



**BHARAT HEAVY ELECTRICALS LTD.**  
 (A GOVT. OF INDIA UNDERTAKING)  
 P.O BHEL Jhansi - 284129, INDIA  
 Tel.:0510-277001/2412260 Fax: 2412120  
 Email : mmx@bheljhs.co.in

**PURCHASE ENQUIRY**

ENQ NO/DT: E0120015 01/08/22  
 REV NO/DT: 0 01/08/22

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PLEASE SEND YOUR BEST QUOTATION AS PER TERMS & CONDITIONS AND REMARK MENTIONED UNDERNEATH.	
Enq Due on:	10-08-22 WEDNESDAY
Close at:	13:15 Open at:14:00
Matcat:	011001 M S Plate/HRC,Steel
Validity:	120 days from Technical bid opening date
IEM:	
TOP:	See Special Remarks
RA:	RA not applicable
REQUIRED: TEST CERT	
Est. Value:	Item wise
Bid Type:	TWO BID
Tot Item:	3
Delivery:	FOR Jhansi
E-Proc:	Yes

ITEM NO : 1 PSL QTY/UM: 5000.00 KG  
 MATL CODE : AA1011713136 PO QTY /UM: 5.00 MT  
 DESTINATION: JS

DESCRIPTION	DELIVERY	QUANTITY (PSL UM)
HRC STL SHT 3.15TK X 1250 X 2500 MM & ABOVE TO CPS AA10113 REV-07	AUG-22	5000.00

ITEM NO : 2 PSL QTY/UM: 10000.00 KG  
 MATL CODE : AA1011808030 PO QTY /UM: 10.00 MT  
 DESTINATION: JS

DESCRIPTION	DELIVERY	QUANTITY (PSL UM)
MS PLATE 6TK X 1500 X 6300 MM & ABOVE TO CPS AA10108 REV-11/IS 2062 GRADE A/B.	AUG-22	10000.00

ITEM NO : 3 PSL QTY/UM: 10000.00 KG  
 MATL CODE : AA1011808056 PO QTY /UM: 10.00 MT  
 DESTINATION: JS

DESCRIPTION	DELIVERY	QUANTITY (PSL UM)
M.S.PLATE, 8TK X 2500 X 6300 MM & ABOVE TO CPS AA10108 REV-11/ IS2062 GRADE A/B.	AUG-22	10000.00

**SPECIAL REMARKS:**

- TENDER ENQUIRY IS BEING PUBLISHED IN TWO PART BIDDING ON NIC PORTAL (<https://eprocurebhel.co.in/>).
  - PART "A" (COVER NAME - \*\*\*\*Pack1) SHOULD CONTAIN YOUR TECHNO - COMMERCIAL OFFER ALONGWITH OTHER COMMERCIAL DOCUMENTS.
  - PART "B" (COVER NAME - \*\*\*\*Pack2)



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ENQ NO/DT:	E0120015	01/08/22	PAGE	2 8
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JSC140/M2053

SHOULD CONTAIN PRICE BID ONLY.

2. PLEASE SEND THE TECHNO-COMMERCIAL BID (PART A) & PRICE BID (PART-B) AS PER FORMATS UPLOADED ON NIC PORTAL ONLY BEFORE DUE DATE AND TIME SPECIFIED IN ENQUIRY.
3. SOURCE OF MATERIAL PROCUREMENT /PURCHASE ALONG WITH CERTIFICATE SHALL BE REQUIRED
4. QUANTITY TOLERANCE: TOLERANCES UPTO +/- 10% ACCEPTABLE.
5. MATERIAL SHALL BE PROCURED ON F.O.R BHEL JHANSI BASIS, BIDDERS ARE ADVISED TO OFFER THEIR QUOTATIONS ACCORDINGLY.
6. PLEASE QUOTE WITH FIRM RATES OTHERWISE OFFER SHALL NOT BE CONSIDERED.
7. ALL THE TERMS AND CONDITIONS OF THE CONTRACT WITH RESPECT TO TAXES AND DUTIES ARE SUBJECT TO THE NEW TAXATION LAWS INTRODUCED FROM TIME TO TIME ( E.G. GST). THE TERMS AND CONDITIONS WILL BE MODIFIED IN ACCORDANCE WITH THE PROVISIONS OF NEW LAWS E.G. GST.
8. PREFERENCE TO MICRO & SMALL ENTERPRISE (MSE) SUPPLIERS (TRADERS EXCLUDED) SHALL BE GIVEN AS PER CLAUSE 22 OF BHEL JHANSI GTC REV 03.
9. PREFERENCE TO PURCHASE UNDER 'MAKE IN INDIA' (MII) SHALL BE GIVEN AS PER CLAUSE 23 OF BHEL JHANSI GTC REV 03.
10. THE BIDDER IS INFORMED THAT THE GENERAL TERMS & CONDITIONS REV 03 OF ENQUIRY WHICH ARE UPLOADED AT [https://www.bheljhs.co.in/index\\_en.php](https://www.bheljhs.co.in/index_en.php). ARE TO BE READ BY THE BIDDER BEFORE SUBMITTING QUOTE IN THE ENQUIRY. BHEL SHALL CONSTRUCE THE PARTICIPATION BY THE BIDDER IN THE ENQUIRY AS ACCEPTANCE TO THE GENERAL TERMS & CONDITIONS OF ENQUIRY.
11. RA SHALL NOT BE CONDUCTED. L-1 BIDDER WILL BE DECIDED BY PRICE BID OPENING OF QUALIFIED AND TECHNICALLY ACCEPTED BIDDERS.
12. ALL OTHER TERMS AND CONDITION SHALL BE AS PER ATTACHED TECHNO-COMMERCIAL BID AND GTC REV 03.

In case the bidder has not submitted PAN No, TIN No. and E-mail ID, the bidder has to submit the same along with the copy of PAN No and TIN No. Else his offer will be liable to be rejected.

If you are not in a position to quote due to any reason, you must send regret letter titled enquiry no. etc, failing which you may not be considered for sending future enquiries.

\*\*\*\*\*

ENCLOSERS:



JSC140/M2053

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### PURCHASE ENQUIRY

ENQ NO/DT: E0120015 01/08/22  
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FOR AND ON BEHALF OF  
BHARAT HEAVY ELECTRICALS LTD

*Ch. Singh*  
11/08/22  
CHOUHRY M S VERMA  
MANAGER (CMM)  
Email:-mulayam@bhel.in

\*\*\*\*\* END OF PURCHASE ENQUIRY \*\*\*\*\*

**NOTE :**

- \* THE BIDDER IS INFORMED THAT THE GENERAL TERMS & CONDITIONS OF ENQUIRY (JHS 2055A Rev 03) WHICH ARE UPLOADED AT <https://www.bheljhs.co.in/apps/sip/index.php> AT (TERMS & CONDITION -> FOR ENQUIRY ) LINK, ARE TO BE READ BY THE BIDDER BEFORE SUBMITTING QUOTE IN THE ENQUIRY. BHEL SHALL CONSTRUCE THE PARTICIPATION BY THE BIDDER IN ENQUIRY AS ACCEPTANCE TO THE GENERAL TERMS AND CONDITIONS OF ENQUIRY.
- \* SUPPLIERS ARE REQUESTED TO INFORM US WITH VALID CERTIFICATE, IF THEY ARE REGISTERED UNDER MSMED ACT'2006. (APPLICABLE FOR INDIAN SUPPLIERS ONLY).
- \* FOR SUPPLIERS SUPPLYING FROM OUTSIDE THE LOCAL AREA OF BHEL JHANSI, ENTRY TAX WILL BE APPLICABLE. SUPPLIERS SHOULD NECESSARILY INDICATE RATE OF ENTRY TAX SEPARATELY WHEREVER APPLICABLE. THEY SHOULD ALSO MENTION THE ENTRY TAX CHARGED SAPARATELY IN THE INVOICE.
- \* FOR SUPPLIERS SUPPLYING FROM OUTSIDE UP, IN CASE THE OFFER IS SILENT ON ENTRY TAX, IT SHALL BE LOADED SUITABLY WITH THE APPLICABLE RATES
- \* IN CASE IF THERE IS ANY DIFFERENCE BETWEEN THE 'SPECIAL REMARKS/ANNEXURES' OF THE ENQUIRY AND THE PREPRINTED TERMS & CONDITIONS (REF JSC140/M2053), THE REQUIREMENT GIVEN IN REMARKS WILL PREVAIL.
- \* Reference Sl. No. 2(B) of General Terms and Conditions regarding option for offer submission through Email addressed to [tenderbox.jhs@bhel.in](mailto:tenderbox.jhs@bhel.in) , please note that the maximum mail size including attachments should not exceed 20 MB , otherwise the offer shall not be delivered due to size limitation and bidder sending mail attachments more than 20 MB will have no claim whatsoever on the subject tender . Also due to any technical snag , if offer has not reached [tenderbox.jhs@bhel.in](mailto:tenderbox.jhs@bhel.in) , it will be bidder's sole responsibility to ensure offer submission through alternate routes before the due date and time .BHEL will not entertain any such claim for non-receipt of offer on time .



**BHARAT HEAVY ELECTRICALS LIMITED JHANSI - 284120**  
(A Govt of India undertaking)  
Central Material Management

**Part-A**

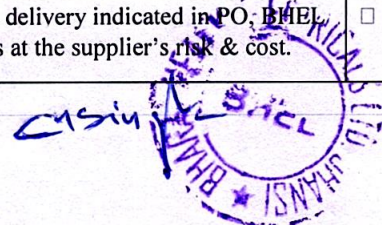
**TECHNO COMMERCIAL BID FOR ENQUIRY NO. E0120015 Rev 00**

**Mandatory sheet regarding instruction to bidders for compliance for Indigenous bidders**

QUOTATION NO.....DATE.....

SUPPLIER'S NAME: .....

Sl. no.	Particulars	Supplier's Confirmation
1	Complete acceptance for supply of items as per Purchase / Tech. specification mentioned in the enquiry.	<input type="checkbox"/> Accepted
1A)	In case of acceptance to 1 above and wherever needed, successful bidder has to submit duly seal & signed copy of Drgs, Purchase / Tech. specification etc. as token of acceptance before placing order.	<input type="checkbox"/> Accepted
2	Acceptance to all special remarks / <b>General Terms &amp; Condition JHS 2055A rev 03</b> of enquiry.	<input type="checkbox"/> Yes
3	<b>Guarantee / Warrantee / Conformance / Test Certificate</b> (along with supply) as specified in enquiry will be provided.	<input type="checkbox"/> Yes
4	<b>Delivery</b> period from date of PO issue.	.....Days.
5	<b>Taxes &amp; Duties -</b>	<input type="checkbox"/> Accepted
	a) <b>Tariff Head / HSN No.</b>	
	b) Applicable GST (mention NA if not applicable)	.....%
6	<b>Price Bid</b> submitted as per attached price bid format only (Copy of blank price bid is submitted).	<input type="checkbox"/> Yes
7	Acceptance to <b><u>Delivery Terms on F.O.R BHEL Jhansi as per latest GTC.</u></b>	<input type="checkbox"/> Accepted
8	Basic rate quoted is <b>inclusive of Packing &amp; forwarding</b>	<input type="checkbox"/> Yes
9	Acceptance for <b>Prices on firm basis and no PVC is applicable</b>	<input type="checkbox"/> Yes
10	Acceptance for <b>120 days Validity</b> of offer from date of Part-I bid opening.	<input type="checkbox"/> Yes
11	<b>Inspection</b> – Final inspection for acceptance of quality and quantity shall be done at BHEL's works after receipt of material and results shall be binding on the suppliers. Supplier has to furnish all required documents for getting 'Dispatch Clearance' before dispatching the material.	<input type="checkbox"/> Accepted
12	<b>Liquidated Damage / Penalty</b> - Failure to supply by the time specified in the order will make the supplier liable to pay unconditional penalty of 0.5% of the price of the goods in arrear (delayed and not supplied) per week or part thereof, subject to a maximum of 10% of the order value.	<input type="checkbox"/> Accepted
13	<b>Risk Purchase</b> - If the material is not supplied within stipulated delivery indicated in PO, BHEL shall have the option to purchase the material from other sources at the supplier's risk & cost.	<input type="checkbox"/> Accepted





**BHARAT HEAVY ELECTRICALS LIMITED JHANSI - 284120**  
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14A)	<b>Payment Terms (For indigenous bidders) -</b> 100 % payment within 90 days (45 days for MSE / NSIC registered suppliers as per relevant act in force) from the date of receipt of material and submission of clear and admissible bill, subject to acceptance of material at BHEL, on direct presentation of the documents.  In case of dispatch of material to site directly, site certification for receipt of materials is required. <b>Only MSME suppliers (excluding Traders) with Udyam Certificate and duly filled format of CA certificate shall be eligible for MSE payment terms benefits.</b>	<input type="checkbox"/> Accepted
14B)	<b>Preference to MSE –</b> MSE Manufacturers shall be given as per MSME Act. Preference criteria shall be <b>L1+15% for MSE suppliers with maximum of 20% Bid Qty as BHEL GTC.</b>	<input type="checkbox"/> Accepted
14C)	<b>Preference to Make in India (MII) –</b> MII supplier with <b>50% local content</b> shall be given as per DPIIT Order dtd 04.06.20. Preference Criteria Shall be <b>L1+20% for MII suppliers with 50% Bid Qty</b> on production of self-certification by supplier.	<input type="checkbox"/> Accepted
15	<b>Guarantee -</b> In Case an order is placed, supplier shall be required to guarantee for smooth and satisfactory performance of the equipment Warranty of the items shall be 30 months from the date of supply or 24 months from the date of commissioning whichever is later. and certificate must be issued to this effect. Necessary instruction booklets for operation and maintenance are to be sent with supply, where applicable.	<input type="checkbox"/> Accepted
16	"The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <a href="http://www.bhel.com">http://www.bhel.com</a> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice."	<input type="checkbox"/> Accepted
17	Supply Tolerance for this Enquiry shall be +/- 10%.	<input type="checkbox"/> Accepted
18	Reverse auction will not be conducted. L1 bidder shall be decided by price bid opening	<input type="checkbox"/> Accepted
19	<b>Qualification Criteria:</b> Qualifying Criteria shall be as per annexure-P.	

- Notes: -
- 1) If above clauses are not accepted offer may not be considered.
  - 2) If rates are disclosed through any other format along with techno-commercial bid (Part-I), offer may not be considered.
  - 3) Evaluation of bid will be done on landed cost to BHEL, Jhansi basis. Hence, please quote accordingly.
  - 4) L-1 bidder will be decided by price bid opening of PQR qualified and technically accepted bidders.

In case of any discrepancy/deviation in terms & conditions accepted in mandatory sheet and condition given in the offer, acceptance given on mandatory sheet shall be considered.

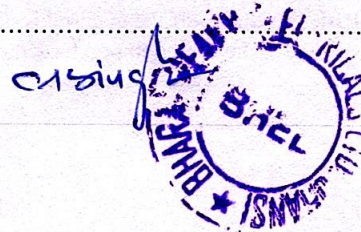
Signature of supplier & seal : .....

Date : .....

Name of contact person : .....

Cell No. : .....

E-mail : .....



**Pre- Qualification Requirement (PQR)**  
**for open enquiry on GeM and BHEL e-Procurement/NIC**

While floating tender /enquiry/NIT on GeM or on BHEL e-procurement /NIC the following PQR to be used.

**Pre- Qualification Criteria of Past Performance for bidders**

The Bidder or its OEM (themselves or through re-seller(s)) should have supplied same or Similar Category Products of quantity / value as detailed in (B) to the customers as detailed in (C). Bidder to submit the documents as detailed at (A) along with Techno-commercial Bid (Part I bid)

The bidder should have executed minimum two Orders of total quantity/value as defined in (A) in last five Financial years before the bid opening date. Supplies made in current FY will also be considered.

**(A) Bidder should submit the following documents as a proof of execution**

- 1) Copies of two or more Purchase Order, and
- 2) Copies of invoices (of same PO), and
- 3) Self-certification by bidder that, the supplies against the submitted PO and invoices PO have been executed by them successfully.
- 4) Credentials of Power Transformer Manufacturer (only when Option C-2 is opted)

**(B)- Minimum quantity/ value**

- 1) If order is not to be split : Minimum 10% of total contract value/Quantity for Non-MSE bidders and minimum 7% of total contract value/Quantity for MSE bidders
- 2) If the order is to be split among more than one bidder: Minimum 10% of L1 share of value/Quantity for Non- MSE bidders and minimum 7% of L1 share of value/Quantity for MSE bidders

**Pre- Qualification Requirement (PQR)**  
**for open enquiry on GeM and BHEL e-Procurement/NIC**

**(C)- Should have supplied to any of the following manufacturers or organisations**

- 1) Central/ State Govt. Organization / PSU / Public Listed Company,  
Or
- 2) Any Manufacturer or Power Utility Company of 220 KV or above rating Power Transformers.  
Or
- 3) BHEL /ABB / Siemens / Mitsubishi Electric / Toshiba / TBEA / Alstom / Crompton Greaves / Bharat Bijlee / TELK / EMCO / T & R / Voltamp Trfr / Imp Power / Vijay Electrical / Technical Associates / Schneider Electric / Andrew Yule / Skipper Ltd./ High Volt,  
or
- 4) ABB Limited/ ASTOR TRANSFORMER A.S/ Bemag Transformer, Inc. / Bowers Electricals Ltd. / Changzhou XD Transformer Co., Ltd. / DAIHEN Corporation / EFACEC Group/ GE Grid Solutions / Hammond Power Solutions, Inc. / Howard Industries, Inc./ Hyosung Heavy Industries/ Hyundai Electric & Energy Systems Co., Ltd. / Imefy Group/ JSHP Transformer / KONCAR Group / Mitsubishi Electric Corporation / Olsun Electrics Corporation/ Schneider Electric SA / SGB-SMIT Group / SGB-SMIT Power Matla / Shihlin Electric & Engineering Corporation / Siemens AG / SPX Transformer Solutions, Inc. / TBEA Co., Ltd. / Toshiba Energy Systems & Solutions Corporation / Wilson Power Solutions/ Wilson Transformer Company/ Winder Power Ltd.,

In case of C(2) , vendor to submit credentials of Manufacturer of Power Transformer to whom they have supplied.

**(D) To qualify for the benefits of MSME Vendors, vendors should submit 'UDYAM Registration Certificate' with date of Udyam registration of Current or Previous Financial Year. In case of the Date of Udyam Registration is older than Previous FY, vendor should submit Certificate endorsed by CA as per Annexure I (enclosed).**

**Certificate by Chartered Accountant on letter head.**

This is to Certify that M/s ....., (hereinafter referred to as 'company/) having its registered office at ..... is registered under MSMED Act 2006 as per following details:-

UDYAM Reg. No. - .....

UDYAM Reg. Date : .....

Category: ..... (Micro/Small),

Major Activity: .....(Manufacturing/Services).

Further verified from the Books of Accounts that the investment and turnover of the company as per the latest three financial statements as per MSMED Act 2006 is as follows:-

(Amount in Crores)

Financial Year	Investment in plant and machinery*	Turnover during the Year	Type of Financial Statements
			Audited/Provisional
			Audited/Provisional
			Audited/Provisional

\*Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Micro, Small and Medium Enterprises vide its notification No.S.O.2119 (E) dated June 26, 2020:

**(Strike off whichever is not applicable)**

The above investment of Rs..... Crore and Turnover of Rs..... Crore is within permissible limit of Investment of Rs. .... Crore and Turnover of Rs..... Crore 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 which is not applicable) and the date of graduation of such enterprise from its original category is ..... (dd/mm/yyyy) as notified vide S.O. No. 2119(E) published in the gazette notification dated 26.06.2020 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

UDIN -



# CORPORATE PURCHASING SPECIFICATION

AA10108

Rev No.11

PREFACE SHEET

## STRUCTURAL STEEL-STANDARD QUALITY (PLATES, SECTIONS, STRIPS, FLATS & BARS)

FOR INTERNAL USE ONLY

REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

### Equivalent/Comparable Standards:

- |             |   |                                       |
|-------------|---|---------------------------------------|
| 1. INDIAN   | : | IS : 2062 – 2011, Gr: E250, Quality A |
| 2. AMERICAN | : | ASTM A131M – 2013                     |
| 3. JAPANESE | : | JIS G3106 – 2008                      |
| 4. EUROPEAN | : | EN 10025 – 2:2004 Gr. S275JR          |

### Suggested/Probable Suppliers and Grades:

- |              |   |                        |
|--------------|---|------------------------|
| 1. M/S TISCO | : | TISTEN 42              |
| 2. M/S SAIL  | : | i) MA 300 HY           |
|              |   | ii) Lloyds, Gr :A      |
|              |   | iii) IS : 2062, Gr : A |

### User Plants and Replaced Plant Specifications/References:

- |                    |   |           |
|--------------------|---|-----------|
| 1. HEP, BHOPAL     | : | PS 10108  |
| 2. TP, JHANSI      | : | PS 10108  |
| 3. HEEP, HARDWAR   | : | 0500.001  |
| 4. HPEP, HYDERABAD | : | HY0210299 |
| 5. HPBP, TIRUCHY   | : |           |

Revisions:

As per Cl. No. 38.1 of MOM of MRC-S&amp;GPS

**APPROVED:**

INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(S&GPS)

Rev No.11

Amd No.

Reaffirmed

Prepared

Issued

Dt. of 1<sup>st</sup> Issue

Dt:22-02-2014

Dt:

Year:

HPEP, Hyderabad

Corp.R&amp;D

July, 1976

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# CORPORATE PURCHASING SPECIFICATION

AA10108

Rev No. 11

PAGE 1 of 2

## STRUCTURAL STEEL-STANDARD QUALITY (PLATES, SECTIONS, STRIPS, FLATS & BARS)

### (ORDERING DESCRIPTION)

#### 1.0 GENERAL:

This specification governs the quality requirements of structural steel plates, strips, flats, bars and sections such as angles, beams, channels and tees etc. of IS: 2062 – 2011, Gr: E250, Quality A

#### 2.0 APPLICATION:

For general engineering purpose.

#### 3.0 CONDITION OF DELIVERY:

Plates, Bars & Sections: Hot rolled in straight lengths without twists & Bends

#### 4.0 COMPLIANCE WITH NATIONAL STANDARDS:

Material shall comply with the requirements of IS: 2062 – 2011, Gr: E250, Quality A

Material offered to EN 10025-2:2004 Gr. S275JR is also acceptable. The tolerance on dimensions for plates shall comply with EN 10029.

#### 5.0 DIMENSIONS AND TOLERANCES:

##### 5.1 DIMENSIONS:

##### 5.1.1 Sizes

Material shall be supplied to the dimensions specified on BHEL Order.

##### 5.1.2 Length

Unless otherwise specified, hot rolled bars and sections shall be supplied in 3 to 6 metres length.

##### 5.2 Tolerances:

5.2.1 The tolerances on hot rolled material shall comply with IS: 1852. However, no plate shall be under the specified thickness at any point.

Revisions:  
As per Cl. No. 38.1 of MOM of MRC-S&GPS

**APPROVED:**  
INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(S&GPS)

Rev No.11	Amd No.	Reaffirmed	Prepared	Issued	Dt. of 1 <sup>st</sup> Issue
Dt:22-02-2014	Dt:	Year:	HPEP, Hyderabad	Corp.R&D	July, 1976

# CORPORATE PURCHASING SPECIFICATION



## 5.2.2 Straight for hot rolled bars:

Unless otherwise specified, the permissible deviation in straightness shall not exceed 5 mm in any 1000 mm length.

## 6.0 HARDNESS (BRINELL):

When tested in accordance with IS: 1500, the material shall show a brinell hardness in the range of 120-156 HB.

Note: Hardness test shall be conducted only when tensile test cannot be performed.

## 7.0 TEST CERTIFICATES:

Unless otherwise specified, three copies of test certificates shall be supplied.

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their dispatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information.

AA10108 Rev.11 / IS:2062 Grade: E250 Quality A / EN 10025-2 Gr. S275JR,

BHEL order no., Melt no. Size, Results of chemical analysis and Mechanical tests, Supplier's name, Identification no. TC no., Signature of competent authority etc.

## 8.0 PACKING AND MARKING:

Plates shall be transported suitably to avoid damage during transit.

For plates below 10 mm thick, each pile (preferably of 16 plates) and each plate 10 mm thick & over shall be marked with melt no. AA10108, BHEL order no., Supplier's name, Identification no., Size & weight on any one corner and encircled with paint preferably of white colour.

## 9.0 REFERRED STANDARDS (Latest publications including amendments):

1) IS: 1500

2) IS: 1852

3) EN 10029



# CORPORATE PURCHASING SPECIFICATION

AA10113

Rev No.07

PREFACE SHEET

## HOT ROLLED CARBON STEEL SHEET (330 N/mm<sup>2</sup> Tensile)

FOR INTERNAL USE ONLY

REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

### Comparable Standards:

1. INDIAN : IS: 5986 – 2011, Gr: 205

### Suggested/Probable Suppliers and Grades:

Refer plant vendors list

### User Plants References:

1. HEEP, HARDWAR : 0500.004, Gr.: St.34  
2. HPEP, HYDERABAD : HY0212299  
3. HEP, BHOPAL : PS10113  
4. HPBP, TRICHY :

#### Revisions:

As per Cl.No.38.1 of MOM of MRC– S&amp;GPS

#### APPROVED:

INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(S&GPS)

Rev No.07

Amd No.

Reaffirmed

Prepared

Issued

Dt. of 1<sup>st</sup> Issue

Dt:22-02-2014

Dt:

Year:

HEP, Bhopal

Corp.R&amp;D

July, 1976

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# CORPORATE PURCHASING SPECIFICATION

AA10113

Rev No. 07

PAGE 1 of 5

## HOT ROLLED CARBON STEEL SHEET (330 N/mm<sup>2</sup> Tensile)

### 1.0 GENERAL:

This specification governs the quality requirements of Hot Rolled Carbon Steel Sheet of thickness of 2.5 mm to 4.0 mm (both inclusive).

### 2.0 APPLICATION:

Suitable for cold forming / drawing / fabrication by welding.

### 3.0 CONDITION OF DELIVERY:

Sheets shall be supplied in hot rolled, decaled and oiled condition. Imported sheets shall be supplied in straight lengths. The edges shall be flattened and sheared. Mill edges are not acceptable. Sheets shall be free from waviness and shall have a uniformly dull (matt) finish.

Oil used for rust prevention should be free from pungent smell. The following oils are suggested:

- a) SERVO RP 125 of M/s. IOC.
- b) RUSTOP 387/388 of M/s. HPC
- c) Bharat TCPF of M/s. Bharat Petroleum
- d) Any other TRP conforming to IS : 1154

### 4.0 COMPLIANCE WITH NATIONAL STANDARDS:

The material shall comply with the requirements of the following National standards and also meet the requirements of this specification.

IS: 5986 – 2011, Gr.: 205: Hot rolled steel flat products for structural forming and flanging purposes - Specification.

### 5.0 DIMENSIONS AND TOLERANCES:

#### 5.1 Sizes:

Hot rolled carbon steel sheets shall be supplied to the dimensions in BHEL order.

#### 5.2 Tolerances:

The tolerances on sheets shall comply with the following:

##### 5.2.1 Thickness (IS: 1852):

Thickness, mm	Tolerance, mm
2.50	± 0.20
3.15	± 0.22
4.0	± 0.25

Revisions:  
As per Cl.No.38.1 of MOM of MRC– S&GPS

**APPROVED:**  
INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(S&GPS)

Rev No.07	Amd No.	Reaffirmed	Prepared	Issued	Dt. of 1 <sup>st</sup> Issue
Dt:22-02-2014	Dt:	Year:	HEP, Bhopal	Corp.R&D	July, 1976

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# CORPORATE PURCHASING SPECIFICATION



## 5.2.2 Width (IS: 1852):

Width, mm	Tolerance, mm
Upto & incld. 1250 mm	+ 6 mm - 0 mm
Over 1250 mm & upto and incld.1550 mm	+ 0.5 percent - 0.0 percent
Over 1550 mm	+ 0.6 percent - 0.0 percent

## 5.2.3 Length (Continuous mill) IS: 1852:

Length, mm	Tolerance, mm
Upto & incld. 2500 mm	+ 25 mm - 00 mm
Over 2500 mm	+ 1 percent subject to a maximum of 70 mm - 0 percent

## 5.2.4 Flatness (for cut lengths):

Thickness, mm	Width, mm	Flatness tolerance, mm
From 2.5 to 4.0	Upto & incld. 1200	15
	Over 1200 & upto incld. 1500	20
	Over 1500	25

## 5.2.5 Edge camber IS: 5986:

The edge camber (i.e. lateral departure of the edge of the material from a straight line forming a chord) of sheets in cut lengths and coil shall not exceed the following values:

### 5.2.5.1 For Cut Lengths:

Length in meters		Tolerance, mm
Over	Upto & incld.	
--	1.25	5
1.25	1.80	6
1.80	2.50	8
2.50	3.15	10
3.15	3.55	12
3.55	4.00	16
4.00	5.00	19

### 5.2.5.2 For Coils:

25 mm in any 5000 mm length.



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## 6.0 MANUFACTURE:

Process of manufacture is left to the discretion of the manufacturer except Bessemer process.

Material shall be manufactured from semi killed or killed steel.

## 7.0 FREEDON FROM DEFECTS:

The sheets shall be free from harmful defects, twists, buckle, rust, scale and waviness and shall be reasonably smooth, flat and square.

## 8.0 CHEMICAL COMPOSITION:

The melt analysis of steel and the permissible variation in the composition of the material from the melt analysis shall be as follows:

Element	Melt analysis, percent, max.	Permissible variation, percent, max.
Carbon	0.15	0.03
Manganese	0.80	0.05
Sulphur	0.040	0.005
Phosphorus	0.040	0.005

## 9.0 TEST SAMPLES:

### 9.1 Tensile Test:

One sample shall be taken per thickness per consignment from each melt.

As far as possible test pieces shall be cut transverse to the direction of rolling and shall be of full thickness of the sheet rolled.

### 9.2 Bend Test:

One sample shall be taken per thickness per consignment from each melt.

Bend test pieces shall be cut so that the axis of the bend is parallel to the direction of rolling viz. transverse.

**Note:** When more than one thickness is rolled from the same melt, one additional test piece for each thickness shall be taken.

## 10.0 MECHANICAL PROPERTIES:

### 10.1 Bend:

When tested in accordance with IS: 1599, the test pieces shall be capable of being bent cold through 180° close. The outer convex surface of the test piece shall be free from cracks.

### 10.2 Tensile:

When tested as per IS: 1608, the test pieces shall show the following properties:

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Tensile strength	: 330 – 440 N/mm <sup>2</sup>
Yield strength	: 205 N/mm <sup>2</sup> , min.
Elongation:	
For sheets up to & Incl. 3 mm, thick	: 20 %, minimum on 80 mm gauge length
For sheets above 3 mm, thick	: 28 %, minimum in 5.65 √So gauge length

## 11.0 HARDNESS (VICKERS):

When tested in accordance with IS: 1501, the material shall show a Vickers hardness in the range of 100 – 140 HV.

**Note:** Hardness test shall be conducted only when tensile test cannot be performed.

## 12.0 TEST CERTIFICATES:

Unless otherwise specified, three copies of test certificates shall be supplied.

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their dispatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

AA10113, Rev 07: HOT ROLLED CARBON STEEL SHEET (330 N/mm<sup>2</sup> Tensile)

BHEL Order No,

Supplier's name,

Identification No

Melt No,

Process of manufacture

Details of pickling, descaling and oiling

Results of dimensional inspection

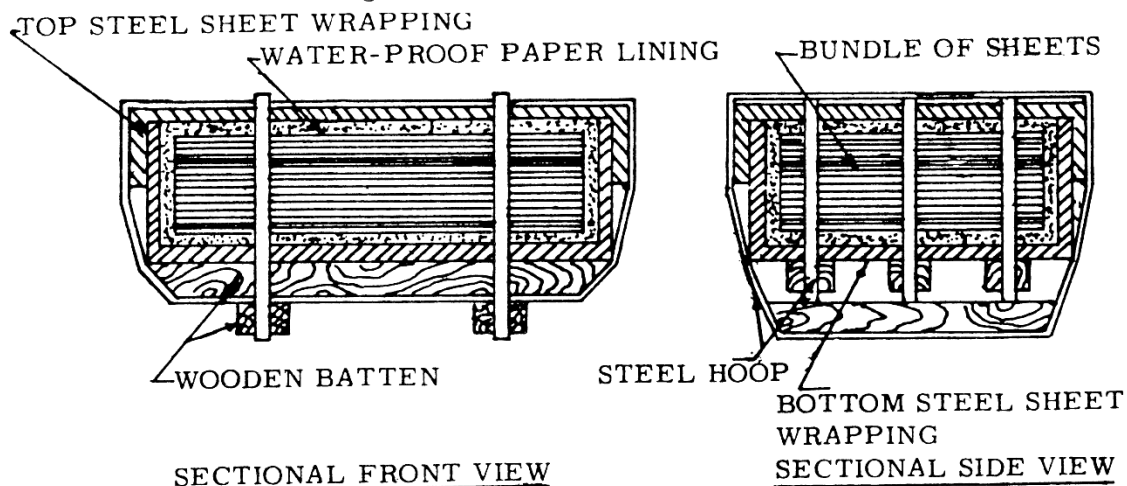
Results of Chemical analysis and Mechanical tests,

**Note:** Material procured, supplied and certified as AA10113 / IS: 5986, Gr.:205 and comply with the requirements of this specification is acceptable.

## 13.0 PACKING AND MARKING:

Steel sheets shall be supplied in bundles and shall be suitably packed in bundles to prevent corrosion and damage during transit.

The recommended packing for imported material shall be as shown below.





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**Note:**

- a) Water proof paper lining shall be preferably Volatile Corrosion Inhibitor (V.C.I.) Coated Paper with an additional polythene (100 micron) enveloped.
- b) Approximate weight of each bundle shall be 2 to 3 tonnes. Bundle weighing 2 metric tonnes is however preferred.

A metal label shall be securely attached to each bundle and shall bear the following information:

AA10113:HOT ROLLED CARBON STEEL SHEET (330 N/mm<sup>2</sup> Tensile)

BHEL Order No,

Supplier's Name & Identification No,

Size & Thickness of sheets

Weight

**14.0 REFERRED STANDARDS (Latest publications including amendments):**

- 1) IS: 1154      2) IS: 1501      3) IS: 1852      4) IS: 1599      5) IS: 1608