



CORPORATE PURCHASING SPECIFICATION

AA10119

Rev No.15

PREFACE SHEET

STRUCTURAL STEEL - WELDABLE QUALITY (PLATES, SECTIONS, STRIPS, FLATS AND BARS)

FOR INTERNAL USE ONLY

REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

Equivalent/Comparable Standards:

- 1) IS: 2062 – 2011 : Grade: E250- BR (With impact test)
- 2) DIN EN 10025-2:2005 : Grade: S275JR

Suggested/Probable Suppliers and Grades:

Refer Plant Vendors List

User Plants and Replaced Plant Specifications/References:

- 1) HEP, BHOPAL :
- 2) HEEP, HARDWAR :
- 3) HPEP, HYDERABAD :

Revisions:

Clause No. 1, 3, 5 & 8 revised (as per MOM of 38th MRC meeting), Clause 10 added

APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(S&GPS)

Rev No.15

Amd No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt:11-03-2014

Dt:

Year:

HPEP, Hyderabad

Corp.R&D

June, 1976



CORPORATE PURCHASING SPECIFICATION

AA10119

Rev No. 15

PAGE 1 of 2

STRUCTURAL STEEL - WELDABLE QUALITY (PLATES, SECTIONS, STRIPS, FLATS AND BARS)

ORDERING DESCRIPTION

1.0 GENERAL:

The material shall conform to IS 2062 – 2011, E250-Gr.BR (with mandatory Impact Test) or DIN EN 10025-2:2005, Gr. S275JR and comply with following additional requirements.

2.0 APPLICATION:

For general engineering purposes, suitable for welding.

3.0 CONDITION OF DELIVERY:

3.1 Bars & Sections shall be supplied in Hot rolled in straight lengths without twists and bends.

3.2 The material shall be supplied as per IS: 2062 – 2011, E250 Gr.BR (with mandatory Impact Test) or as per DIN EN 10025-2:2005 Gr. 275JR.

3.3 Any other additional requirement as per BHEL Purchase order.

4.0 DIMENSIONS AND TOLERANCES:

4.1 Sizes:

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

4.2 Tolerances:

The tolerances on hot rolled material shall comply with IS: 1852 or any other equivalent national standard.

4.3 Straightness for hot rolled bars:

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

5.0 TEST SAMPLES:

The selection of test pieces for all tests like Chemical, Mechanical etc. shall be as per IS: 2062, E250-Gr.BR or DIN EN 10025-2, Gr. S275JR.

Revisions:

Clause No. 1, 3, 5 & 8 revised (as per MOM of 38th MRC meeting), Clause 10 added

APPROVED:

INTERPLANT MATERIAL RATIONALISATION
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Corp.R&D

June, 1976

26/6/14

CS-72

CORPORATE PURCHASING SPECIFICATION



6.0 ULTRASONIC EXAMINATION:

Plates shall be ultrasonically examined in accordance with BHEL standard AA0850120 (or ASTM-A435) as detailed below and shall comply with the acceptance standards specified therein.

6.1 For plates above 40 mm thick:

Shall be ultrasonically examined unless when otherwise specified in order.

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:

AA10119 - Rev.No.15/ IS: 2062-Gr: BR (with mandatory Impact test) or DIN EN 10025-2, Gr. S275JR,

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.

8.0 PACKING AND MARKING:

Plates shall be transported suitably to avoid damage during transit.

Each plate shall be marked with Melt No. Material grade and specification, BHEL Order No, Supplier's Name Identification No, Size & weight, on any one corner and encircled with paint preferably of white colour.

9.0 REJECTION AND REPLACEMENT

If the material does not comply with the requirements of this specification during receipt inspection at BHEL or if any defect is found during further processing of material, BHEL reserves the right to reject the whole consignment and the supplier shall replace the material free of cost. The rejected material shall be taken back by the supplier after fulfilling the commercial terms and conditions.

10.0 REFERRED STANDARDS (Latest publications including amendments):

1) IS: 1852

2) ASTM - A435

3) AA0850120

26/6/14

CS-721



PLANT STANDARD

HEEP-HARDWAR

18.8370

PAGE 1 OF 2

SIGN & DATE

SUPERSEDES
INVENTORY No.

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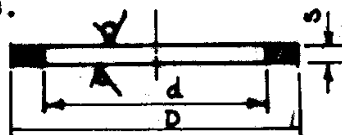
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SIGN & DATE

INVENTORY No.

SEALING RINGS

1. The present standard deals with copper sealing rings to be used with plugs.



6.3 THE REST

2. The dimensions of the sealing rings, their weights, surface areas and code numbers shall be as per table given below:-

d	D	S	Weight of one piece in KG	Surface area of 10 pieces in dm ²	Code No.
* 17.2	22.9	1.5	0.0023	0.472	027
* 21.2	27.9		0.0032	0.770	028
11	18	2	0.0028	0.501	010
15	22		0.0036	0.639	011
18	26		0.0049	0.829	012
22	31		0.0067	0.082	013
24	31		0.0054	0.950	014
28	35	3	0.0093	1.288	015
35	44		0.0146	1.861	016
41	50		0.0172	2.144	017
44	55		0.0228	2.643	018
50	58	3	0.0182	2.375	023
55	62		0.0192	2.339	024
62	70		0.0227	2.804	025
78	86		0.0276	3.610	026

* NOTE: These two sizes have been taken from DIN 7603 and of second preference

DRAWN		NAME		SIGN & DATE	
WORKED		I. B. Mathok		20.9.97	
CHECKED		J. KUMAR		20.9.97	
SUPERVISED		J. N. JOSHI		22.10.97	
APPROVED:		PLANT STANDARDIZATION COMMITTEE			
3.27					
PREPARED:		ISSUED:		DATE:	
TSX		STANDARDS DIVISION		25.10.97	
REVISION-01		01-08-2007			

25/10/97

P-2658



PLANT STANDARD

HEEP-HARDWAR

18.8370

PAGE 2 OF 2

SIGN & DATE

SUPERSEDES
INVENTORY No.

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SIGN & DATE

INVENTORY No.

P-2658

25/10/97

3. MATERIAL:- Cold rolled annealed sheets of copper
as per ~~IS:1972~~ IS:14811
4. TOLERANCES:As per Product Grade B,~~IS:1367(Part 2)~~. AA0230201
5. The sealing rings are to be manufactured as per this standard
without making separate drawings (Blank drg.No.0317.040).
6. The rings to be nickel plated as per IS:1068
 - For rings with 'd' upto 35mm - Ni9
 - For Rings with 'd' from 41 to 78 mm - Ni15
7. In an assembly/sub assembly drawing, as an example
For a sealing ring having diameter 'd' = 11 and nickel
plated the following should be written:
 - In the column "Designation" - 18.8370.010
 - In the column "Description" - Sealing ring d = 11

REVISION:
REV-01

WORKED BY

L.B. Malhotra

20-9-97

CHECKED BY

S.KUMAR

20-9-97

72.8322

PAGE 1 OF 2

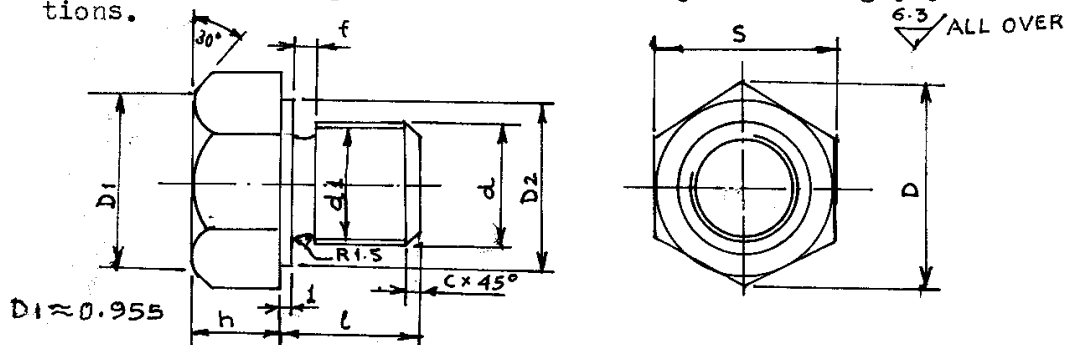
SUPERSEDES OLD STANDARD
No. 71-74.8322

PLANT STANDARD

HEEP-HARDWAR

PLUGS WITH PIPE THREADS

1. These Plant Standards deal with steel plugs with cylindrical pipe threads (with cadmium/zinc plating) meant for tight closing of holes in the walls of the bearing housings and in other units. If the holes are not to be left opened during operation of the machine these plugs are also used for joint having pipe connections.



2. The dimensions of the plugs, their code nos. and weights shall be as per Table given below:

THREAD d	d IN MM	S		h		D	D_2	ALLOWABLE ECCENTRICITY OF HEAD	l		f	d_1	C	WT. OF ONE PLUG	CODE NO.
		SIZE	TOL.	SIZE	TOL.				SIZE	TOL.					
G $\frac{1}{4}$ "	13.16	22	-0.28	9	± 0.36	25.4	21	0.4	12	± 1	3	11	1	0.044	010
G $\frac{3}{8}$ "	16.66	24	-0.28	10	± 0.36	27.7	23	0.5	14	± 1	3	14	1.5	0.063	011
G $\frac{1}{2}$ "	20.96	30	-0.28	13	± 0.43	34.5	29	0.6	16	± 1	4	18	1.5	0.121	012
G $\frac{3}{4}$ "	26.44	36	-0.34	15	± 0.43	41.6	35	0.6	20	± 1	4	23	2	0.215	014
G 1"	33.25	46	-0.34	19	± 0.52	53.1	45	0.6	22	± 1	5	29	2	0.413	016
G $1\frac{1}{4}$ "	41.91	55	-0.40	23	± 0.52	63.5	54	0.7	26	± 1	5	38	2.5	0.742	018
G $1\frac{1}{2}$ "	47.80	65	-0.40	26	± 0.52	75	64	0.8	28	± 1	5	44	2.5	1.129	019

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SIGN & DATE

INVENTORY No.

AGREED DEPTT		NAME	SIGN & DATE	DRAWN		NAME	SIGN & DATE
				WORKED		L. B. MALHOTRA	
				CHECKED		S. KUMAR	
				SUPERVISED		D. N. JOSHI	19/1/98
APPROVED:				PLANT			
				STANDARDIZATION COMMITTEE			
REVISION-01 (Reaffirm)				3.35			
17-10-2007				PREPARED:		ISSUED:	DATE:
				TSX		STANDARDS DIVISION	19-01-98





PLANT STANDARD

HEEP-HARDWAR

72.8322

PAGE 2 OF 2

SIGN & DATE

SUPERSEDES
INVENTORY No.

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SIGN & DATE

INVENTORY No.

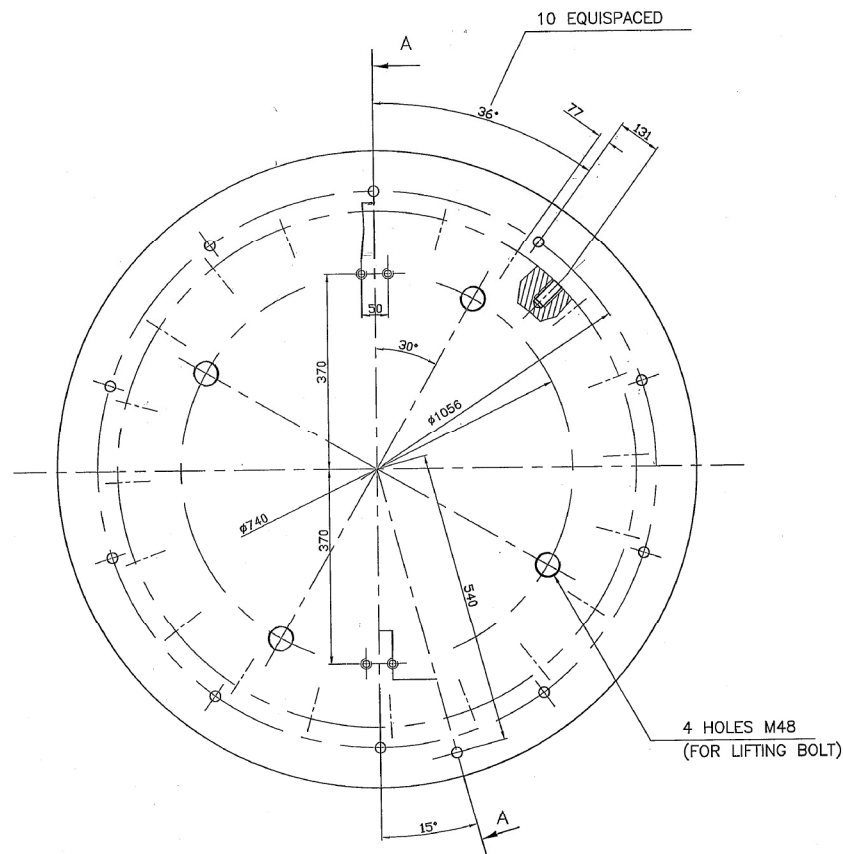
3. Material : Steel having mechanical properties as per C/D ROUND BAR CARBON STEEL [C20], AA10112 or IS: 9550
4. The pipe threads are of class B as per IS:2643-64. (Part-2).
5. The tolerances on dimensions (besides d.s.h. and 1) are as per 7th class of accuracy as per Product Group B to IS:1367 Part-II.
6. Sealing Rings - as per standards 18.8370.
7. Threads should be clean and free of burrs, stripped turns and dents.
8. Technical supply conditions are as per IS:1367 (Part-I).
9. The plug should be manufactured as per this Plant standard without making separate drawings (blank drg.No.0317.029)
10. If required, the steel plugs can be cadmium plated/Zinc plated with a supplementary chromate treatment.
as per IS:1572 /IS:1573- as detailed below:
Plugs with $\frac{1}{4}$ ", $\frac{3}{8}$ " , $\frac{1}{2}$ " , $\frac{3}{4}$ " and 1" pipe threads -
Cadmium plated Cd13Cr.
Plugs with 1 $\frac{1}{4}$ " , 1 $\frac{1}{2}$ " pipe threads-Zinc plated Zn 25Cr.
11. In an assembly/sub-assembly drgg., as an example, for plug having $\frac{1}{4}$ " pipe threads and made of steel Round Bar Carbon steel C20, AA10112. The following should be written:
In the column "DESIGNATION - 72.8322.010
In the column "DESCRIPTION - Plug $\frac{1}{4}$ " Pipe.

REVISION : 01

WORKED BY L.B. MALHOTRA

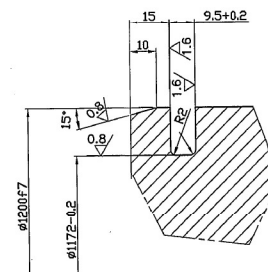
CHECKED BY S.KUMAR

6.3/ THE REST

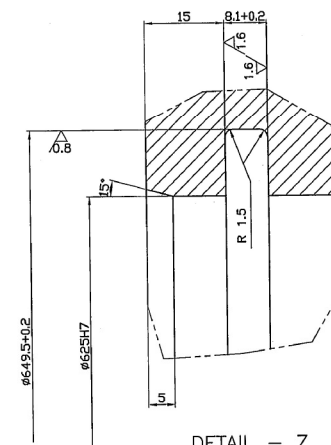


THIS DRG. IS REDRAWN FROM
ORIGINAL ON AUTOCAD

[Signature] (RAM ADHAR)



DETAIL - Y
SCALE - 1:1



DETAIL - Z

SCALE - 2:1

SHARP EDGES TO BE ROUNDED OFF.

[illegible]

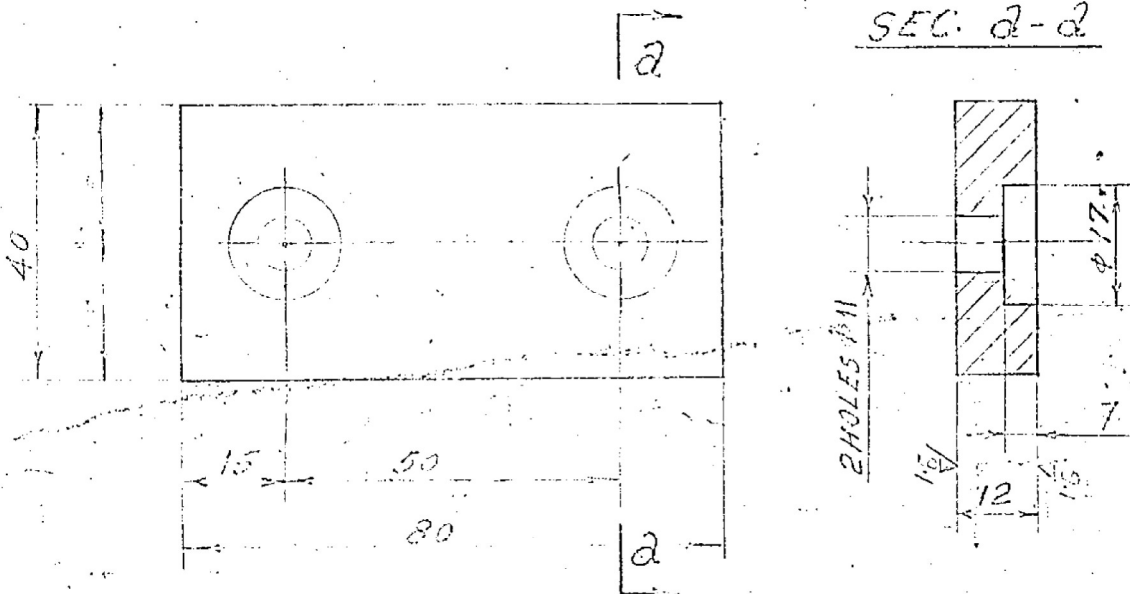
FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED

R7871-0769/007

6.5/ THE NET

SEC. a-a



ST42-5

MAT. CODE
MATSPECN.



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DEPT	CODE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
JET	125	1:1	-	R7871-0759	14

DRAWN	NAME	SIGN.	DATE
CHECKED	H. K. KHAN		
APPROVED			

SPACE

Dimensions to be Controlled Within Limits as Shown
Machining Tolerance $\pm$.25 mm Unless Otherwise
Shown. Non Machining Tolerance $\pm$

CARD
CODE

DRAWING NO.

R7871-0769/007

SHEET NO.

NO. OF SHEETS.

SIZE A4

It must not be used directly or indirectly in anyway detrimental to the interest of the company.

Ref. Drg. No.

Sign & Date

Inventory No.

2 HOLES M48 EQUALLY SPACED
(FOR LIFTING EYE BOLTS)

TAPER PIN #25

ANCHOR BOLT 5100 LONG

MAXIMUM FORCE=6000.000 KGS AT P=7250HP

2 HOLES M48
FOR LIFTING BOLTS4 HOLES M48
FOR LIFTING BOLTS2 HOLES M48
FOR LIFTING BOLTSMARK
R7871-0762

1. CONSERVATION TO BE DONE AS PER TL30007.

REDRAWN FROM
ORIGINAL

ITEM No.	DESCRIPTION	DRAWING No.	ITEM No.	DESCRIPTION	DRAWING No.
17	SEALING 400x440x25	N. 300	17	SEALING 400x440x25	N. 300
16	PROTECTION NUT	R7871-0769/008	16	PROTECTION NUT	R7871-0769/008
15	SCREW M10x1/b	AA7123123	15	SCREW M10x1/b	AA7123123
14	SPACER	R7871-0769/007	14	SPACER	R7871-0769/007
13	TURCON GLD SEALING & O'RING	555023-6250-42N	13	TURCON GLD SEALING & O'RING	555023-6250-42N
12	NUT	R7871-0769/006	12	NUT	R7871-0769/006
11	PISTON	R7871-0769/005	11	PISTON	R7871-0769/005
10	TURCON GLD SEALING & O'RING	555023-6250-42N	10	TURCON GLD SEALING & O'RING	555023-6250-42N
9	CYLINDER	R7871-0769/004	9	CYLINDER	R7871-0769/004
8	SEALING RING	18.8370-012	8	SEALING RING	18.8370-012
7	PLUG 1/2" PIPE THD.	72.8322-012	7	PLUG 1/2" PIPE THD.	72.8322-012
6	BOLT M36x110	AA7111124	6	BOLT M36x110	AA7111124
5	PROTECTION NUT	R7871-0769/003	5	PROTECTION NUT	R7871-0769/003
4	NUT M20	AA7151112016	4	NUT M20	AA7151112016
3	TAPER PIN #25x120	ST-05002	3	TAPER PIN #25x120	ST-05002
2	ANCHOR BOLT	R7871-0769/002	2	ANCHOR BOLT	R7871-0769/002
1	FLANGE	R7871-0769/001	1	FLANGE	R7871-0769/001

VAR. NO.	REMARKS	ITEM No.	DESCRIPTION	DRAWING No.
01				
02				

QMS No./QMS No.	STATUS	DATE	QMS No./QMS No.	STATUS	DATE

NAME	SIGN.	DATE	NAME	SIGN.	DATE

GRADE OF UNTOOL DIM.	TYPE OF PRODUCT	COMP. DRG. No.	M/C TOOL TRANS. No.	REF. DRG. No.
M/CG-6/M/F	VE-0-19	ST/200008		
WELDING-M/8/8/2	KVU-210 MW			
GAS CUTTING-T3MA0824101				

REV	DATE	ALTERED	REASON	REV	DATE	ALTERED	REASON
01	04/13	01/13	01/13/001	02	04/13	01/13	01/13/001

DEPT.	JTE	SCALE	WGT (kg)	REF. TO ASST. DRG.	ITEM No.
089		1:1	18772		

DEPT.	JTE	SCALE	WGT (kg)	REF. TO ASST. DRG.	ITEM No.
089		1:1	18772		

TITLE	DRAWING No.	REV.
HYDRAULIC TESTING DEVICE ALONG WITH CLAMPING DEVICE FOR H.P. OUTER CASING	R7871-0769	

NO. OF SHEET	NO. OF SHEET
1	1

SIZE	SIZE
A 0	A 0