42 mm. L=7150 mm	8555	30.10.2016


Remarks-








1. Quantity tolerance $\pm 10\%$ acceptable.
2. Mat. Code HW1070284190 is required in fixed length i.e. L=7150 mm and minimum 110 pieces are required. Length tolerance +10/-0 mm per piece is acceptable.
3. Comparative Statement will be evaluated on item wise basis after combining DEEC and PI Quantity.
4. 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.


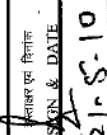


ANNEXURE-IV

(Specification)

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (हीप - हार्डवयर)	HW 10784														
		PLANT PURCHASE SPECIFICATION (HEEP - HARDWAR)	पृष्ठ का Page 1 of 4														
सामग्री सूची संख्या INVENTORY NO.	सामग्री सूची संख्या को अधिगणित करने हेतु T.L.V9384/01	SL.PURCHES अंकित तिथि : Nov. 2002	AUSTENITIC ALLOY STEEL BAR (ROUNDS & FLATS) (X 40 MnCrN19K)														
1. GENERAL: This specification governs the requirements of cold drawn steel bars of grade X40MnCrN19K (Material No.: 1.3813) round and flats.																	
2. APPLICATION: The steel bar shall be used for manufacture of tension bolts, press fingers etc.																	
3. DIMENSIONS & TOLERANCE: 3.1 The dimensions of the bar shall be stated on the order. 3.2 The tolerances shall be as per Annexure - I.																	
4. MANUFACTURE: The bars can either be rolled or forged provided that the required mechanical properties in cold drawn condition are fulfilled.																	
5. CHEMICAL COMPOSITION: The material shall conform to the chemical composition shall be as follows:																	
<table border="1"> <thead> <tr> <th>Carbon</th> <th>Silicon</th> <th>Manganese</th> <th>Chromium</th> <th>Nitrogen</th> <th>Sulphur</th> <th>Phosphorus</th> </tr> </thead> <tbody> <tr> <td>0.30-0.50</td> <td>≤ 0.50</td> <td>18.0-20.0</td> <td>3.00-5.00</td> <td>0.080-0.120</td> <td>≤ 0.015</td> <td>≤ 0.050</td> </tr> </tbody> </table>				Carbon	Silicon	Manganese	Chromium	Nitrogen	Sulphur	Phosphorus	0.30-0.50	≤ 0.50	18.0-20.0	3.00-5.00	0.080-0.120	≤ 0.015	≤ 0.050
Carbon	Silicon	Manganese	Chromium	Nitrogen	Sulphur	Phosphorus											
0.30-0.50	≤ 0.50	18.0-20.0	3.00-5.00	0.080-0.120	≤ 0.015	≤ 0.050											
6. MECHANICAL PROPERTIES: 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. The mechanical properties are to be determined on both the hardest and softest bar for each melt and heat treatment batch. The specimen is to be taken in longitudinal direction from centre of the bars. 0.2% Proof stress and tensile strength shall be determined on each and every cross-section.																	
स्वत्वधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत की इलेक्ट्रिकल की अस्पष्टता से सुरक्षा प्रदान एवं आरक्षण का अधिकारी को तब तक प्रदान, जो कि कंपनी के हित में इतिहासिक हो तब किया जाय।	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.																
दिनांक एवं हस्ताक्षर SIGN & DATE	दिनांक एवं हस्ताक्षर SIGN & DATE	नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE														
TSX	B. CHOUDHARY	अनुबाहक TRANSLATED BY															
IPSC	V.K. Chauhani	निर्माणकर्ता WORKED BY	SKumar														
STE	D.R. Kory	जांचकर्ता CHECKED BY	Ashish														
QAX	N.K. Manwani	पर्यवेक्षणकर्ता SUPERVISED BY	JP MEENA														
सहमत विभाग AGREED DEPT	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	दिनांक एवं हस्ताक्षर SIGNATURE & DATE														
P-2230	SUPERSEDES	स्वीकृति APPROVED :	संस्थान मानक समिति PLANT STANDARDS COMMITTEE														
Rev. 02 Dt: 17-05-10	निर्माण PREPARED : MTE	जारी ISSUED : STANDARDS DIVISION	दिनांक DATE : 24.3.81														

संस्था का नाम BHEL	दिनांक एवं हस्ताक्षर SIGN & DATE	<div style="text-align: center;">  <p>संस्थान क्रय विनिर्देश (डीप - हार्डवार)</p> <p>PLANT PURCHASE SPECIFICATION</p> <p>(HEEP - HARDWAR)</p> </div>	HW 10784 पृष्ठ का Page 2 of 4												
सामग्री सूची संख्या का संशोधन क्रमांक	SUPERSEDES INVENTORY NO.	Following properties shall be achieved at room temperature: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">0.2 % Proof Stress:</td> <td style="text-align: right;">≥ 500 N/mm²</td> </tr> <tr> <td>Tensile Strength:</td> <td style="text-align: right;">850 – 1250 N/mm²</td> </tr> <tr> <td>Elongation (l₀=5d) (%):</td> <td style="text-align: right;">≥ 20%</td> </tr> <tr> <td>Reduction in area:</td> <td style="text-align: right;">≥ 35%</td> </tr> <tr> <td>Impact Energy (J):</td> <td style="text-align: right;">≥ 90 *</td> </tr> <tr> <td>Hardness (HB30):</td> <td style="text-align: right;">260 - 360</td> </tr> </table> <p style="text-align: center;">*Average of 3 Charpy V-notch specimens</p>		0.2 % Proof Stress:	≥ 500 N/mm ²	Tensile Strength:	850 – 1250 N/mm ²	Elongation (l ₀ =5d) (%):	≥ 20%	Reduction in area:	≥ 35%	Impact Energy (J):	≥ 90 *	Hardness (HB30):	260 - 360
0.2 % Proof Stress:	≥ 500 N/mm ²														
Tensile Strength:	850 – 1250 N/mm ²														
Elongation (l ₀ =5d) (%):	≥ 20%														
Reduction in area:	≥ 35%														
Impact Energy (J):	≥ 90 *														
Hardness (HB30):	260 - 360														
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.		7. NON DESTRUCTIVE TEST: 7.1 Scope of inspection: Following NDT shall be performed in delivery condition for all bars <ul style="list-style-type: none"> • Verification Test • Complete ultrasonic inspection (UT) according to EN 10308 type 1a-1c (table1) • Liquid penetrate test according to EN 10228-2 or according to any other technique that guarantees achieving the requested registration and decision criteria 7.2 Criteria for Registration and decision. 7.2.1 UT Inspection Regarding UT inspection quality class 3 according to EN 10308 (table 3) shall be the acceptable norms. 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 accepted. 7.2.2 Surface crack inspection Quality class 4 according to EN 10228-2 (table 1) shall be applied.													
स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में जो भी सूचना भारत भारती इलेक्ट्रिकल्स की सम्पत्ति है, स्वतंत्रता है, सुरक्षा प्रदान है एवं सुरक्षा रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए ।		8.0 TEST CERTIFICATES: The supplier shall furnish four copies of test certificates unless and otherwise stated on the order. 8.1 BHEL'S Reference Purchase Order Specification Number 8.2 Supplier's Reference: Name or emblem of the supplier Material Designation Melt No. Steel melting process Complete detail of heat – treatment 8.3 Results of Testing 8.3.1 Chemical Analysis 8.3.2 Mechanical Properties. All individual values are to be given. 8.3.3 Type and results of non-destructive testing and final surface inspection. 8.3.4 Verification test Confirmation													
सामग्री सूची संख्या INVENTORY	दिनांक एवं हस्ताक्षर SIGN & DATE 21-5-10	Rev 02	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">निर्माणकर्ता WORKED BY</td> <td style="width: 20%;">SKumar</td> <td style="width: 20%; text-align: center;"></td> <td style="width: 40%; text-align: center;">17/5/10</td> </tr> <tr> <td>जांचकर्ता CHECKED BY</td> <td>JPMeena</td> <td style="text-align: center;"></td> <td style="text-align: center;">17/5/10</td> </tr> </table>	निर्माणकर्ता WORKED BY	SKumar		17/5/10	जांचकर्ता CHECKED BY	JPMeena		17/5/10				
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दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (टीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARDWAR)		HW 10784 पृष्ठ का Page 3 of 4	
सुपरसेडेस INVENTORY NO.	सामग्री सूची संख्या का संश्लेषण करना है	<p>8.4 Dimensional Results:</p> <p>8.4.1 Diameter, Length, Straightness of rounds. Length, Width, Height, Straightness, and Twist of flats.</p> <p>8.4.2 100% dimensional checking by supplier and reporting 10% for actual dimension in TC.</p> <p>9. CLEARANCE FOR DELIVERY:</p> <p>The total results of all the tests carried out are decisive for clearance for delivery. BHEL evaluates the total results taking into consideration the intended use of material and examines accordingly the permissibility of deviation (if any) from the specified properties.</p> <p>The clearance, however, does not relieve the supplier of his responsibilities for the hidden/ unreported non-permissible defects which are found at latter.</p> <p>10.0 PACKING AND MARKING:</p> <p>10.1 All bars shall be marked with the supplier's identification, material designation and melt number. The marking shall be clearly punched and bordered with oil paint.</p> <p>10.2 The bars shall be suitably packed and protected against corrosion and damage during transportation.</p> <p>11.0 CROSS REFERRED STANDARD: EN 10228 -2, EN 10308</p>			
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<p>स्वत्वधिकार एवं गोपनीय</p> <p>इस दस्तावेज में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की सम्पत्ति है, इसका प्रयोग एवं आस्वादाकार एवं अन्य किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न सके, वर्जित है।</p>					
दिनांक एवं हस्ताक्षर SIGN & DATE	21/5/10				
सामग्री सूची संख्या INVENTORY	Rev 02	निर्माणकर्ता WORKED BY	SKumar		5.5.10
P-2230		जांचकर्ता CHECKED BY	Ashish		5.5.10

प्रमाण एवं स्थायी चिह्न & DATE		संस्थान क्रय विनिर्देश (डीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARDWAR)	HW 10784 पृष्ठ का Page 4 of 4																												
सामग्री सूची संख्या को अधिकृत करता है	SUPPLIERS INVENTORY NO.	Annexure-I																													
<p>I. FOR ROUND BARS:</p> <p>1. Tolerance on round bars shall be as follows:</p> <table border="1" data-bbox="375 470 1436 739"> <thead> <tr> <th>DIAMETER (MM)</th> <th>PERMISSIBLE TOLERANCE</th> </tr> </thead> <tbody> <tr><td>UPTO 1.6</td><td>-0.050</td></tr> <tr><td>1.7 to 3.0</td><td>-0.060</td></tr> <tr><td>3.2 to 6.0</td><td>-0.075</td></tr> <tr><td>6.3 to 10.0</td><td>-0.090</td></tr> <tr><td>10.3 to 18.0</td><td>-0.110</td></tr> <tr><td>18.3 to 30.0</td><td>-0.130</td></tr> <tr><td>32.0 to 50.0</td><td>-0.160</td></tr> <tr><td>52.0 to 80.0</td><td>-0.190</td></tr> <tr><td>85.0 to 120.0</td><td>-0.220</td></tr> </tbody> </table> <p>2. TOLERANCE ON STRAIGHTNESS: ± 0.50 mm/ Meter</p> <p>II. FOR FLAT BARS :</p> <p>1. Tolerance on flat bars shall be as follows :</p> <table border="1" data-bbox="383 896 1444 963"> <thead> <tr> <th>SIZE (mm)</th> <th>WIDTH (mm)</th> <th>HEIGHT (mm)</th> <th>LENGTH (mm)</th> </tr> </thead> <tbody> <tr> <td>42X25</td> <td>25\pm0.5</td> <td>42\pm1</td> <td>630(+10,-0)</td> </tr> </tbody> </table> <p>2. TOLERANCE ON STRAIGHTNESS : ± 0.25 mm/ Meter 3. TWISTING TOLERANCE : ± 0.25 mm/ Meter</p>				DIAMETER (MM)	PERMISSIBLE TOLERANCE	UPTO 1.6	-0.050	1.7 to 3.0	-0.060	3.2 to 6.0	-0.075	6.3 to 10.0	-0.090	10.3 to 18.0	-0.110	18.3 to 30.0	-0.130	32.0 to 50.0	-0.160	52.0 to 80.0	-0.190	85.0 to 120.0	-0.220	SIZE (mm)	WIDTH (mm)	HEIGHT (mm)	LENGTH (mm)	42X25	25 \pm 0.5	42 \pm 1	630(+10,-0)
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		जांचकर्ता CHECKED BY	Ashish		S.S.10																										

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