

**BHARAT HEAVY ELECTRICALS LIMITED**  
**HEEP HARIDWAR INDIA-PIN 249403**  
**FAX NO: 0091 1334 226462/223948**  
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**Sub: Requirement of Structural Steel High Tensile Plates**

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 following items through GeM Portal- <https://gem.gov.in>

Item Description	Mat. Code	Size (mm)	Qty. (Kg)	Delivery
STRUCTURAL STEEL HIGH TENSILE PLATES SPECIFICATION: AA10122 REV 15 GRADE: GR. S355J2G3	HW1011822989	16 x (1500-2000) x (4000-6000)	6000	30/04/2024
	AA1011822130	20 x (1500-2000) x (4000-6000)	3800	30/04/2024
	AA1011822156	25 x (1500-2000) x (4000-6000)	4710	30/04/2024
	AA1011822601	30 x (2000-2500) x (6000-8000)	4700	30/04/2024
	AA1011822180	36 x (1500-2000) x (4000-6000)	3400	30/04/2024
	AA1011822202	45 x (1500-2000) x (4000-6000)	8500	30/04/2024
	AA1011822210	50 x (2000-2500) x (6000-8000)	7850	30/04/2024
	AA1011822237	63 x (1500-2000) x (4000-6000)	5950	30/04/2024
	AA1011822296	110 x 1300 x 5000	22500	30/04/2024

**Remarks-**

1. Delivery period mentioned in enquiry is indicative, bidders to quote their best possible delivery.
2. Plate thickness 110mm (Mat Code-AA1011822296) is required as per tender size only. For other plate thickness, vendor can offer plates with higher length & width for which acceptance of same shall be in BHEL's discretion.
3. Quantity tolerance  $\pm 10\%$  is acceptable in view of dimensional tolerances.
4. **Risk Purchase:** In case of abnormal delays (beyond the maximum late delivery period as per LD clause in supplies / defective supplies or nonfulfillment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / alternative source at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer.  
In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as

per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract or under General Law.

**Action against Bidders / vendor / supplier / contractor in case of default:**

In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc.

Suspension of Business Dealings could be in the form of “Hold” or “Banning” a supplier/ contractor or a bidder and shall be as per “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” available at BHEL’s website “<https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors>”

5. Payment terms shall be as follows:

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

6. EMD will be applicable (Amount as mentioned in bid document), however EMD is waived in following cases-
- Central/ State – PSUs
  - 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 with BHEL (HEEP), Haridwar are also exempted from EMD.
  - Other exemptions on EMD will be as per GeM Terms and conditions.

**Note:** Benefits of MSE (such as EMD Waiver, Tender fee exemption, 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.

7. “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**

- d. 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
  
- e. 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.”

### Pre- Qualification Requirements

PQR Point	Requirements	Vendor to submit / confirm	Vendor's reply
<b>1</b>	<b><u>For Plate manufacturer:</u></b>		
	a	Vendor must be having Bureau of Indian Standard (BIS) approval for manufacturing of carbon/alloy steel plates of IS 2062, E350/ EN 10025-2, S355J2G3.	Vendor to submit copy of valid BIS Certificate / BIS Certification number
	b	Enquiry plate will be supplied as per BHEL enquiry specification and dimension.	Vendor to confirm.
<b>2</b>	<b><u>For trader / stockist / reseller:</u></b>		
	a	Vendor to submit their past experience for supply of carbon steel / alloy steel plates against at least one purchase order in last seven years.	At least one purchase order and its correlated test certificates/dispatch note for carbon / alloy steel plate
	b	Enquiry Plates shall be supplied from BIS approved manufacturer for IS 2062, E350/ EN 10025-2, S355J2G3 and dimension only.	Vendor to confirm
	c	Enquiry plate will be supplied as per BHEL enquiry specification and dimension.	Vendor to confirm.

Sl. No.	Quality Requirement	Vendor's confirmation (Y/N)
01	Testing and certification as per ordering specification and documents.	

**Signature with stamp**

**Name:**

**Name of Firm:**

**Designation:**

**Date:**

**(Self-Certification for local content)**

In line with Government Public Procurement Order 2017 dated 16.09.2020, we hereby certify that we

.....  
(supplier name) inform that local content is .....% (indicate percentage of local content) and are

**Class- I local supplier** (meeting requirement of)-

**Minimum Local content 50%**

or

**Class- II local supplier** (meeting requirement of)-

**Minimum Local content 20%**

(mark wherever applicable)

defined by Nodal Ministries/ Departments as per above order for the material against Enquiry No.

.....  
Details of location at which local value addition will be made is as follows:

.....  
.....  
.....

We also understand, false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Seal and Signature of Supplier

**(Specification)**

**AA10122 Rev:15**

**STRUCTURAL STEEL - HIGH TENSILE PLATES, FLATS & BARS****1.0 GENERAL:**

This specification governs the quality requirements of High Tensile Structural Steel Plates where guaranteed weldability is required.

**2.0 APPLICATION :**

Steel intended for use in structures where enhanced mechanical properties are required and where saving in weight can be effected due to their greater strength.

**3.0 CONDITION OF DELIVERY :**

Plates shall be supplied in the normalized condition or in an equivalent condition obtained by normalizing rolling.

**4.0 COMPLIANCE WITH NATIONAL STANDARDS:**

Material shall comply with the requirements of DIN EN 10025-2:2004, Gr: S355J2G3 (Material Number 1.0577) or the equivalent grade of latest version.

The supply of the material as per IS:2062-2006 Grade E350 (Fe 490) (latest version) meeting the requirement of clause 3.0, 5.0. and 12.0 of this specification is also acceptable.

**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.

Revisions:  
CL.32.7 of MOM of MRC-S&GPS

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

Rev. No. 15

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1 st Issue

Dt:10.11.2009

Dt :

Year :

HYDERABAD

Corp. R&amp;D

JULY, 1976

**5.2 Tolerances:**

The tolerances on dimensions for plates shall comply with DIN EN 10029.

**6.0 MANUFACTURE:**

Material shall be manufactured from fully killed (FF) steel having a Carbon Equivalent (melt analysis) of:

0.45 max. for plates upto & incl. 30 mm thick

0.47 max. for plates above 40 mm thick upto & incl. 150 mm thick.

0.49 max for plates > 150mm & ≤ 250 mm thick.

**7.0 FREEDOM FROM DEFECTS :**

All finished steel shall be well and cleanly rolled to the dimensions, sections and weights specified. The finished material shall be free from cracks, surface flaws, laminations; rough, jagged and imperfect edges and internal & surface defects.

**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	Percent, max.	Permissible variation, percent, maximum
Carbon		
Upto&Incl 40mm thick	0.20	0.03
Above 40mm thick	0.22	0.02
Silicon	0.55	0.05
Manganese	1.60	0.10
Sulphur	0.025	0.010
Phosphorus	0.025	0.010
Copper	0.55	0.050

**Note :**

- Total Aluminum: 0.020%, minimum.
- Micro-alloying elements like niobium, boron, titanium and vanadium may be added by the manufacturer to achieve the mechanical properties specified.
- Carbon Equivalent (CE) based on melt analysis shall be calculated as per following formula :

$$CE = C + \frac{Mn}{6} + \frac{Cr+Mo+V}{5} + \frac{Ni+Cu}{15}$$

**9.0 TEST SAMPLES:**

Test samples shall be selected and prepared in accordance with DIN EN 10025. One tensile test piece per 40 tonnes or part thereof shall be selected from finished steel from each melt for each class of products.

CPS-1055

**10.0 MECHANICAL PROPERTIES (On longitudinal test samples) :****i) Tensile :**

The test pieces shall show the following properties, when tested in accordance with IS: 1608 / DIN EN 10025.

Nominal thickness, mm	Tensile strength N/mm <sup>2</sup> , min.	Yield strength N/mm <sup>2</sup> , min.	Elongation on 5.65 $\sqrt{S_0}$ gauge length, percent, min.
From 5 to 16	470-630	355	22
Over 16 to 40	470-630	345	22
--- 40 to 63	470-630	335	21
--- 63 to 80	470-630	325	20
---- 80 to 100	470-630	315	20
---- 100 to 150	450-600	295	18
---- 150 to 200	450-600	285	17
---- 200 to 250	450-600	275	17
---- 250 to 400	450-600	265	17

**ii) Impact :**

The "Choppy Impact test" shall be carried out in accordance with DIN EN 10045-1/IS-1757 at (-20°C). The impact values achieved shall be as follows.

Nominal thickness (mm)	Impact strength (KCV) (2mm 'V' notch)
< 16	Note (1)
16 $\geq$ to $\leq$ 150	27 Joules
150 > to $\leq$ 250	27 Joules

**Note :**

(1) Impact test is not required for plates below 16 mm.

The average value of the three test results shall meet the specified requirement. One individual value may be the below minimum average value specified, provided that it is not less than 2/3 rd of the same.

**11.0 PROTECTIVE COATING :**

Plates upto 10 mm thick shall be applied with a suitable rust preventive coating for overseas shipping only.

CPS-1055

**12.0 ULTRASONIC EXAMINATION:**

Plates above 40mm shall be ultrasonically examined in accordance with BHEL standard AA 085 01 20 (or ASTM A435 / EN10160) and shall comply with the acceptance norms specified therein.

**13.0 OPTIONAL:****PRESERVATION:**

If specified in order, all plates shall be applied with a suitable rust preventive to avoid pitting.

**14.0 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 despatch documents to facilitate quick clearance of the material.

The test certificate shall bear the following information:

- (i) AA 101 22-Rev. No.15, DIN EN 10025 Gr. S355J2G3, Matl. No. 1.0577.
- (ii) BHEL order No, Melt No, Size & Quantity, Batch No with heat treatment details, Results of Chemical analysis, Mechanical tests & NDT, Supplier's name, identification No, TC No, Signature of Competent authority, etc.

**15.0 PACKING AND MARKING:**

Plates shall be transported suitably to avoid damage during transit.

For plates below 10 mm thick, each pile (preferably of 16 mm plates) and each plate 10 mm thick and over shall be marked with Melt No., AA 101 22, BHEL Order No, Supplier's Name, Identification No, Size & weight, on any one corner and encircled with paint preferably of white colour.

**15.0 REFERRED STANDARDS (Latest Publications including amendments):**

- |                 |                   |                 |
|-----------------|-------------------|-----------------|
| 1. IS : 1608    | 2. IS: 2062       | 3. DIN EN 10025 |
| 4. DIN EN 10029 | 5. DIN EN 10045-1 | 6. AA 085 01 20 |
| 7. ASTM A435    | 8. EN10160        | 9. IS: 1757     |

CPS-1055