

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

Sub: Requirement of Austenitic Stainless-Steel Plates/Sheets/Strips

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.

Bids are invited for the following items through GeM Portal- <https://gem.gov.in>

Item Description	Mat. Code	Size (mm)	Total Qty (Kg)	Lot wise Delivery Requirement	Delivery Period (Days from PO placement)
H/R Plate Alloy Steel Grade-ST-1X11MF-HR Specification-0500.218 Rev 02	HW1061893014	5 x 55 x (500-2000)	3000	30/08/2025	90

Remarks-

1. Delivery period mentioned in enquiry is indicative, bidders to quote their best possible delivery.
2. Quantity tolerance $\pm 10\%$ is acceptable.
3. Sheets as per specification HW10687 are also acceptable as an alternate to specification 0500.218 Rev 02.
4. Dimension tolerance shall be as per specification 0500.218.
5. Vacuum degassed steel is acceptable for specification HW10687 as well as 0500.218.

6. Breach of Contract:

In case of breach of contract, wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is at least 10% of the contract value, the same be encashed. In case the value of the security instruments available is less than 10% of the contract value, the balance amount be recovered from other financial remedies (i.e. available bills of the contractor, retention amount, etc. with BHEL) or legal remedies be pursued. The balance scope shall be got done independently without Risk & Cost of the failed supplier/ contractor. Further, levy of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract. Accordingly, recovery of an amount equivalent to 10% of the contract value shall be made in case of breach of contract.

7. Payment terms shall be as follows:

The payment shall be made within no. of days as defined in the below table from appointed day:

Type of Bidder	Payment Terms (Number of days)
Micro & Small Enterprises (MSEs)	45 days
Medium Enterprises	60 days
Non MSME	90 days

Appointed day means

- The day of *material entry in HEEP (i.e. CISF Stamp date)*, subject to submission of non-discrepant documents by vendor as per Purchase Order.
- Or
- Where there is any objection regarding acceptance of goods, the same shall be informed to supplier within fifteen days from the day of the delivery of good. Appointed day will be the day on which such objection is removed by the supplier.
- For BOIs, the appointed day means the date of receipt of material at respective project Site (i.e. MRC date).

Note: Benefits of MSE (Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. No MSE benefits shall be provided to Agents / Stockists / Dealers / Traders etc. for the items offered but not manufactured by themselves

8. “A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity’s interests. **The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in the bidding process, if”**

- They have controlling partner (s) in common; **or**
- They receive or have received any direct or indirect subsidy/financial state from any of them; **or**
- They have the same legal representative/ agent for purposes of this bid; **or**
- They have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; **or**
- Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components / sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; **or**

- f. In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent / dealer. There can be only one bid from the following:
 - 1. The principal manufacturer directly or through one Indian agent on his behalf; and
 - 2. Indian/ foreign agent on behalf of only one principal;

or
 - g. A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;

or
 - h. In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidder must proactively declare such sister/ common business/ management units in same/ similar line of business.”
- 9.** Vendor should raise inspection call for BHEL / TPI inspection at least 4 days in advance to the planned date of inspection. If customer inspection is envisaged at vendor's works, vendor should give inspection call at least 7 days in advance to the planned date of inspection.
- 10.** For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
- 11.** Test certificate and Guarantee certificate are required.
- 12.** Rest terms and conditions shall be as per latest GeM GTC.

Pre- Qualification Requirements

Clause	Pre-Qualification Requirement	Details to be submitted	Vendor's response
1	Vendor must have manufactured and supplied flats / sheets in material grade X22CrMoV121 / P91 / P92 or equivalent Cr-Mo-V Creep resistant steel against at least one purchase order in the last 10 years from enquiry issue date. Material supplied in hardened and tempered condition will only be considered for experience.	Vendor to submit at least one purchase order copy and its correlated test certificate	
2	Vendor to confirm that they have in house melting & refining, rolling and heat treatment facility to manufacture enquiry material and dimensions. In case of outsourcing of any manufacturing operation, vendor to inform operation outsourced with details of their sub supplier and its manufacturing facility and experience for the same.	Vendor's confirmation & in-house facilities for melting & refining, rolling and heat treatment are to be submitted.	
3	a Vendor to confirm that they have inhouse testing facilities as per the requirement of enquiry specification.	Vendor's confirmation and inhouse testing facility details are to be submitted	
	b In case of outsourcing of any test, vendor to agree to carry out testing at NABL / Govt. / any other lab accrediting agency like ILAC/APLAC etc. approved labs only.	Vendor's confirmation required	

Sl. No.	Quality Requirement	Vendor's confirmation (Y/N)
01	PRE-DISPATCH INSPECTION BY BHEL TPIA QUEST AS PER BHEL APPROVED QUALITY PLAN (QA/PMD/001 REV 00). (VENDOR TO ENDORSE THE ATTACHED QUALITY PLAN WITH THEIR SIGN & STAMP.)	

Signature with stamp

Name:

Name of Firm:

Designation:

Date:

(Self-Certification for local content)

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH
JUNE, 2020 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(BHEL HEEP Haridwar)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref: 1) GeM Bid Specification No:

2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of _____ % and this meets the local content requirement for **'Class-I local supplier' / 'Class II local supplier'** ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

1. _____ 2. _____

3. _____ 4. _____

...

Thanking you,

Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

**** - Strike out whichever is not applicable.**

Note:

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

(Specification)

- 1. 0500.218 Rev 02**
- 2. HW0687 Rev 08**
- 3. HW0993008**



PURCHASE SPECIFICATION

0300.218

PAGES 1 OF 7 PAGES

540 N/mm² 0.2% Proof stress 11% Cr-Mo-V Steel
(For band segments of Steam Turbine)

1. GENERAL This specification governs the quality of of creep-resistant Cr-Mo-V-Nb steel flat products (eg. sheet, strip plates).
2. APPLICATION The flat products are required for machining and punching of band segments of rotor blades.
3. CONDITION OF DELIVERY Hot rolled/cold rolled in heat-treated condition.
4. DIMENSIONS AND TOLERANCES
 - 4.1 Sizes
Flat products shall be supplied to the dimensions as specified on the order.
 - 4.2 Tolerances
Tolerances on the thickness of flat product shall be as per annexure-I.
5. MANUFACTURE Steel shall be made by basic electric furnace, subsequently it should be remelted by electro-slag refined process or vacuum remelting. Any other process of manufacture is subjected to mutual agreement between BHEL & suppliers.
6. FREEDOM FROM DEFECTS
Surface of flat products shall be free from blisters, skin cavities, cracks, laps, laminations etc.

Flat products shall be completely free from laminations, cracks, hairline cracks, laps, scabs and inclusions etc.
7. FINISH The surface of the flat products shall be smooth and even. Dent, roll marks, ripples, notches shall not be allowed. It can be dressed off with emery paper to a depth not exceeding the minimum tolerances on thickness.

REV, DATE REAFFIRMED

02 03.12.18

TSX	S. KUMAR	Checked 16.2.80	REAFFIRMED YEAR 2024	C/A NO:
AGREED DEPT.	NAME	SIGN & DATE	Work by S. Kumar Sta 29.05.74	TSX (MTE)-
			Check by R. Kumar 29.05.74	29-70
REVISION	SUBMITTED WITHOUT ANY CHANGE		ISSUED BY :	PS
	15.2.80		STANDARDS DIVISION	2.60
DATE	PREPARED	CHECKED	APPROVED	DATE
	15.2.80	15.2.80	15.2.80	12.10.77

FORM

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INVENTORY No Sign. & Date



PURCHASE SPECIFICATION

0300.218

PAGE 2 OF 7 PAGES

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SIGN. & DATE

INVENTORY NO.

8. CHEMICAL COMPOSITION

The chemical analysis of the steel shall conform to the following:

Element	Min(%)	Max.(%)
Carbon	0.12	0.19
Manganese	-	0.70
Silicon	-	0.60
Chromium	10.0	11.5
Nickel	-	0.6
Molybdenum	0.60	0.80
Vanadium	0.25	0.40
Sulphur	-	0.025
Phosphorus	-	0.03

9. HEAT TREATMENT

The recommended heat-treatment of the test sample shall be as follows:

Hardening in air or oil 1080-1100°C
Tempering 720-740°C

10. SELECTION OF TEST SAMPLES

Test samples for chemical analysis shall be taken from each heat. Two sample for mechanical testing shall be selected from each heat and each heat-treatment batch.

11. MECHANICAL PROPERTIES

11.1 The mechanical properties after heat-treatment shall show the following properties when tested in accordance with IS:1608.

Tensile strength in 705(72) Min.
N/mm² (Kgf/mm²)

0.2% Proof stress 540(55) Min.
in N/mm²(Kgf/mm²)

Elongation on 15% Min.
5.65 √ S₀

Reduction in Area 50% Min.

11.2 Hardness

When tested in accordance with IS:1500 shall show brinell hardness in the range of 219-255.

12. METALLOGRAPHIC TEST

12.1 The micro-structure of the steel shall be studied and photo-micrograph alongwith report shall be furnished to BH&L. The structure should be free from delta ferrite.

REV. DATE

02

03-12-18



PURCHASE SPECIFICATION

0500.218

PAGE 3 OF 7 PAGES

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INVENTORY No

REV. DATE

02

03-12-18

12.2 Non-metallic inclusions

The test sample shall be taken longitudinal plane midway between the centre and the surface of the material. The rating of the inclusion content shall be based upon the average length of the inclusions the longest inclusion and the general background when tested as per ASTM E45 plate III. The inclusion rating shall not exceed the following:

- 'A' sulphide type Thin series -2
'B' or 'D' (Globular oxide or Alumina oxide type) Thin series- 2
'C' Silicate type Thin series- 2

12.3 Grain size

The average austenitic grain size of steel shall be between 5 & 8 when tested as per IS:2583/ASTM E 112.

13. ELEVATED TEMPERATURE PROPERTIES

The elevated temperature properties of of the steel after heat-treatment shall be guaranteed by the supplier as per annexure attached to this specification.

14. ULTRASONIC TEST

Each flat product shall be ultrasonically tested to determine its soundness and method of testing shall be mentioned during quotation.

15. INSPECTION AT SUPPLIER'S WORKS

BHEL representative shall have all reasonable facilities afforded to him to satisfy himself that the material is being furnished in accordance with this specification. Test shall be witnessed at supplier's works by BHEL or consultants representative and in such cases the supplier shall notify those concerned when the material is available for inspection and testing.



PURCHASE SPECIFICATION

0500.218

PAGE 4 OF 7, PAGES

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INVENTORY NO.

16. RETESTS

If any of the selected test specimen fails to meet the specified requirements, two test specimens may be selected for retest without reheat-treatment.

If any test specimen fails because of mechanical reasons such as testing equipment failure or improper specimen preparation, it may be described in the test certificate and another specimen taken for testing.

17. TEST CERTIFICATES

Three copies of test certificates shall be supplied unless otherwise stated on the order.

Test certificates shall bar the following information.

BHEL reference

Purchase order No.

Specification No.

Supplier's reference

Supplier's name

Identification No.

Heat No.

Size and weight of flat products

Heat-treatment details

Process of manufacture

Heat treatment batch No.

Test results

Chemical composition

Mechanical properties

REV. DATE

02

03-12-18



PURCHASE SPECIFICATION

0500.218

PAGE 5 OF 7 PAGES

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INVENTORY NO. P-2052

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INVENTORY NO.

SIGN. & DATE

18. PACKING AND MARKING

Micro-structure report, grain size and non-metallic inclusions.

Ultrasonic reports.

The certificate must be signed by the Chief of the Inspection Department/ Chief Metallurgist of the supplier's plant.

The melt number, specification number, grade of steel, identification number, batch no. and inspecting authority stamp shall be stamped on the flat products along the rolling direction or on metallic tags attached to the flat product wherever not possible to stamp on flat products and bordered by white paint.

In addition to the above the supplier's name purchase order number, size and net weight of the flat product shall be painted on the top of all the plates and further protected by coat of transparent varnish.

The transportation of the plates shall be made in separate package each package containing the plates of the same heat, same batch or heat-treatment and size. The flat product shall be preserved against corrosion and damage during transportation.

REV. DATE

02

03.12.18





PURCHASE SPECIFICATION

0500.218

PAGES 6 OF 7 PAGES

ANNEXURE - ITOLERANCE ON DIMENSION OF SHEETS

Thickness/ Width in mm. in mm.	HOT ROLLED		COLD ROLLED
	Width less than 1000mm	Width 1000mm and over	All widths
0.2-04	± 0.07	± 0.07	± 0.03
0.50	± 0.08	± 0.08	± 0.04
1-1.1	± 0.12	± 0.12	± 0.07
1.5	± 0.15	± 0.15	± 0.11
2.5-3.0	± 0.17 $- 0.22$	± 0.22	± 0.16
3.5-4.0	± 0.20 $- 0.10$	± 0.20 $- 0.10$	± 0.20
5.0-5.5	± 0.3	± 0.4	-
6.0-7.0	± 0.3 $- 0.6$	± 0.4 $- 0.6$	-

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INVENTORY No Sign. & Date

REV. DATE

02.

03-12-18

FORM



PURCHASE SPECIFICATION

0500.218

PAGE 7 OF 7 PAGES

ANNEXURE - II

ELEVATED TEMPERATURE PROPERTIES

1. Stress rupture

Temperature
°C

550

Stress rupture in N/mm²
(Kgf/mm²) in 100,000 hrs.

150 (15-13)

2. Creep properties

Temperature
°C

550

1% creep in N/mm²
(Kgf/mm²) in 100,000 hrs.

90 (9)

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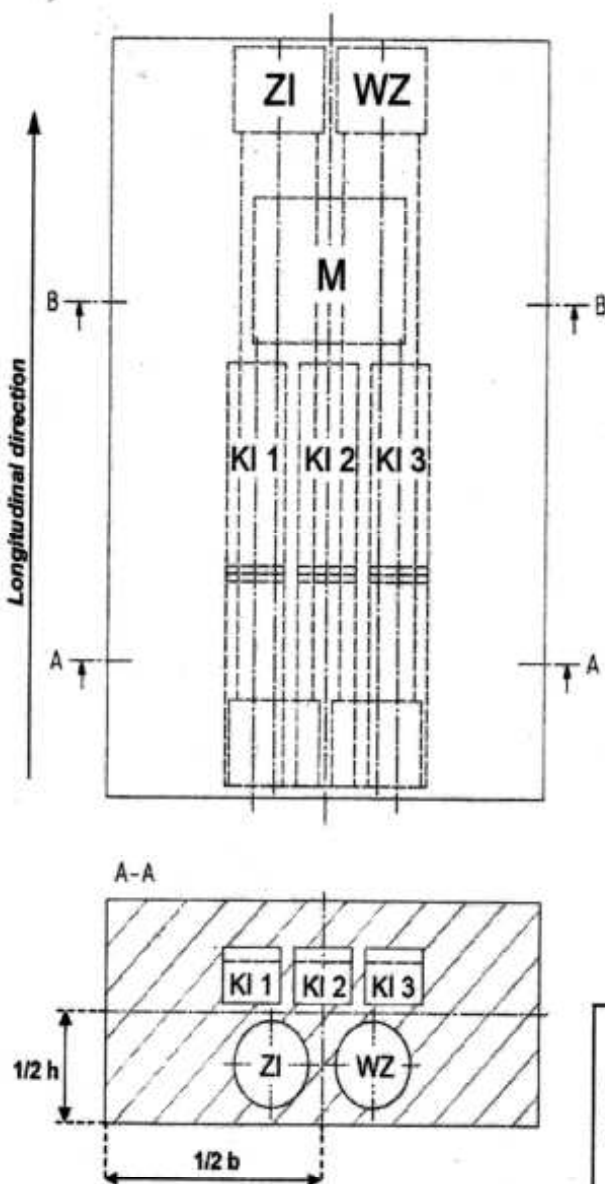
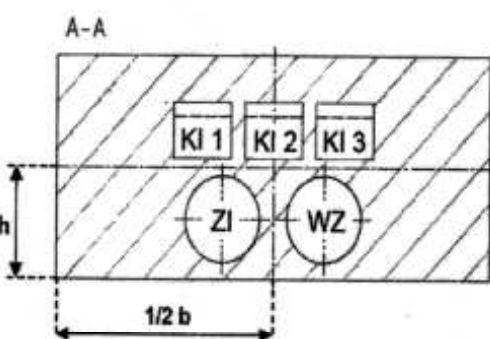
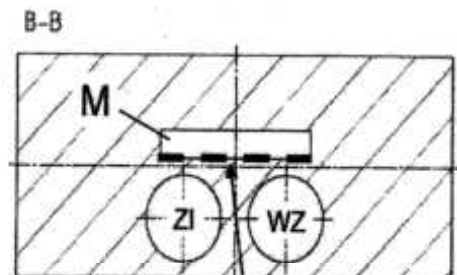
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SUPERVISOR'S INVENTORY NO. जारी की जाएगी TLV9248/06, Dec'13	<u>HEAT RESISTANT STEEL BARS FOR TURBINE BLADES</u> <u>GRADE: X22CrMoV121 +QT2</u>																																						
1.0 General: This specification governs the quality of Steel rectangular bars in steel grade X22CrMoV121, material no. 1.4923 EN10269.																																							
2.0 Application: For machining of blades for Steam Turbine.																																							
3.0 Condition of Delivery: Rolled or Forged and Heat Treated.																																							
4.0 Dimension and Tolerances: Dimensional tolerance, straightness, twisting and bulging limits shall be as per HW0993008.																																							
5.0 Manufacture: Degassed steel (e.g. vacuum degassed) shall be used. Cast ingot is to be used as initial material for production of the bars. The manufacturing process must ensure a homogenous grain structure over the entire length of the bar and the bar cross section.																																							
6.0 General Requirements: <ul style="list-style-type: none"> Prerequisite requirement for approval of a new vendor is a successful Process qualification. Manufacturing process established during this shall be the basis for future manufacture. Manufacturing plan shall be prepared and submitted after successful process qualification. Manufacturing plan shall include specific information on manufacturing like rolling temperature, reduction ratio, heat treatment temperature, hardening method and soaking time, rate of heating and cooling etc. Test instructions for nondestructive and destructive testing are to be provided in the manufacturing and testing plan. Product and process qualification is mandatory for each of the supplier's manufacturing plants. For new supplier, process qualification shall be required for three purchase orders. If necessary, BHEL may ask for process qualification for verification of manufacturing reliability from regular suppliers also. Any change in the agreed manufacturing plan shall be informed to BHEL. BHEL will review the requirement of renewed process qualification. 																																							
सहायक निदेश एवं गोपनीयता यह दस्तावेज केवल BHEL के उपयोग के लिए है। इसे अन्य किसी भी व्यक्ति को देना या प्रकाशित करना गैर कानूनी है। This document is for BHEL use only. It is not to be distributed to any other person.	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">TSX</td> <td style="width:25%;">V. Srivastava</td> <td style="width:25%;">नाम NAME</td> <td style="width:35%;">दिनांक एवं हस्ताक्षर SIGNATURE & DATE</td> </tr> <tr> <td>PSC</td> <td>G. KRISHNAN</td> <td>अनुवाद TRANSLATED BY</td> <td></td> </tr> <tr> <td>QAX</td> <td>U. K. PANDA</td> <td>जांच/करवाया WORKED BY</td> <td>ASHISH RANJAN</td> </tr> <tr> <td>STE</td> <td>P. K. BANSAL</td> <td>जांच/करवाया CHECKED BY</td> <td>ASHISH RANJAN</td> </tr> <tr> <td>सहमत विभाग AGREED DEPTT</td> <td>नाम NAME</td> <td>पर्यवेक्षणकर्ता SUPERVISED BY</td> <td>GOPAL KRISHNAN</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"> स्वीकृति संस्थान मानकीकरण समिति APPROVED : PLANT STANDARDIZATION COMMITTEE </td> </tr> <tr> <td>REV. NO.</td> <td>08</td> <td>निर्माता PREPARED : MTE</td> <td>जारी ISSUED : TSX</td> </tr> <tr> <td>DI</td> <td>14.12.17</td> <td colspan="2">दिनांक DATE : 31.12.1985</td> </tr> <tr> <td>CHANGE ADVICE NO.</td> <td>TSX(MTE)-17-38</td> <td colspan="2"></td> </tr> </table>			TSX	V. Srivastava	नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE	PSC	G. KRISHNAN	अनुवाद TRANSLATED BY		QAX	U. K. PANDA	जांच/करवाया WORKED BY	ASHISH RANJAN	STE	P. K. BANSAL	जांच/करवाया CHECKED BY	ASHISH RANJAN	सहमत विभाग AGREED DEPTT	नाम NAME	पर्यवेक्षणकर्ता SUPERVISED BY	GOPAL KRISHNAN			स्वीकृति संस्थान मानकीकरण समिति APPROVED : PLANT STANDARDIZATION COMMITTEE		REV. NO.	08	निर्माता PREPARED : MTE	जारी ISSUED : TSX	DI	14.12.17	दिनांक DATE : 31.12.1985		CHANGE ADVICE NO.	TSX(MTE)-17-38		
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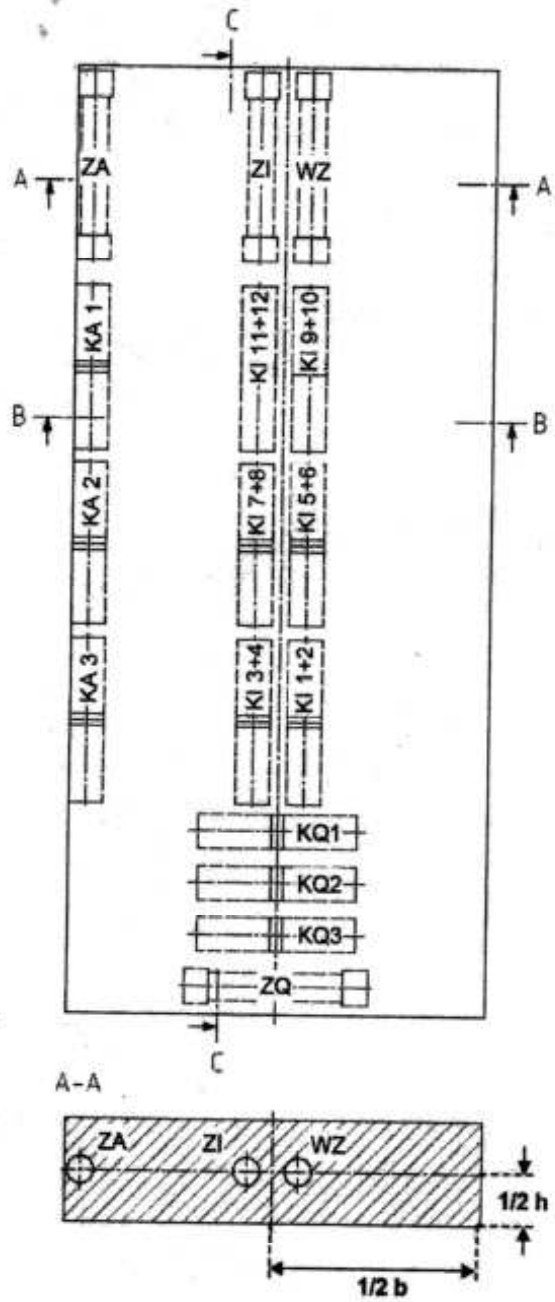
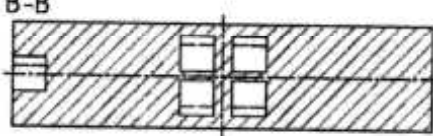
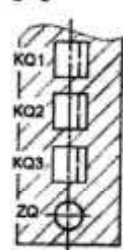
हस्ताक्षर एवं तिथि SIGN & DATE		संस्थान क्रय विनिर्देश (हीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARIDWAR)	HW 10687 पृष्ठ का Page 2 of 8																			
सामग्री सूची संख्या INVENTORY NO.	SUPERSEDES INVENTORY NO.	7.0 Heat Treatment: Hardening has to be done in accordance with EN 10269 + QT2 in line with Table B .1 (1020 - 1070°C /air or liquid quenching). Tempering must be done at a temperature $\geq 650^{\circ}\text{C}$. A fully transformed and tempered martensitic microstructure must be present over the entire cross section. Hardening and tempering in bundles are not allowed. Suitable gaps between two bars are to be ensured during heat treatment for uniformity of properties. If bars need to be straightened after the heat treatment, a stress relieving heat treatment shall be performed after completion of entire straightening process. Stress relieving is to be carried out at 20 - 30°C below the tempering temperature with a subsequent slow cooling. The lowest possible residual stresses shall be targeted. Distortion of the finish machined part due to residual stresses from the manufacturing process or heat treatment process shall not occur.																				
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bhans Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company		8.0 Properties and their verification: 8.1 Chemical Composition: Heat analysis in weight % <table border="1" data-bbox="300 945 1388 1045"> <thead> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Mo</th> </tr> </thead> <tbody> <tr> <td>0.18 - 0.24</td> <td>0.10 - 0.50</td> <td>0.30 - 0.80</td> <td>≤ 0.020</td> <td>≤ 0.020</td> <td>11.0 - 12.5</td> <td>0.80 - 1.20</td> </tr> </tbody> </table> <table border="1" data-bbox="300 1087 630 1188"> <thead> <tr> <th>Ni</th> <th>V</th> </tr> </thead> <tbody> <tr> <td>0.30 - 0.80</td> <td>0.25 - 0.35</td> </tr> </tbody> </table>			C	Si	Mn	P	S	Cr	Mo	0.18 - 0.24	0.10 - 0.50	0.30 - 0.80	≤ 0.020	≤ 0.020	11.0 - 12.5	0.80 - 1.20	Ni	V	0.30 - 0.80	0.25 - 0.35
C	Si	Mn	P	S	Cr	Mo																
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Ni	V																					
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स्ववाचित्कार एवं गोपनीय : यह प्रवेश में दी गई सूचना भारत की प्रोपर्टी है। इसका प्रयोग केवल उद्देश्य के लिए ही किया जाना चाहिए, जो कि इसकी मूल रूप से इस्तेमाल के लिए है।		8.2 Properties and Microstructure: The specimens shall be taken in the longitudinal direction in accordance with Attachment 1. The properties described below shall be determined at room temperature in the delivery condition, i. e. after the last heat treatment including any stress relieving heat treatment. The metallographic investigations shall be performed on the hardest and softest bar with an area of at least 320mm ² each. The areas to be investigated must be in the longitudinal direction. The longitudinal direction must be indicated in the documentation. 8.2.1 Mechanical Properties: Hardness of the bars in a test unit shall be verified by Brinell hardness testing in accordance with ISO 6506 -1, HBW10/3000 or HBW 5/750 may be used. The surface of the bar shall be prepared in the area of the hardness measurement so that the result is not affected by the surface condition																				
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सामग्री सूची संख्या INVENTORY NO.	REV 08	निर्माणकर्ता WORKED BY	Ashish Ranjan	 02.05.17																		
सामग्री सूची संख्या INVENTORY NO.	REV 08	जांचकर्ता CHECKED BY	Gopal Krishnan	 02.05.17																		


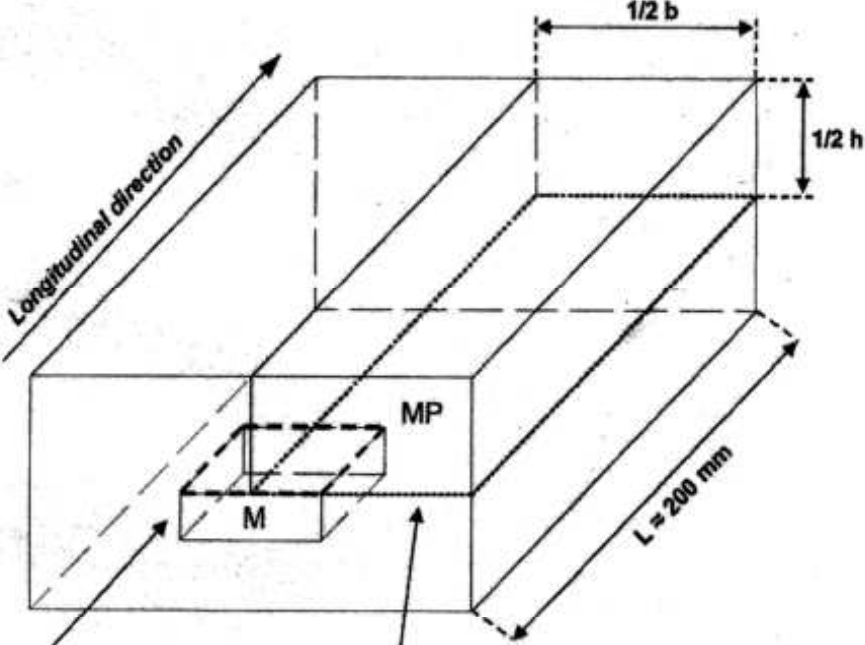
संस्थान का लोगो 	संस्थान क्रय विनिर्देश (हीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARIDWAR)		HW 10687 पृष्ठ का Page 3 of 8												
	<p>Hardness testing shall be performed on 10% of each test unit but at least on 10 bars or on each bar if test unit is less than 10 bars. The greatest resulting difference in hardness shall not exceed 35HBW. Mechanical properties shall be determined on the hardest and softest bar determined in a test unit. Tensile testing shall be performed in accordance with ISO 6892 -1 or ASTM E8M (round specimen with $L_0 = 50\text{mm}$ and $d_0 = 10\text{mm}$) or ASTM E8M (standard specimen in accordance with figure 8). Standard specimens Charpy (V-notch) in accordance with ISO 148 -1 shall be used for determining the absorbed impact energy.</p> <p>The following properties must be achieved at room temperature:</p> <table border="1"> <thead> <tr> <th>0.2 % Proof Stress (N/mm²)</th> <th>Tensile Strength (N/mm²)</th> <th>Elongation After Fracture (%)</th> <th>Reduction in area %</th> <th>Impact Energy (J)¹</th> <th>Hardness HBW</th> </tr> </thead> <tbody> <tr> <td>≥ 700</td> <td>900 - 1050</td> <td>≥ 11</td> <td>≥ 35</td> <td>≥ 20</td> <td>265 - 310</td> </tr> </tbody> </table> <p>¹ Average of 3 specimens and minimum value for two specimens in accordance with EN10021, where the lowest value shall be at least 14 Joule.</p> <p>8.2.2 Microstructure: Microstructure must be uniform, without porosity, excessive segregation or other inhomogeneities.</p> <p>8.2.2.1 Cleanliness: The cleanliness shall be determined as per ASTM E45 method A. Acceptance criteria: <u>Inclusion: Thin Series</u> Type A, B, C: 2 max Type D: 2.5max <u>Inclusions: Heavy Series</u> Type A, B, C, D: 1.5max Maximum Number and dimension of globular inclusions (type D) $IR(D) = n_1 + 2.5n_2$, IR (D) is converted to an area of 160mm² $IR(D) \leq 10$ n = number of globular inclusions n_1 (25-50 μm); n_2 (51-75 μm) Any material discontinuities present at the inclusion must also be accounted for in determining the size of the globular inclusion. Inclusions > 75 μm, including any material discontinuities are not allowable.</p> <p>8.2.2.2 Delta Ferrite content and grain size:</p> <ul style="list-style-type: none"> - Delta ferrite content shall be < 5%. The determination of delta ferrite content shall be performed based on analysis methods in accordance with ASTM E45 Method A, "Worst field method" with $V=100:1$. - An average grain size of 4 or finer has to be achieved. Grain size shall be determined on the martensitic secondary grain structure in accordance with ASTM E112 or ISO643. A deviation of more than 2 grain sizes in size of individual's grains from the average grain size is not allowable. 				0.2 % Proof Stress (N/mm ²)	Tensile Strength (N/mm ²)	Elongation After Fracture (%)	Reduction in area %	Impact Energy (J) ¹	Hardness HBW	≥ 700	900 - 1050	≥ 11	≥ 35	≥ 20
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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	स्वयंसेवा विभाग एवं शीपनीय : इस लेख में दी गई सूचना भारत भारी इलेक्ट्रिकल्स लि. की संपत्ति है। इसका प्रयोग केवल अपने-आपके उपयोग के लिए ही करना चाहिए, जो कि स्वयंसेवा विभाग के हित में है।	संस्थान का लोगो 	संस्थान का लोगो 	संस्थान का लोगो 											
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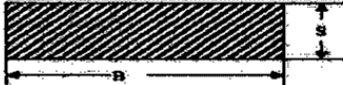
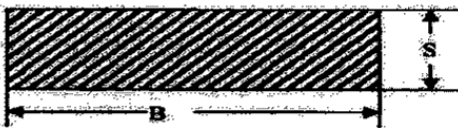
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8.3 Non-destructive Testing: 8.3.1 Test Scope: The following Non-destructive inspection shall be performed in the as delivered condition: <ul style="list-style-type: none"> - Visual inspection of all bars - Ultrasonic examination of all bars in accordance with TWP1204. 100% of the volume must be tested in accordance with the recording level. 8.3.2 Recording level and acceptance criteria: <ul style="list-style-type: none"> - Indications of surface defects such as rolled marks shall be ground out to investigate their depth at least at both ends, in the middle of the indication and at an interval of approx. 250mm. - Surface defects with a depth extension of $\geq 1\text{mm}$ are not allowable, and these areas shall be cut out of the bar. - Ultrasonic examination of all bars in accordance with TWP 1204. - Defects above the recording level are not acceptable. - It shall be confirmed in writing to the BHEL that bar sections containing defects above the recording level have been cut out of the bar. - The acceptance of material at vendor's works does not relieve the supplier of his responsibility for defects discovered at later stages. 8.3.3 Material Identity Test: An identity test must be conducted in the as – delivered condition on all bars.													
9.0 Process Qualification: In addition to testing as per clause 8.0 of this specification, following additional testing shall be performed in process qualification (see Attachment 2). All test results carried out during process qualification shall be submitted to BHEL for approval.													
- Tensile tests¹: The strength values (0.2% Proof Stress and Tensile Strength) in the transverse direction (specimen orientation ZQ) shall not differ by more than 10% from the corresponding longitudinal values.													
- The absorbed impact energy in the transverse direction (KQ 1 -3) should not differ by more than 25% from the values in the longitudinal direction (KI at room temperature).													
- FATT: Determination of FATT (fracture appearance transition temperature) in accordance with ASTM A370. The FATT should be preferably evaluated based on SEP 1670 (software) method. The test scope must include at least 10 specimens. FATT < 25°C is to be achieved.													
In accordance with ISO 6892 -2, a tensile test (in longitudinal direction) has to be performed at 600°C. The following properties must be achieved:													
<table border="1"> <thead> <tr> <th>0.2 % Proof Stress (N/mm²)</th> <th>Tensile Strength (N/mm²)</th> <th>Elongation After Fracture (%)</th> <th>Reduction in area (%)</th> </tr> </thead> <tbody> <tr> <td>≥ 285</td> <td>≥ 380</td> <td>≥ 18</td> <td>≥ 60</td> </tr> </tbody> </table>						0.2 % Proof Stress (N/mm ²)	Tensile Strength (N/mm ²)	Elongation After Fracture (%)	Reduction in area (%)	≥ 285	≥ 380	≥ 18	≥ 60
0.2 % Proof Stress (N/mm ²)	Tensile Strength (N/mm ²)	Elongation After Fracture (%)	Reduction in area (%)										
≥ 285	≥ 380	≥ 18	≥ 60										
¹ For case where standard specimens in transverse direction cannot be made: -													
- For tensile test specimens, a round specimen with $L_0 = 5 d_0$ or a flat specimen with a proportionality factor of $k= 5.65$. Proportional specimens in accordance with Fig 8 shall be used if ASTM E8 is applied.													
- An undersized specimen in accordance with ISO 148 -1 for impact test specimen. Undersize dimension to be reported.													
- If dimension do not allow testing in the transverse direction, even with special specimen, testing will be carried out in the longitudinal direction only.													
प्रत्यक्ष एवं दिनांक SIGN & DATE 	REV 08 (SUPERSEDES)		निर्माणकर्ता WORKED BY	Ashish Ranjan	09.06.17								
INVENTORY P-2006			जांचकर्ता CHECKED BY	Gopal Krishnan	09.06.17								

हस्ताक्षर एवं तिथि SIGN & DATE		संस्थान क्रय विनिर्देश (हीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARIDWAR)	HW 10687 पृष्ठ का Page 5 of 8	
सुपरसेड्स INVENTORY NO. सापेक्षी सूची संख्या को प्रतिस्थापित करना	<p>Intergranular Fracture:</p> <p>The fraction of Intergranular fracture shall be determined over the entire brittle fracture portion of the fracture surface of the impact test specimens tested at room temperature. The fraction of Intergranular fracture shall not exceed 10%. This test is not required for materials which indicate $\geq 90\%$ ductile fracture at room temperature.</p> <p>Magnetic Particle Test:</p> <p>Performance of MT testing by the magnetic flux leakage method, alternating current phase shifted and a field strength of 20 – 65A/cm.</p> <p>Distribution, type and size of grain structure in-homogeneities (e.g. segregation or delta ferrite) shall not result in MT indications.</p>			
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 this company.	<p>10.0 Identification Marking:</p> <p>All bars are to be marked with following information:</p> <ul style="list-style-type: none"> - Purchase Order Number - Size - Material Grade - Supplier Identification <p>The details are to be clearly stamped and encircled by oil paint. Each bar shall be painted with gold colour on both ends. All the bars shall be suitably packed to protect them against corrosion and damage during transportation.</p> <p>Bars having maximum and minimum hardness (from which test samples are taken) shall be clearly marked by oil paint for easy identification. Their respective hardness values shall also be punched on these bars.</p> <p>11.0 Documentation:</p> <p>Prior to, but in no case later than the delivery of the material, an inspection certificate as per EN 10204 shall be provided to BHEL in duplicate; this certificate must contain the following data:</p> <ul style="list-style-type: none"> (a) Material code no and P.O. number (b) Material designation (c) Heat no., heat analysis and melting methods (d) Complete information on all heat treatments performed (d) Mechanical test results including hardness range and the metallurgical examination. (e) Results of non-destructive tests, UT inspection report (f) Confirmation of the material identity check (g) Confirmation of the dimensions and visual inspection <p>12.0 Cross Referred Standards:</p> <p>EN10269, HW0993008, ISO 6506-1, ISO 6892, ISO 148-1, ASTM E8M, EN10021, ASTM E45, ASTM E112, ISO 643, TWP1204, ASTM A370, SEP1670, EN10204</p> <p>13.0 Modification with respect to last revision:</p> <ul style="list-style-type: none"> • Clause 8.3 modified. 			
स्वतंत्रताधिकार एवं गोपनीयता इस दस्तावेज में दी गई सूचना स्वतंत्रता के अधिकारों को सुरक्षित रखे। इसका प्रसारण एवं उपयोग केवल के लिए ही किया जा सकता है जो कि इस दस्तावेज के बिना ही प्रतिक्रिया दे या किए जाय				
हस्ताक्षर एवं तिथि SIGN & DATE 				
सापेक्षी सूची संख्या INVENTORY NO. P-2006	REV 08 (SUPERSEDES)	निर्माणकर्ता WORKED BY	Ashish Ranjan 	09.06.17
		जांचकर्ता CHECKED BY	Gopal Krishnan 	09.06.17

प्रमाणित एवं दिनांक SIGN & DATE		संस्थान क्रय विनिर्देश (हीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARIDWAR)	HW 10687 पृष्ठ का Page 6 of 8										
SUPERSEDES INVENTORY NO. सामग्री सूची संख्या से अधिकतम करार है	Attachment 1 Standard Testing												
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharti Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  </div> <div style="flex: 1;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Label</th> <th style="text-align: center;">Specimen</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">ZI</td> <td style="text-align: center;">Tensile Specimen Centre</td> </tr> <tr> <td style="text-align: center;">WZ*</td> <td style="text-align: center;">Hot Tensile Specimen</td> </tr> <tr> <td style="text-align: center;">KI 1 - KI 3</td> <td style="text-align: center;">Notched Impact Specimen Centre</td> </tr> <tr> <td style="text-align: center;">M</td> <td style="text-align: center;">Metallographic Specimen</td> </tr> </tbody> </table> <p style="font-size: small;">* if required in material specification</p> </div> </div> <div style="display: flex; align-items: center; margin-top: 20px;"> <div style="flex: 1;">  </div> <div style="flex: 1;">  </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; font-size: small;"> Lower Surface of the Metallographic Specimen has to be examined. Longitudinal direction must be indicated in the documentation. $A \geq 320 \text{ mm}^2$ </div>			Label	Specimen	ZI	Tensile Specimen Centre	WZ*	Hot Tensile Specimen	KI 1 - KI 3	Notched Impact Specimen Centre	M	Metallographic Specimen
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प्रमाणित एवं दिनांक SIGN & DATE	जांचकर्ता CHECKED BY Gopal Krishnan												
सामग्री सूची संख्या INVENTORY P-2206	02.05.17 02.05.17												

प्रमाणित एवं दिनांक SIGN & DATE		संस्थान क्रय विनिर्देश (हीप - हरिद्वार) PLANT PURCHASE SPECIFICATION (HEEP - HARIDWAR)	HW 10687 पृष्ठ का Page 7 of 8																
SUPERSEDES INVENTORY NO. आगामी सूची संख्या में उल्लेखित न हो	Attachment 2, Page 1/2 Process Qualification																		
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.	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); margin-right: 10px;">Longitudinal direction</div>  </div>																		
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सुपरीदेस INVENTORY NO. सारणी सूची संख्या को अधिकारित करने	<p style="text-align: right;">Attachment 2, Page 2/2</p> <p style="text-align: center;">Process Qualification</p> <table border="1" data-bbox="279 430 766 709"> <thead> <tr> <th>Label</th> <th>Specimen</th> </tr> </thead> <tbody> <tr> <td>M</td> <td>Metallographic Specimen</td> </tr> <tr> <td>MP</td> <td>Specimen for Magnetic Particle Test</td> </tr> </tbody> </table>				Label	Specimen	M	Metallographic Specimen	MP	Specimen for Magnetic Particle Test
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स्थापक एवं दिनांक SIGN & DATE 4/5/17										
सारणी सूची संख्या INVENTORY P-2006	REV. 08	निर्माणकर्ता WORKED BY	Ashish Ranjan	02.05.17						
	जांचकर्ता CHECKED BY	Gopal Krishnan	02.05.17							

दिनांक एवं हस्ताक्षर SIGN & DATE SUPERSEDES INVENTORY NO. सावधानीपूर्वक से संभालें सावधानीपूर्वक से संभालें सावधानीपूर्वक से संभालें		<h1 style="margin: 0;">संस्थान मानक (हीप : हरिद्वार)</h1> <h2 style="margin: 0;">PLANT STANDARD (HEEP: HARIDWAR)</h2>	HW0993008 पृष्ठ 2 का 1 Page 1 of 2																																							
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<u>DIMENSION AND TOLERANCES OF BAR MATERIAL OF BLADES FOR SPECIFICATIONS HW10663, HW10670, HW10786, HW10687 & NICKEL BASED SUPER ALLOYS (HW12784, INCONEL 617M, NIMONIC 105 ETC.)</u>																																										
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संस्थान मानक (हीप : हरिद्वार)

HW0993008

PLANT STANDARD (HEEP : HARIDWAR)

पृष्ठ 2 का 2
Page 2 of 2

Table:2

Condition	Bending	Twisting
B & S both ≤ 110	1.5 mm/meter	1.5 mm/meter
B or S > 110	2 mm/meter	2 mm/meter

Table 3: Straightness tolerances (q_{max}) for rectangular section bar

Straightness	Value of q_{max} (mm)	Condition
	$(L \times 1.5)/2000$	B & S both ≤ 110
	$(L \times 2)/2000$	B or S > 110

Bulging on the sides shall not be more than $0.01 \times B$ & $0.02 \times S$ respectively

Table 4: Out of section tolerance for rectangular section bar:

Out of section	Nominal Thickness (mm)	Tolerance(mm)
	$10 < S \leq 25$	$u \leq 0.5$
	$25 < S \leq 40$	$u \leq 1.0$
	$40 < S \leq 80$	$u \leq 1.5$
	$S > 80$	$u \leq 3.0$

2. Cross referred documents: HW10663, HW10670, HW10786, HW10687, HW12784 and EN10269.

REV.
NO. 01

निर्माणकर्ता
WORKED BY

SANDIP
CHAKRABORTY

जांचकर्ता
CHECKED BY

ANIL KUMAR

05/06/2020

05/06/2020

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स्वतंत्रता और गोपनीय

इस दस्तावेज़ में दी गई सूचना भारत भारती लिमिटेड की सम्पत्ति है। इसका प्रयोग
एक मात्रा में ही किया जा सकता है। यदि इस दस्तावेज़ को किसी अन्य व्यक्ति को दे दिया
जाएगा, तो यह गोपनीयता के सिद्ध में हानिकारक हो सकता है।

निर्माणकर्ता
SIGN & DATE

जांचकर्ता
INVENTORY NO.

REV. NO. 01

डॉक्यूमेंट सर्वर पर मौजूद कर दी गई है।
DOCUMENT RELEASED FROM SERVER/CTA

हस्ताक्षर दिनांक
SIGN & DATE

डॉक्यूमेंट सर्वर पर जमा कर दी गई है।
DOCUMENT DEPOSITED IN SERVER

हस्ताक्षर दिनांक
SIGN & DATE

संशोधन प्रपत्र
CHANGE ADVICE FORM



संशोधन सूचना संख्या
CHANGE ADVICE NO.

जारीकर्ता विभाग
ISSUING DEPTT. TBM

उत्पाद का प्रकार
TYPE OF PRODUCT
Turbine blade

जीएमएस/जीआर
रससी/सीबीएम सं
GMS / GRSP
/CBOM NO.

मुद्रण वितरण
दिनांक
PRINT
DELIVERY DATE

स्वीकृतिकर्ता
APPROVED BY
Date 06/06/2020
Signature

75X (TSX) 20-166

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QUALITY PLAN
(QA/PMD/001 Rev 00)

MANUFACTURER'S NAME AND ADDRESS				QUALITY PLAN				TO BE FILLED BY BHEL				TO BE FILLED BY BHEL			
BHEL	VENDOR'S NAME	ITEM	AS PER PO	QP NO.	QA/PMD/001										
		DRG. NO.	AS PER PO	REV	00										
		SPEC.	AS PER PO												
		REV	AS PER PO												
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS		CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY		REMARKS			
1	2	3		4	5	6	7	8	9	D	M	B	N	11	

IN CASE OF PROCUREMENT OF PLATES, PIPES, FLATS, ROUNDS (CS), BARS (CS), STRIPS ETC. IS PROCURED DIRECTLY FROM OEM.													
1.	1A	RECEIVING MATERIAL INSPECTION	IDENTIFICATION & VERIFICATION OF MILL TEST CERTIFICATES	CRITICAL	VERIFICATION OF MILL TC	100%	BHEL SPEC	BHEL SPEC	MILL TC / IR	✓	P	V	1. CO-RELATED ORIGINAL OR CO-RELATED COMPUTER GENERATED MATERIAL TEST CERTIFICATE (MTC), ORIGINATED FROM OEM (SEALED AND SIGNED BY OEM) 2. EVERY PLATES, PIPES, FLATS, ROUNDS, BARS, STRIPS ETC. MUST HAVE IDENTIFICATION MARKING OF STEEL MANUFACTURER AS PER APPLICABLE SPECIFICATION/ STANDARD. 3) CO-RELATION WITH TC ALONG WITH CORRELATED INVOICE TO BE PROVIDED WITH SUPPLY OF THE ITEMS.

MANUFACTURER/SUBCONTRACTOR	LEGEND: ! RECORDS IDENTIFIED WITH 'TICK' UNDER COLUMN 'D' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR/VENDOR IN QA DOCUMENTATION. M: MANUFACTURER / SUBCONTRACTOR B: BHEL / BHEL NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHIP' OF CUSTOMER		FOR CUSTOMER USE	APPROVED BY


Digitally signed by Indra Bhushan Kumar
DN: cn=Indra Bhushan Kumar, o=BHEL,
c=IN
Date: 2024.11.27 14:58:57 +05'30'
Adobe Acrobat Reader version:
2024.004.20272

MANUFACTURER'S NAME AND ADDRESS				QUALITY PLAN				TO BE FILLED BY BHEL				TO BE FILLED BY BHEL			
VENDOR'S NAME		ITEM	AS PER PO		QP NO.	QA/PMD/001									
BHEL			DRG. NO.	AS PER PO	REV	00									
			SPEC.	AS PER PO											
			REV	AS PER PO											
SL. NO.		COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY	REMARKS				
1		2	3	4	5	6	7	8	9	M	B	N	10		

2. IN CASE OF PROCUREMENT OF PLATES, PIPES, FLATS, ROUNDS, BARS, STRIPS ETC. IS PROCURED FROM TRADER/STOCKIST.													
2A	RECEIVING MATERIAL INSPECTION	IDENTIFICATION & VERIFICATION OF MILL TEST CERTIFICATES	CRITICAL	VERIFICATION OF MILL TC	100%	BHEL SPEC	BHEL SPEC	MILL TC / IR	✓	P	V	1. CO-RELATED ORIGINAL OR CO-RELATED COMPUTER GENERATED MATERIAL TEST CERTIFICATE (MTC). ORIGINATED FROM OEM (SEALED AND SIGNED BY OEM) 2. MILL TC (AS PER BHEL ORDERING DOCUMENTS) SHALL BE FROM MANUFACTURER IDENTIFIED IN PO 3. EVERY PLATES, PIPES, FLATS, ROUNDS, BARS, STRIPS ETC. MUST HAVE IDENTIFICATION MARKING OF STEEL MANUFACTURER AS PER APPLICABLE SPECIFICATION/ STANDARD. 4) CO-RELATION WITH TC ALONG WITH CORRELATED INVOICES (FROM STEEL MANUFACTURER TO BIDDER) TO BE PROVIDED WITH SUPPLY OF THE ITEMS.	
2B	For Pipes only	SAMPLE FOR CHEMICAL AND MECHANICAL TEST	MAJOR	VISUAL	AS PER ORDERING SPECIFICATION ON	AS PER ORDERING SPECIFICATION AND DOCUMENTS	AS PER ORDERING SPECIFICATION AND DOCUMENTS	REPORT	✓	P	W	-	
2C	For Pipes only	REPEAT TEST CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES	MAJOR	VISUAL AND MEASUREMENT	AS PER ORDERING SPECIFICATION ON	AS PER ORDERING SPECIFICATION AND DOCUMENTS	AS PER ORDERING SPECIFICATION AND DOCUMENTS	REPORT	✓	P	W	-	TESTING TO BE DONE IN NABL APPROVED LABORATORY ONLY.

NOTE: 1) TPIA TO REVIEW ALL THE REMAINING TCs AS PER ORDERING TCs AS PER ORDERING DRAWING / SPEC / DOCUMENTS (AS APPLICABLE).

[Signature]

MANUFACTURER/SUBCONTRACTOR Digitally Signed by Indra Bhushan Kumar DN: cn=Indra Bhushan Kumar, o=BHEL, ou=HEEP Hardwar, ou=BHEL/HEEP Hardwar, email=ibkumar@bhel.in, c=IN Date: 2024.11.27 14:59:16 +05:30 Reason version: 2014.004.20272		LEGEND: ! RECORDS IDENTIFIED WITH 'TICK' UNDER COLUMN 'D' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR/VENDOR IN QA DOCUMENTATION. M: MANUFACTURER / SUBCONTRACTOR B: BHEL / BHEL NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER		FOR CUSTOMER USE		APPROVED BY	
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Certificate of No Deviation

CERTIFICATE OF NO DEVIATION

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Subject: **No Deviation Certificate**

Ref: 1) GeM Bid No:,
2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred GeM Bid.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

**(Signature, date & seal of authorized
representative of the bidder)**

Date:

Place: