

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

**Sub: Requirement of Cold Rolled Carbon Steel Sheets**

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)	Qty. (Kg)	Delivery Requirement
Cold Rolled Carbon Steel Sheets Annealed-Drawing <b>Specification-</b> AA10115 Rev 09 Grade: ST-D	AA1011715031	0.5x(900-1250)x(2500-3000) or in coil form	2500	30/04/2025
	AA1011715074	1x(900-1250)x(2500-3000)	5000	30/04/2025
	AA1011715090	1.6x(900-1250)x(2500-3000)	3000	30/04/2025
	AA1011715996	3x(900-1250)x(2500-3000)	3000	30/04/2025

**Remarks-**

1. Delivery period mentioned in enquiry is indicative, bidders to quote their best possible delivery.
2. Plate thickness shall be as per our tender only.
3. Sheet thickness 0.5mm in coil form in width (900-1250) mm is also acceptable.
4. Quantity tolerance  $\pm 10\%$  is acceptable in view of dimensional tolerances.
5. **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.

6. Testing and certification shall be as per Ordering specification and documents.

## 7. 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

**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.

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”

- a. They have controlling partner (s) in common; **or**
- b. They receive or have received any direct or indirect subsidy/financial state from any of them; **or**
- c. 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.”
- 9. Rest terms & condition shall be as per latest GeM GTC.

### **Pre- Qualification Requirements**

<b>PQR Point</b>	<b>Requirements</b>	<b>Vendor to submit / confirm</b>	<b>Vendor's reply</b>
<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 Steel Plates/Sheets of IS:513, Gr. D	Vendor to submit copy of valid BIS Certificate / BIS Certification number.	
	b Enquiry plate/sheets 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 steel plates / sheets against at least one purchase order in last seven years.	At least one purchase order and its correlated test certificates/dispatch note for steel plate / sheet.	
	b Enquiry Plates / sheets shall be supplied from BIS approved manufacturer for IS:513, Gr. D and dimension only.	Vendor to confirm.	
	c Enquiry plate/sheets will be supplied as per BHEL enquiry specification and dimension.	Vendor to confirm.	

<b>Sl. No.</b>	<b>Quality Requirement</b>	<b>Vendor's confirmation (Y/N)</b>
<b>1</b>	Testing and certification as per ordering specification and documents.	

- Kindly provide bidder's remarks for applicable points.

**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)**

**AA10115 Rev 09**



## CORPORATE PURCHASING SPECIFICATION

AA 101 15

Rev. No. 09

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### COLD ROLLED CARBON STEEL SHEET, ANNEALED - DRAWING

#### 1.0 GENERAL:

This specification governs the quality requirements of Cold Rolled Carbon Steel Sheet/Coil of drawing quality, Annealed and skin passed condition. Sheets having thickness of 0.40 to 3.15 mm (both inclusive) and widths upto 1250 mm are covered in this specification.

#### 2.0 APPLICATION:

Suitable for Drawing/ Welding..

#### 3.0 CONDITION OF DELIVERY:

Sheets/Coils : 0.40 mm to 3.15 mm thick, cold rolled, descaled and oiled sheet/coil shall be supplied in fully annealed and skin passed condition. The size, weight and packing of the coils/sheets shall be as agreed to between the manufacturer and BHEL for indigenous material. For imported material, it shall comply with clause 14.0.

Sheets shall be supplied in straight lengths or in coils as specified in BHEL order.

Sheets shall be flat and the edges cleanly sheared and truly squared to the specified dimensions.

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

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

Sheets shall have a matt surface finish and best surface appearance.

#### 4.0 COMPLIANCE WITH NATIONAL STANDARDS:

- 4.1 Material shall comply with the requirements of IS:513-1994,  
Gr:D-Drawing, Temper: SP-Annealed & Skin passed;  
Quality; killed/semi killed; Surface type - Best;  
Surface finish : Matt.

Revisions :

Cl. 27.6.8 OF MOM OF MRC-S&GPS

APPROVED :

INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE-MRC (S&GPS)

Rev. No. 09

Amd.No. 00

Reaffirmed

Prepared  
BHOPAL

Issued  
Corp. R&D

Dt. of 1st Issue  
JULY, 1976

Dt: 15.06.2005

Dt :

Year :

C-5-9/5



4.2 Material offered to DIN 1623-1983, Part 1, Gr : RRSt-13.03, (Material No. 1.0347) Surface appearance: Best surface - 05, Surface finish : Matt 'm', is also acceptable.

4.3 The tolerance on dimensions shall comply with DIN : 1541.

## 5.0 DIMENSIONS AND TOLERANCES:

### 5.1 Sizes:

Cold rolled carbon steel sheets/coils shall be supplied to the dimensions specified in BHEL order.

### 5.2 Tolerances:

The tolerances on sheets and coils shall comply with IS : 513 as detailed below:

#### 5.2.1 Thickness:

##### Tolerances on thickness of sheets

Nominal thickness, mm	Tolerance for nominal widths upto 1250 mm
-- 0.40	$\pm 0.04$
Above 0.40 up to 0.60	$\pm 0.05$
Above 0.60 up to 0.80	$\pm 0.06$
Above 0.80 up to 1.00	$\pm 0.08$
Above 1.00 up to 1.25	$\pm 0.09$
Above 1.25 up to 1.60	$\pm 0.11$
Above 1.60 up to 2.00	$\pm 0.12$
Above 2.00 up to 2.50	$\pm 0.14$
Above 2.50 up to 3.15	$\pm 0.16$

#### 5.2.2 Width:

Width	Tolerance
Upto & Incl. 1250 mm	+ 7 mm - 0
Above 1250 mm	+ 10 mm - 0

#### 5.2.3 Length:

Up to and incld. 2000 mm	+ 15 mm - 0
Over 2000 mm	+ 0.75 percent of length - 0





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### 5.2.4 Camber:

Camber is the greatest deviation of a side edge from a straight line, the measurement being taken on the concave side with a straight line. Camber tolerances are as specified below:

Coils - 20 mm in any 5000 mm length

Cut lengths - 0.4% x length.

### 5.2.5 Out-of Square Tolerance (for cut lengths) :

1 percent of the width.

(Out-of squareness is the greatest deviation of an edge from a straight line drawn at a right-angle to the other edge of the sheet, touching one corner and extending to the opposite edge).

## 6.0 MANUFACTURE :

Steel shall be manufactured by open-hearth, electric, basic oxygen or a combination of these processes.

Material shall be manufactured from semi killed/killed steel, preferably aluminum killed.

Rimmed steel is not acceptable.

## 7.0 FINISH:

Material shall have a medium or dull finish. Pores, roll marks or scratches which do not impair uniform appearance of the finished product are permissible. The sheets shall be free from waviness and the surface shall be ideal for spray painting.

## 8.0 HEAT TREATMENT :

Sheets and coils shall be fully annealed and skin passed.

## 9.0 FREEDOM FROM DEFECTS :

The material shall be free from harmful defects such as scale, rust, blisters, laminations, pitting, cracked edges, etc.

## 10.0 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	0.12	0.02
Manganese	0.50	0.03
Sulphur	0.040	0.005
Phosphorus	0.040	0.005

**11.0 TEST SAMPLES:**

One bend test and hardness test shall be carried out from each lot of 5,000 kg of material or part thereof, per melt per consignment.

Where material of more than one thickness are rolled from the same melt, one additional bend test shall be made for each thickness.

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

**12.0 MECHANICAL PROPERTIES :****12.1 Bend Test :**

The test piece shall be capable of being bent cold through 180° close without showing sign of cracks or fracture on the outer convex surface.

Bend test shall be carried out in accordance with IS : 1599.

**12.2 Hardness (VICKERS) :**

When tested as per IS : 1501, the test pieces shall show a Vickers hardness as given below:

Upto & Incl. 1.25 mm, thick : 115 HV, max.

Above 1.25 mm, thick : 125 HV, max.

**13.0 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:

AA 101 15, Rev 09/IS:513 Gr:D/DIN 1623 Gr: RRSt 13.03 m,

BHEL Order No,

Melt No,

Size and Quantity,

Results of Chemical analysis and Mechanical tests,

Supplier's name,

Identification No

TC No,

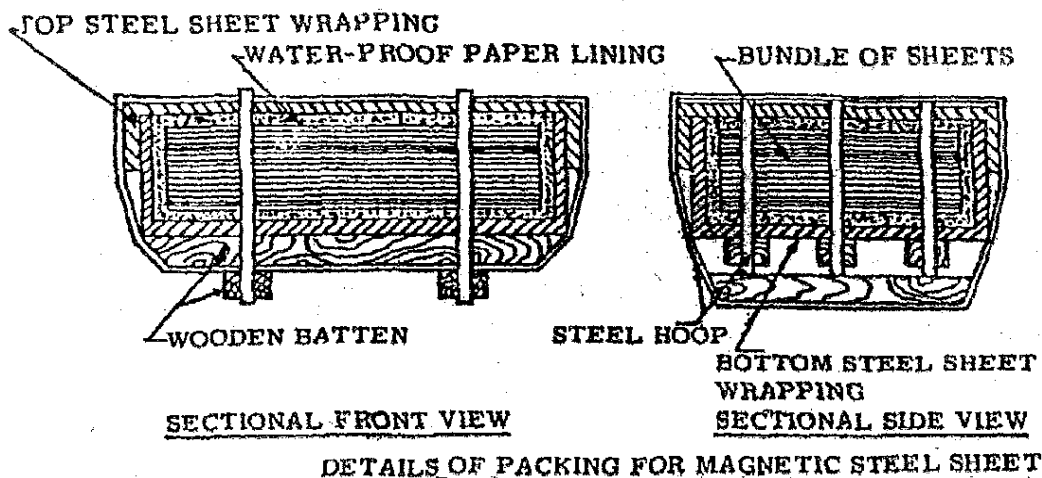
Signature of Competent authority, etc..

**14.0 PACKING :****14.1 Packing:**

Sheets and Coils shall be suitably packed in bundles to prevent corrosion and damage during transit.

Recommended packing for imported material shall be as shown below. However, other methods of packing is also acceptable if prior agreement of BHEL is obtained in writing by the manufacturer.

14.2 Sheets :



Note:

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

14.3 Coils:

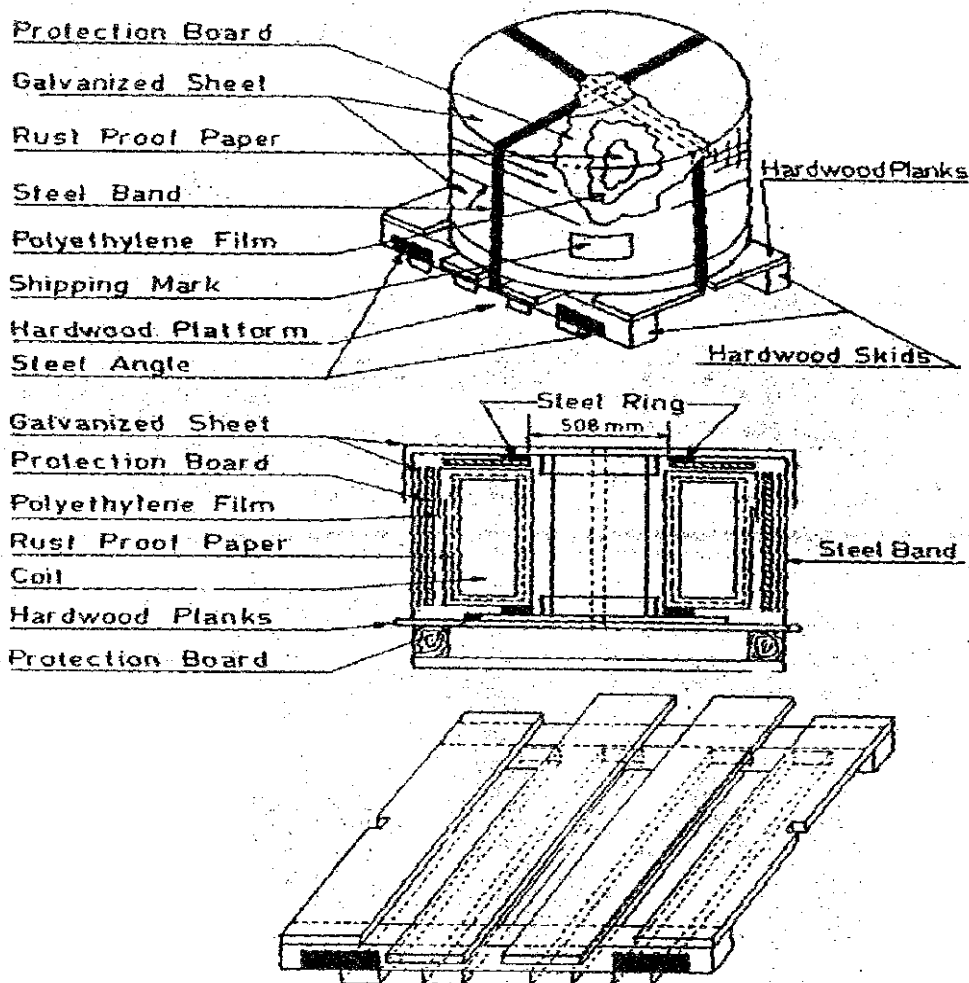
The material shall be supplied in coils of continuous strip. The nominal weight of each coil shall be 1800 - 2000 kg.

The nominal internal diameter of coil shall be 500 mm.

Sheet shall be protected to prevent damage and rusting during transit.

Sheet shall be vertically packed according to the instructions and drawings given below:

- An annular protection board shall be placed at either end of the coil.
- The coil should then be wrapped with waterproof anti-rust proof paper by lapping axially all around the circumference.
- The coil shall then be covered by polythylene sheet or anti-rust waterproof paper and the ends sealed properly.
- A galvanized sheet shall be wrapped on the outside of the coil and the top and bottom of the coils. Care shall be taken to ensure that the ends of the top and bottom of the coils extend sufficiently over the inside diameter of the coil.



- e) A galvanized sheet shall be wrapped on the inside of the coil. Care shall be taken that it overlaps sufficiently over the ends of the sheet mentioned in (d) above.
- f) Steel ring made from thick angle sheets shall be placed on the rim of the inner diameter at both ends of the coil. The rings shall be held at either ends at four points by steel bands.
- g) The coil should then be mounted on wooden skids held together by steel bands. Wooden skids must have cutouts to house the steel bands for tight fit and to avoid slippage.
- h) The packing shall ensure that there is no seepage of moisture and the coils reach BHEL in completely rust free condition. It shall be strong enough to withstand handling.
- i) Coils shall be sufficiently tight-wound to prevent collapse to an extent that would preclude their being mounted on a mandrel appropriate to the ordered internal diameter.
- j) Each package should indicate the , Sling Position, for lifting without damage. It is preferable to fix a suitable size of, 'Sheet Steel Angle', at the position where the Sling Rope is to be fitted to avoid slippage/damage/breakage of the wooden skid at four places.



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### 15.0 MARKING:

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

AA 101 15  
BHEL Order No,  
Supplier's Name and Identification No,  
Melt No,  
Size and Weight.

### 16.0 REFERRED STANDARDS (Latest Publications Including Amendments) :

- |              |               |                       |
|--------------|---------------|-----------------------|
| 1. IS : 513  | 2. IS : 1154  | 3. IS : 1501          |
| 4. IS : 1599 | 5. DIN : 1541 | 6. DIN : 1623, Part 1 |

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### GENERAL INFORMATION FOR CALCULATION (NOT TO FORM ACCEPTANCE CRITERION)

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Tensile strength	:	270 - 410 N/mm <sup>2</sup>
Yield strength	:	280 N/mm <sup>2</sup> , max.
Elongation on 5.65 $\sqrt{S_0}$ gauge length	:	23 percent, min.

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