MATERIALS MANAGEMENT (MM/MFG)
BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHY – 620014

Annexure – I

Ref: MM/MFG/PSS/EOI dt.26.03.12

Notice inviting expression of interest for registration of additional vendors for Packing Wood.

BHEL Tiruchy requires packing wood as per drawings and standards given for logistics purpose. List of items required are as follows:

Sl No	Description	Specifications
1	Rubber Wood	BHEL Spec. & Drawings
2	Silver Oak wood	ISPM-15
3	Country Wood	BHEL Spec.

The annual requirement, with concerned specifications and drawings are attached along with this annexure. The requirement is likely to increase in future.

BHEL Tiruchy is presently seeking expression of interest from reputed suppliers for registration as additional vendors for the above mentioned items.
Interested suppliers are requested to send a request letter along with the details of firm like company profile, company's product profile, manufacturing & inspection facilities, quality accreditations', customers list, financial performance and any other details to

SR MANAGER/PUR/PSS,
BLDG 24, HPBP,
BHEL TIRUCHY – 620 014
TAMILNADU - INDIA
Ph no: 0431 257 7257
Fax: 0431 252 7019
Email: imanavalan@bheltry.co.in

Suitable suppliers will be contacted for further formalities.

Amendments if any will be updated. BHEL reserves the right to take a stand on inclusion of suppliers at its discretion.

SILVER OAK WOOD AS PER ISPM - 15 STANDARD

TYPE	SL NO	MATERIAL CODE	MATERIAL DESCRIPTION	UNIT	ANNUAL REQUIREMENT
REEPERS	1	200053520013	Silver Oak :70 x 30 x 1500	NO	3600
REEPERS	2	200053520005	Silver Oak :70 x 30 x 2000	NO	4000
REEPERS	3	200053520015	Silver Oak :70 x 30 x 2250	NO	1000
REEPERS	4	200053520006	Silver Oak :70 x 30 x 2500	NO	100
REEPERS	5	200053520016	Silver Oak :70 x 30 x 2700	NO	1500
REEPERS	6	200053520017	Silver Oak :70 x 30 x 3000	NO	1200
SCANTLING	7	200053520018	Silver Oak :70 x 70 x 500	NO	2000
SCANTLING	8	200053520007	Silver Oak :70 x 70 x 1000	NO	1500
SCANTLING	9	200053520008	Silver Oak :70 x 70 x 2000	NO	3200
SCANTLING	10	200053520014	Silver Oak :70 x 70 x 2250	NO	3000
SCANTLING	11	200053520019	Silver Oak :70 x 70 x 2500	NO	0
SCANTLING	12	200053520020	Silver Oak :70 x 70 x 2700	NO	3000
SCANTLING	13	200053520009	Silver Oak :70 x 70 x 3000	NO	1000
SCANTLING	14	200053520021	Silver Oak :100 x 100 x 2000	NO	0
SCANTLING	15	200053520010	Silver Oak :100 x 100 x 2500	NO	0
SCANTLING	16	200053520011	Silver Oak :100 x 100 x 2700	NO	1000
SCANTLING	17	200053520022	Silver Oak :150 x 120 x 500	NO	100
SCANTLING	18	200053520012	Silver Oak :150 x 120 x 2700	NO	400
				Total	**26600**

Note : Test certificate required for each consignment.

KILN SEASONED CHEMICALLY TREATED COUNTRY WOOD (K.S.Che.T.C.W)
as per PR:CHEM:24/00

TYPE	SL NO	MATERIAL CODE	MATERIAL DESCRIPTION	UNIT	ANNUAL REQUIREMENT
REEPER	1	200055000008	K.S.Che.T.C.W.Reeper : 70 x 30 x 1500	NO	24480
REEPER	2	200055000001	K.S.Che.T.C.W.Reeper: 70 x 30 x 2000	NO	20160
REEPER	3	200055000010	K.S.Che.T.C.W.Reeper : 70 x 30 x 2250	NO	8640
REEPER	4	200055000002	K.S.Che.T.C.W.Reeper : 70 x 30 x 2500	NO	4320
REEPER	5	200055000011	K.S.Che.T.C.W.Reeper : 70 x 30 x 2700	NO	14400
REEPER	6	200055000012	K.S.Che.T.C.W.Reeper : 70 x 30 x 3000	NO	21600
SCANTLING	7	200055000013	K.S.Che.T.C.W.Scan : 70 x 70 x 500	NO	72000
SCANTLING	8	200055000003	K.S.Che.T.C.W.Scan : 70 x 70 x 1000	NO	36000
SCANTLING	9	200055000004	K.S.Che.T.C.W.Scan : 70 x 70 x 2000	NO	56160
SCANTLING	10	200055000009	K.S.Che.T.C.W.Scan : 70 x 70 x 2250	NO	23040
SCANTLING	11	200055000014	K.S.Che.T.C.W.Scan : 70 x 70 x 2500	NO	8640
SCANTLING	12	200055000015	K.S.Che.T.C.W.Scan : 70 x 70 x 2700	NO	18720
SCANTLING	13	200055000005	K.S.Che.T.C.W.Scan : 70 x 70 x 3000	NO	28800
SCANTLING	14	200055000016	K.S.Che.T.C.W.Scan : 100 x 100 x 2000	NO	800
SCANTLING	15	200055000006	K.S.Che.T.C.W.Scan : 100 x 100 x 2500	NO	3600
SCANTLING	16	200055000007	K.S.Che.T.C.W.Scan : 100 x 100 x 2700	NO	3600
				Total	**344960**

Note : Test certificate required for each consignment.

KILN SEASONED CHEMICALLY TREATED RUBBER WOOD (K.S.T.R.W)
AS PER CHEM:20/03

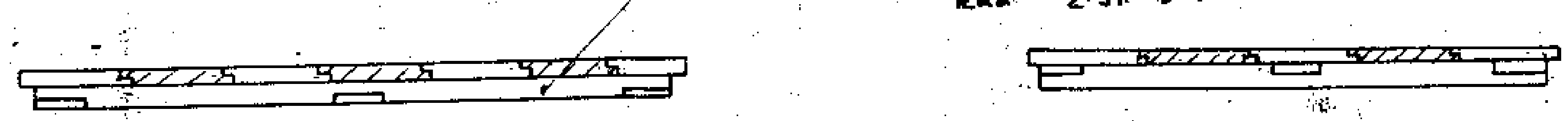
TYPE	MATERIAL CODE	MATERIAL DESCRIPTION	DRG NO / REV NO	UNIT	Proposal/Annum
REEPERS	200053100000	K.S.T.R.W:70X30X1500MM	-	NO	38880
REEPERS	200053000000	K.S.T.R.W:70X30X2000MM	-	NO	33120
REEPERS	200053210000	K.S.T.R.W:70X30X2250MM	-	NO	28800
REEPERS	200053010000	K.S.T.R.W:70X30X2500MM	-	NO	7200
REEPERS	200053220000	K.S.T.R.W:70X30X2700MM	-	NO	11520
REEPERS	200053230000	K.S.T.R.W:70X30X3000MM	-	NO	34560
SCANTLINGS	200054260000	K.S.T.R.W: 70X70X500MM	-	NO	61920
SCANTLINGS	200053020000	K.S.T.R.W:70X70X1000MM	-	NO	43200
SCANTLINGS	200053030000	K.S.T.R.W:70X70X2000MM	-	NO	64800
SCANTLINGS	200053110000	K.S.T.R.W:70X70X2250MM	-	NO	23040
SCANTLINGS	200054280000	K.S.T.R.W: 70X70X2500MM	-	NO	14400
SCANTLINGS	200054290000	K.S.T.R.W: 70X70X2700MM	-	NO	12960
SCANTLINGS	200053040000	K.S.T.R.W:70X70X3000MM	-	NO	18720
SCANTLINGS	200054310000	K.S.T.R.W:100X100X2000MM	-	NO	10080
SCANTLINGS	200053050000	K.S.T.R.W:100X100X2500MM	-	NO	2880
SCANTLINGS	200053060000	K.S.T.R.W:100X100X2700MM	-	NO	1150
SCANTLINGS	200054320000	K.S.T.R.W: 150X120X500MM	-	NO	21600
SCANTLINGS	200053090000	K.S.T.R.W:150X120X2700MM	-	NO	580
BOXES	200054040000	K.S.T.R.W : 600X500X400MM	3-SH-B-004/C	NO	570
BOXES	200054050000	K.S.T.R.W: 900X600X600MM	2-SH-CRT-00002	NO	2880
BOXES	200054240000	K.S.T.R.W:1100X300X300MM	3-SH-B-004/B	NO	70
BOXES	200054150000	K.S.T.R.W: 1100X400X400MM	3-SH-B-004/B	NO	70
BOXES	200054250000	K.S.T.R.W: 1100X500X500MM	3-SH-B-004/B	NO	600
BOXES	200054060000	K.S.T.R.W:1200X900X600MM	2-SH-CRT-00002	NO	2880
BOXES	200054070000	K.S.T.R.W:1300X900X900MM	2-SH-CRT-00002	NO	2160
BOXES	200054080000	K.S.T.R.W:1500X700X700MM	2-SH-CRT-00002	NO	2300
BOXES	200054090000	K.S.T.R.W:1050X1050X500MM	3-SH-B-004/C	NO	432
BOXES	200054100000	K.S.T.R.W:1600X900X1000MM	3-SH-B-005	NO	1730
				Total	**443102**

Note : Test certificate required for each consignment.

ALL DIMENSIONS ARE IN MILLIMETRES

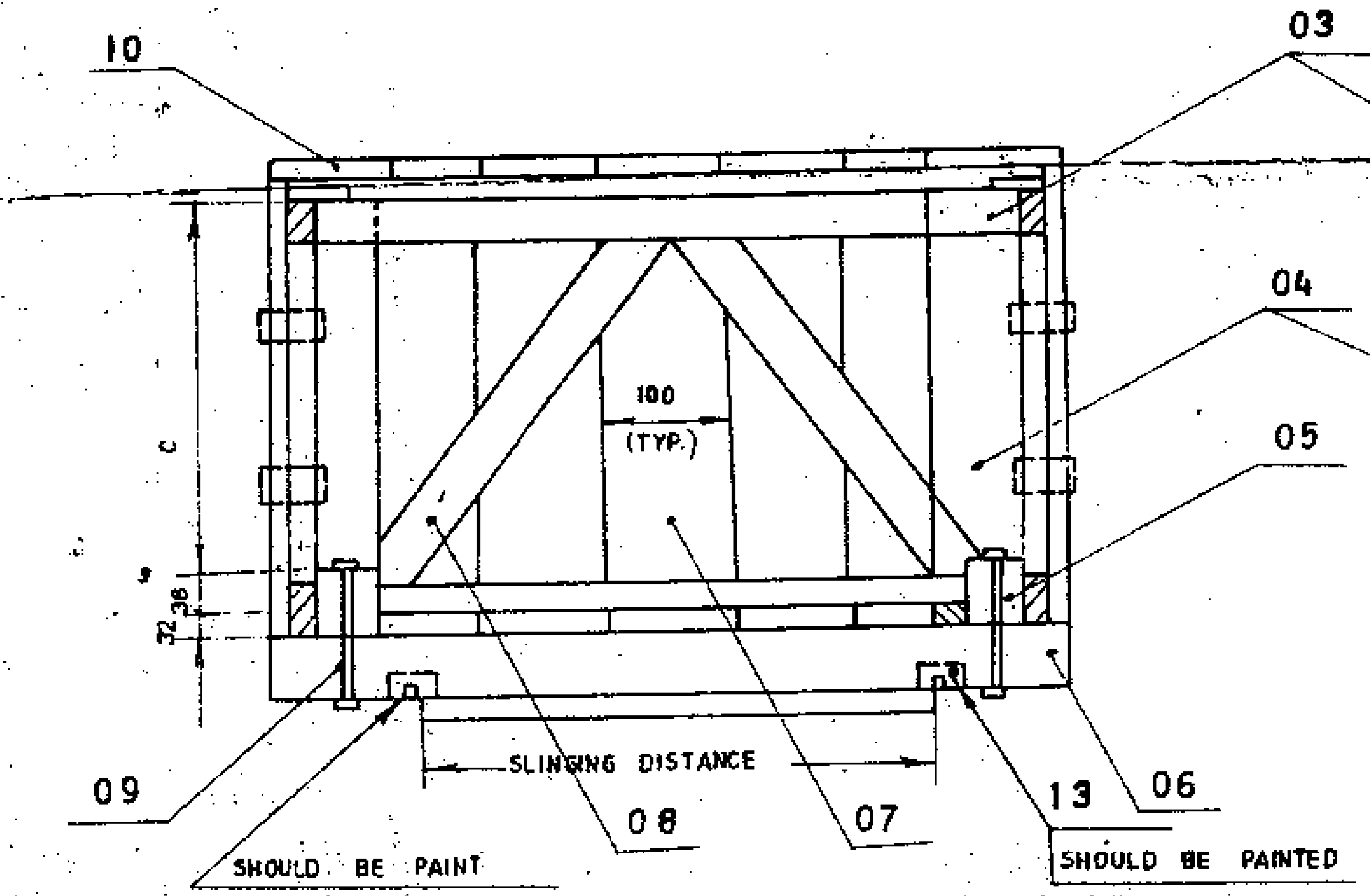
DRAWING NO. 2-SH-CRT - 00002

(B) For detail drawings please refer.
Top. - 2-SH-B-001/B
Bottom - 2-SH-B-001 A/B
Side 2-SH-B-001 B/B
End - 2-SH-B-001 C/B

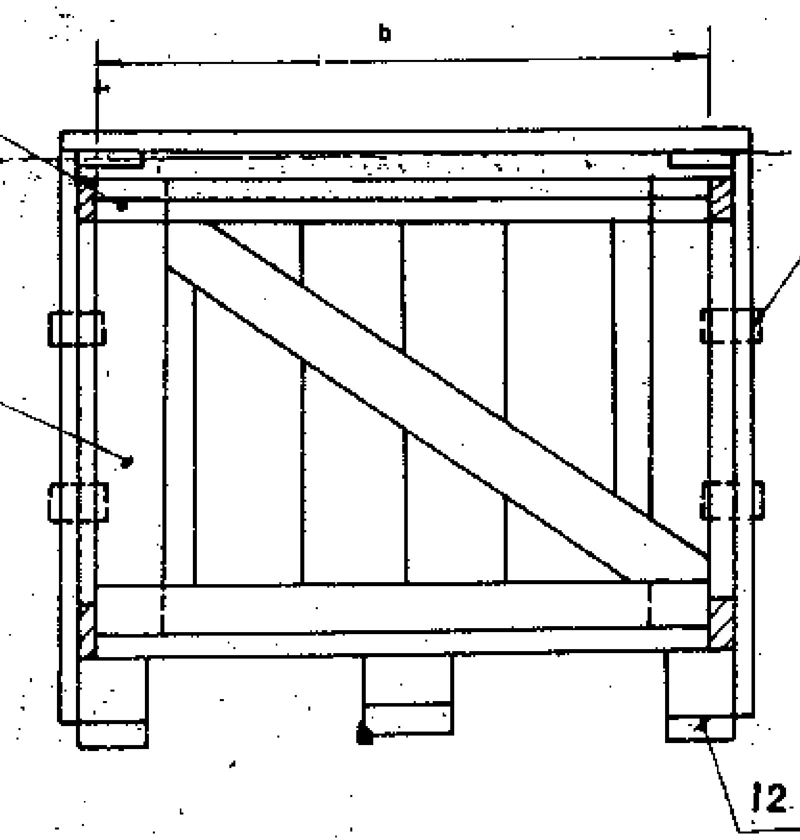


(A)

TYPE	a	b	c
1577	1500	700	700
1399	1300	900	900
1296	1200	900	600
966	900	600	600

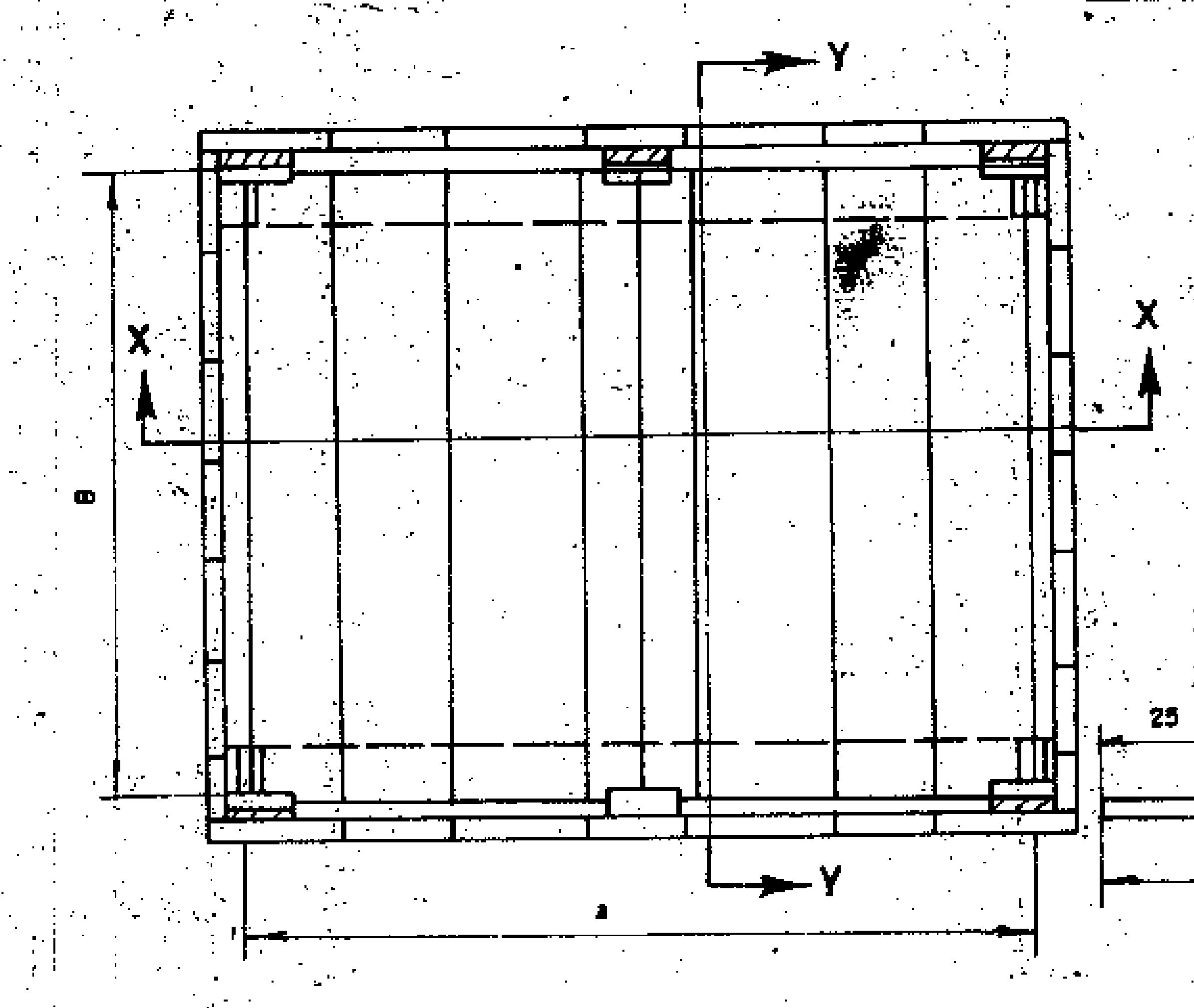


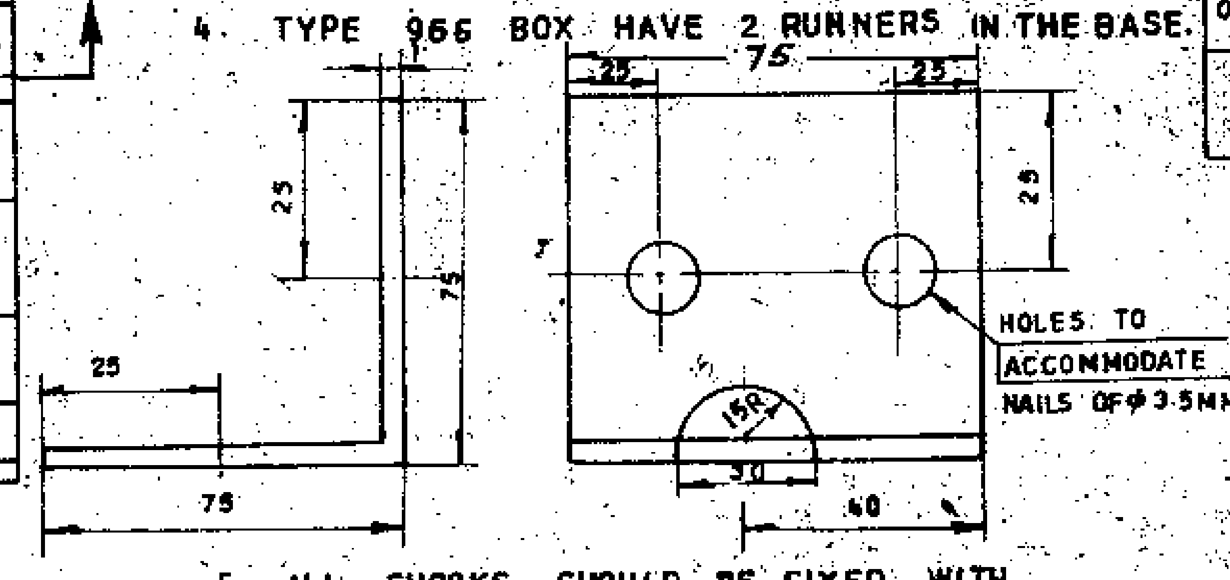
SECTION - XX



SECTION - YY

NOTES:
1. END SHOOK IS TO BE FIXED WITH BASE 4 NAILS 8 GAUGE.
2. ALL OTHER NAILING SHOULD BE 2½ - 10 GAUGE FOR ASSY.
3. CORNER PLATE AND SLING PLATE IS TO BE FIXED WITH 2" NAILS 12 GAUGE.
4. TYPE 966 BOX HAVE 2 RUNNERS IN THE BASE.
5. ALL SHOOKS SHOULD BE FIXED WITH POLYTHINE SHEET TO PROTECT FROM RAIN WATER.





15	SLINGING DISTANCE SHOULD BE PAINTED	850	
14	CAPACITY KG	2000	
13	SLING PL 150 X 75 X 0.5 mm SHOULD BE PAINTED	4 NOS	
12	RESTING BOARD	40 X 100	
11	SIDE PLATE SHOULD BE PAINTED X NAILS 2"	150X75X0.5	
10	THICKNESS OF SHEATHING PLANK	150 X 25	
09	BOLT SIZE	M 12 6 NOS	
08	DIAGONAL BRACE	30 X 100	
07	INTERMEDIATE VERTICAL SUPPORT	30 X 100	
06	RUNNER	100 X 100 3 NOS	
05	BASE END TRAVERSE BAR	70 X 70 2 NOS	
04	LATERAL PANEL AND END PANEL VERTICAL SUPPORT	30 X 100	
03	LATERAL PANEL AND END PANEL HORIZONTAL SUPPORT	30 X 100	
01	TOP LONGITUDINAL BEAM 3 NOS	30 X 100	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT: ALL DIMENSIONS SHOWN FOR TY 1296 BOX

BHARAT HEAVY ELECTRICALS LTD. UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI-620014.

	NAME	SIGN	DATE
DRN	G.K.		
CHD	TTK		
APPD	P.B.N.		

TITLE: BOILER COMPONENT PACKING BOX

CARD CODE: U 01

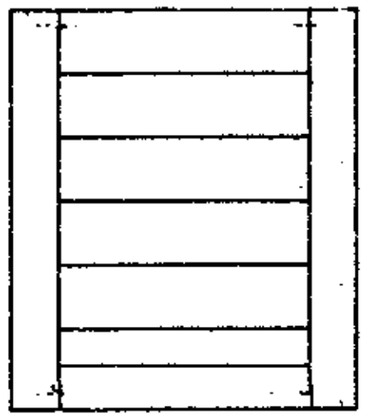
DRAWING NO. 2-SH-CRT-00002

REV 00

Size A2

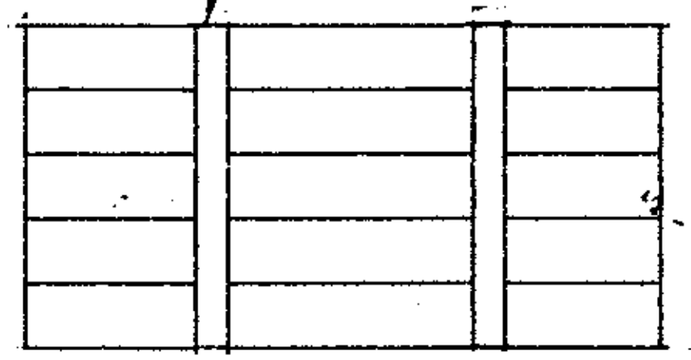
DRAWING NO: 3-SH-B-004/C

DETAIL OF ALL SIDES PROJECTION
INTERNALS

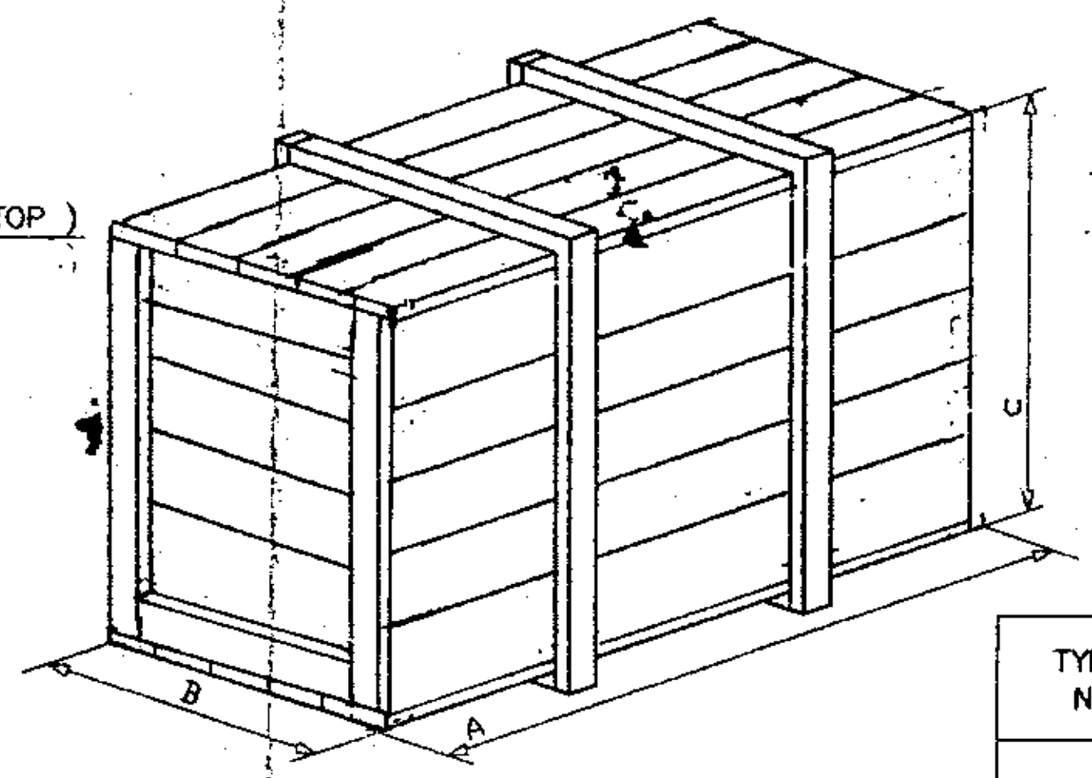


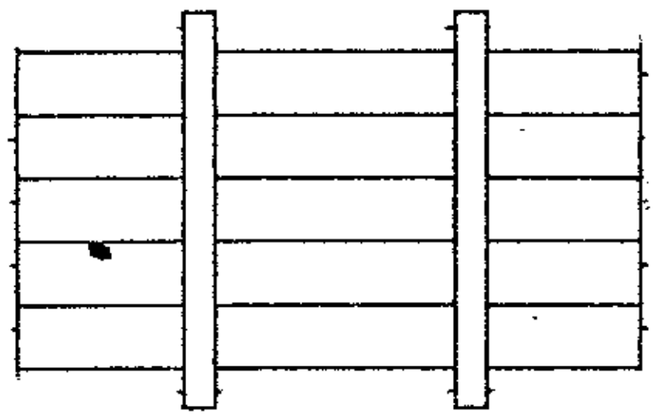
150 mm x 25 mm

ENDS
2 Nos.



TOP & BASE
2 No.





SIDES
2 Nos.

TYPE No.	DIMNS. (mm)		
	A	B	C
654	600	500	400
10105	1050	1050	500

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO / VAR NO	MATERIAL CODE / MATERIAL SPECN	A/C/P	UNIT / QI	UNIT WEIGHT / QUANTITY	GS
	03.	NAILS 2 1/2" – 10 G								
	02.	BATTONS 100 x 30								
	01.	BLANKS 25 x 150								

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

TYPE : 654 600x500x400
: 10105 1050x1050x500

Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI – 620014
355-055

	NAME	SIGNATURE	DATE
DRN			
CHD			
APPD			

DEPT / CODE | ALL DIMENSIONS ARE IN MM | PROJECTION | SCALE | WEIGHT (Kg) | REF TO ASSY / OLD DWG

TITLE: BOILER COMPONENT PACKING BOXES

DRAWING NO : 3-SH-B-004/C

REV: C

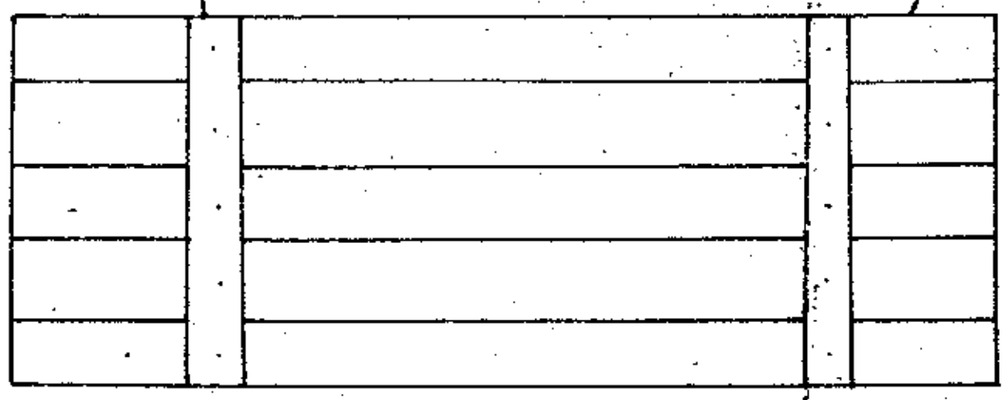
REV	DATE	ALTERED : / CHD & APPD:
01		
ZONE		

DRAWING NO. 3-SH-B-004/B

ALL DIMENSIONS ARE IN MILLIMETRES

02 100MM X 30MM

01 150MM X 25MM



TOP & BASE

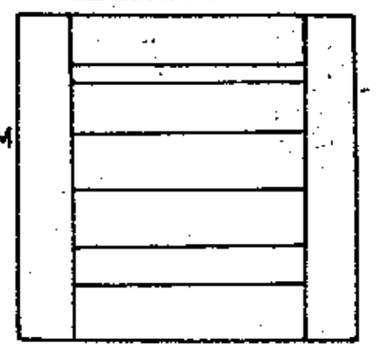
(2 NO.)

TYPE NO.	DIMNS. (MM) A	B	C
1144	1100	400	400
1122	1100	200	200
654	600	500	400
633	600	300	300
1133	1100	300	300
1155	1100	500	500

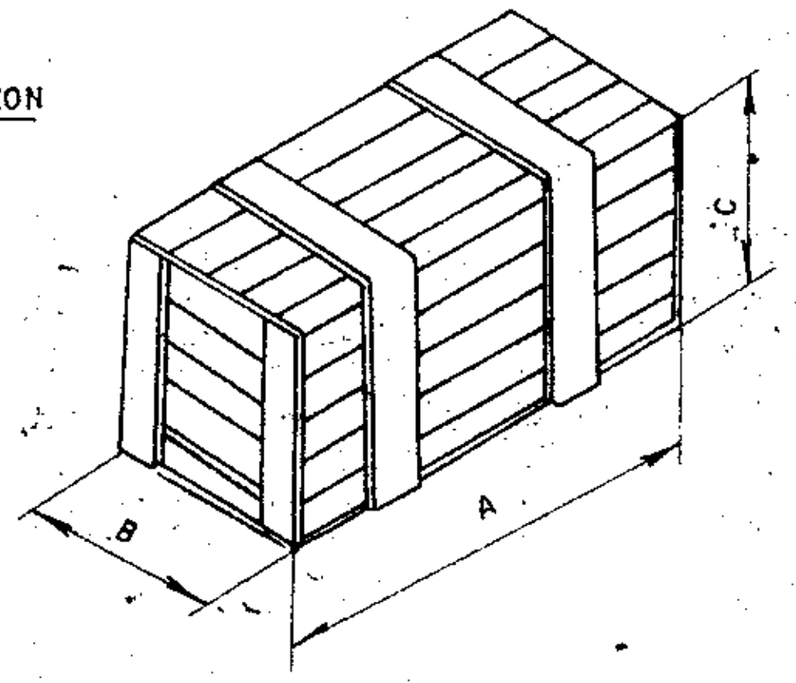
01

DETAILS OF ALL SIDES PROTECTION

INTERNAL

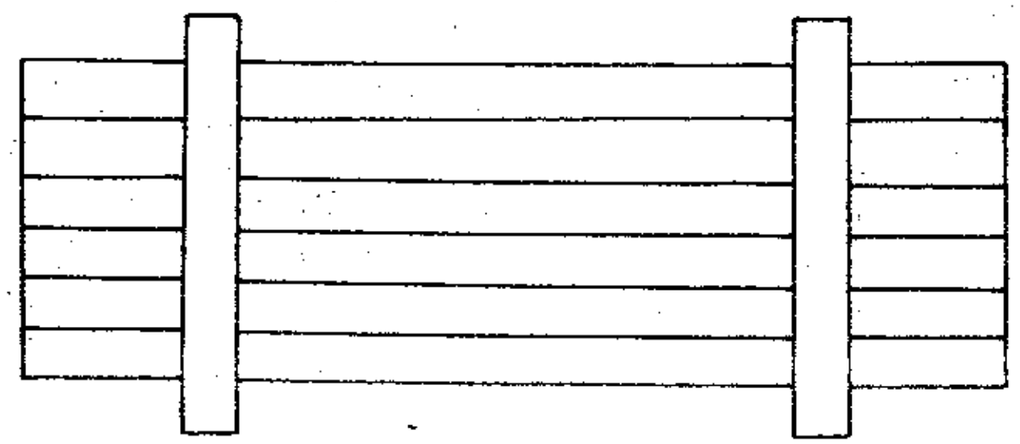


150 MM X 25 MM



ENDS

(2 NOS)



SIDES

(2 NOS.)

VAR NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.
	03	NAILS		2½ - 10G
	02	BATTONS		100 X 30
	01	PLANKS		25 X 150

PRINT ISSUED

TYPE OF PRODUCT / OR NAME OF CUSTOMER/PROJECT

TYPE 1144 1100 X 400 X 400MM
1122 1100 X 200 X 200 MM
654 600 X 500 X 400 MM
633 600 X 300 X 300 MM

BHARAT HEAVY ELECTRICALS LTD.
UNIT: HIGH PRESSURE BOILER PLANT.
TIRUCHIRAPALLI-620014.

	NAME	SIGN	DATE	NO. OF VAR.
DRN	G. KARUPPIAH		30/6/87	
CHD	T. KULLAYAPPA		30/6/87	
APPD	P. PALAKRISHNAN		30/6/87	

DEPT / CODE	GRADE OF UNTOL. DIM. C / M / F	SCALE	WEIGHT (KG).	REF. TO ASSY/OLD DRG.	ITEM NO.	NO. OF ITEMS

TITLE: BOILER COMPONENT PACKING BOXES

CARD CODE: U 01

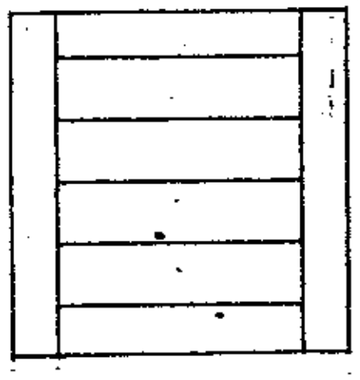
DRAWING NO.: 3-SH-B-004/B

REV: 01

Size A3

DRAWING NO. 3-SH-B-005

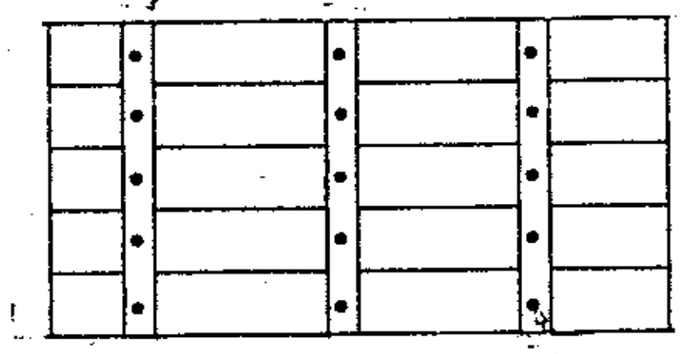
DETAIL OF ALL SIDES PROJECTION
INTERNALS



150 mm x 25 mm

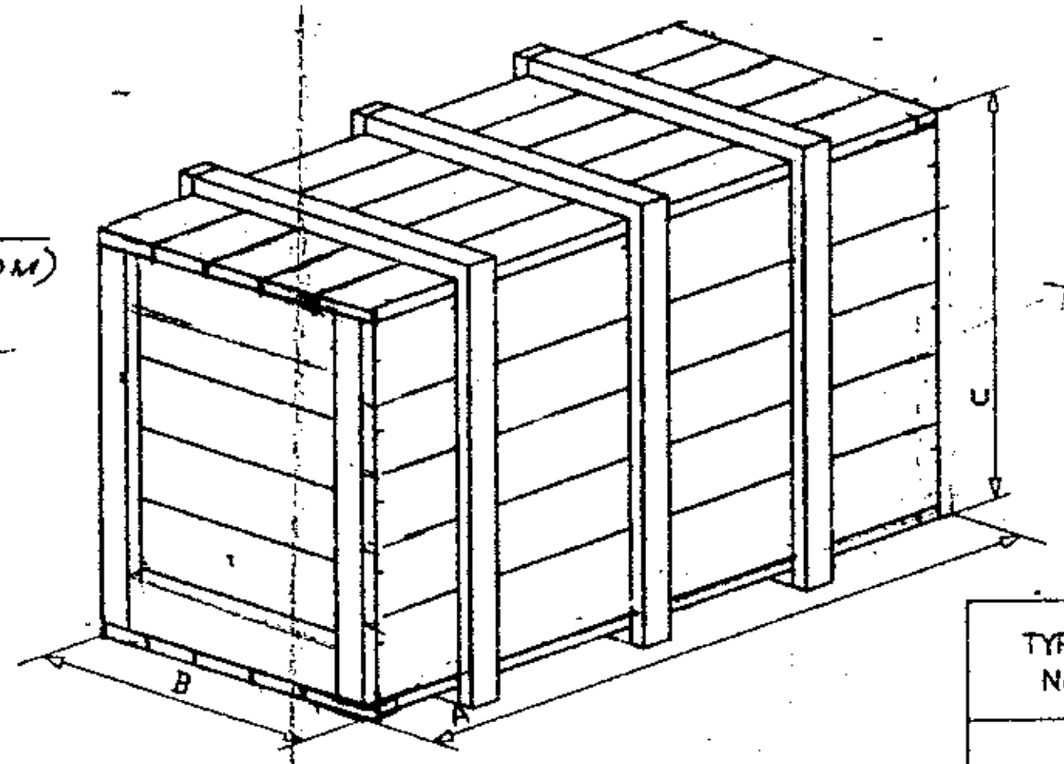
ENDS
2 Nos.

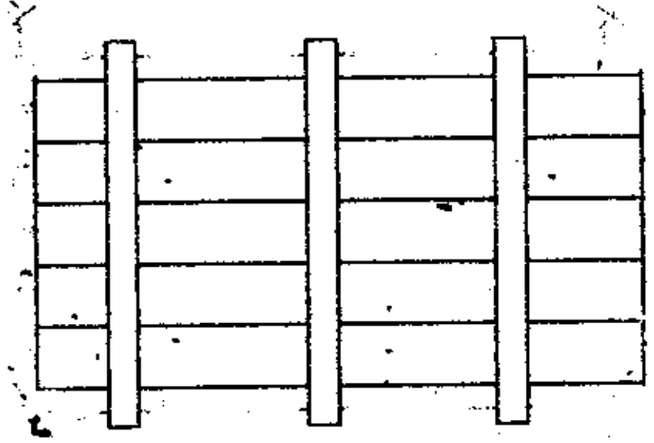
02 100 mm x 30 mm (FOR TOP)
100 mm x 50 mm (FOR BOTTOM)



03

TOP & BASE
2 No.





SIDES
2 Nos.

PRINT ISSUED BY

TYPE No.	DIMNS. (mm)		
	A	B	C
16910	1600	900	1000

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
	03.	NAILS 2 1/2" – 3 1/2"								
	02.	BATTONS 100 x 30 / 100 x 50								
	01.	BLANKS 25 x 150								
					VAR NO	MATERIAL SPECN		DI	QUANTITY	

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

TYPE : 16910 — 1600x900x1000

Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI – 620014
355–055

	NAME	SIGNATURE	DATE
DRN			
CHD			
APPD			

DEPT	ALL DIMENSIONS ARE IN MM	PROJECTION	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG
CODE					

TITLE
BOILER COMPONENT
BUTTON BOXES

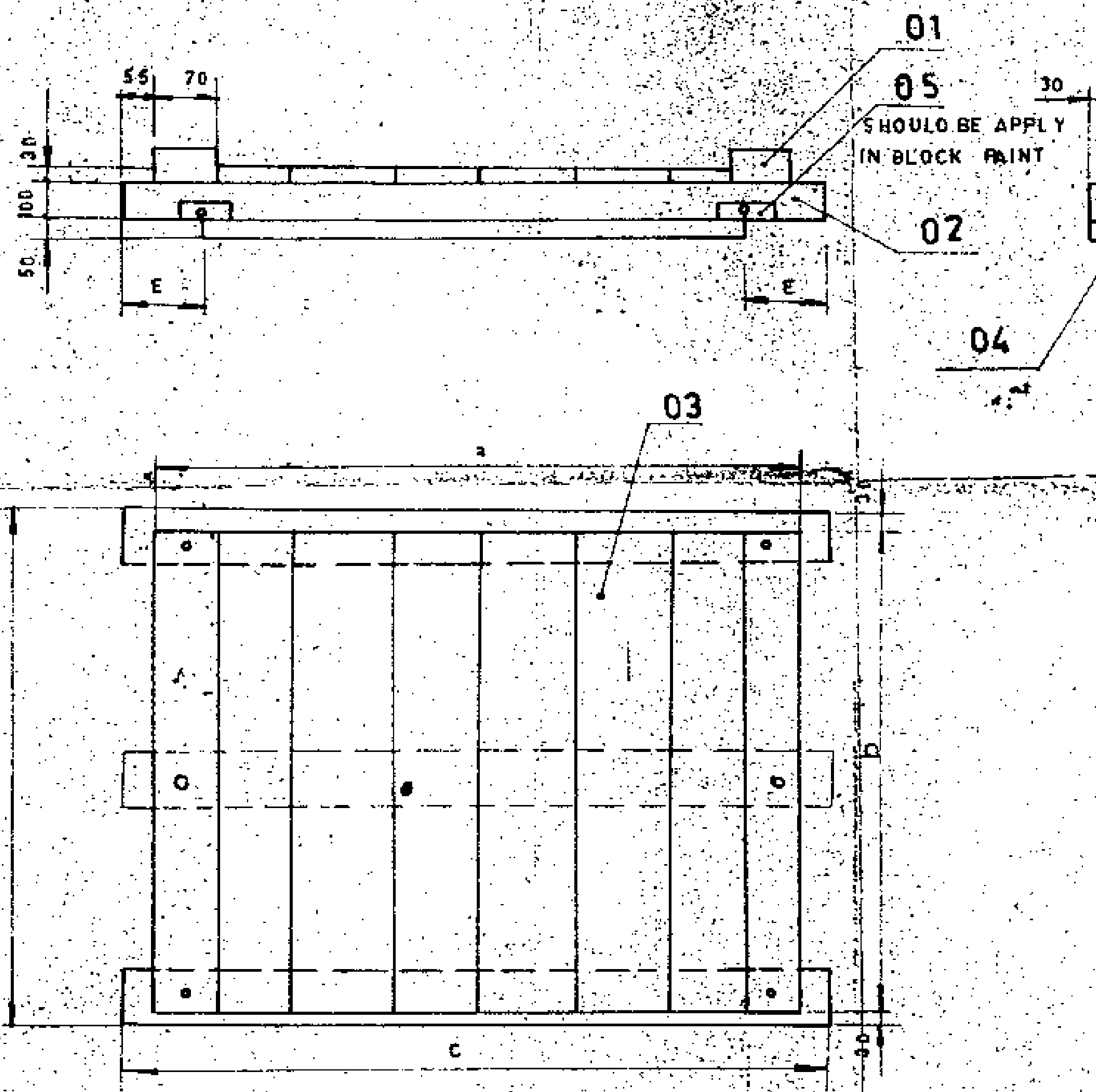
DRAWING NO : 3–SH–B–005

REV

REV	DATE	ALTERED :
01		CHD & APPD:

ZONE

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER PLANT STD.NO TP 023 0299



ITEM NO	TYPE 966	TYPE 1296	TYPE 1399	TYPE 1577
E	150 — 150	150 — 150	200 — 200	200 — 200
d	660	960	960	760
c	1010	1310	1410	1610
b	600	900	900	700
a	900	1200	1300	1500

ITEM NO	DESCRIPTION	TYPE 966	TYPE 1296	TYPE 1399	TYPE 1577
04	BASE RESTING BOARD	710 X 100 X 50 / 2	1010 X 100 X 50 / 3	1010 X 100 X 50 / 3	1210 X 100 X 50 / 3
03	BASE PLANKS	600 X 150 X 30 / 6	900 X 150 X 30 / 8	900 X 150 X 30 / 9	700 X 150 X 30 / 10
02	BASE RENNER	1010 X 100 X 100 / 2	1310 X 100 X 100 / 3	1410 X 100 X 100 / 3	1610 X 100 X 100 / 8
01	BASE END TRAVES	600 X 70 X 70 / 2	900 X 70 X 70 / 2	900 X 70 X 70 / 2	700 X 70 X 70 / 2

REV	DATE	ALTERED
01		CHD & APPD

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI — 620014

70-413

	NAME	SIGNATURE	DATE
DRN	T. XAVIER		11/05/94
CHD	M. KALAIMANI		11.5.94
APPD	P. BALAKRISHNAN		

DEPT | CODE | ALL DIMENSIONS ARE IN MM | PROJECTION | SCALE | WEIGHT (Kg) | REF TO ASSY / OLD DRG

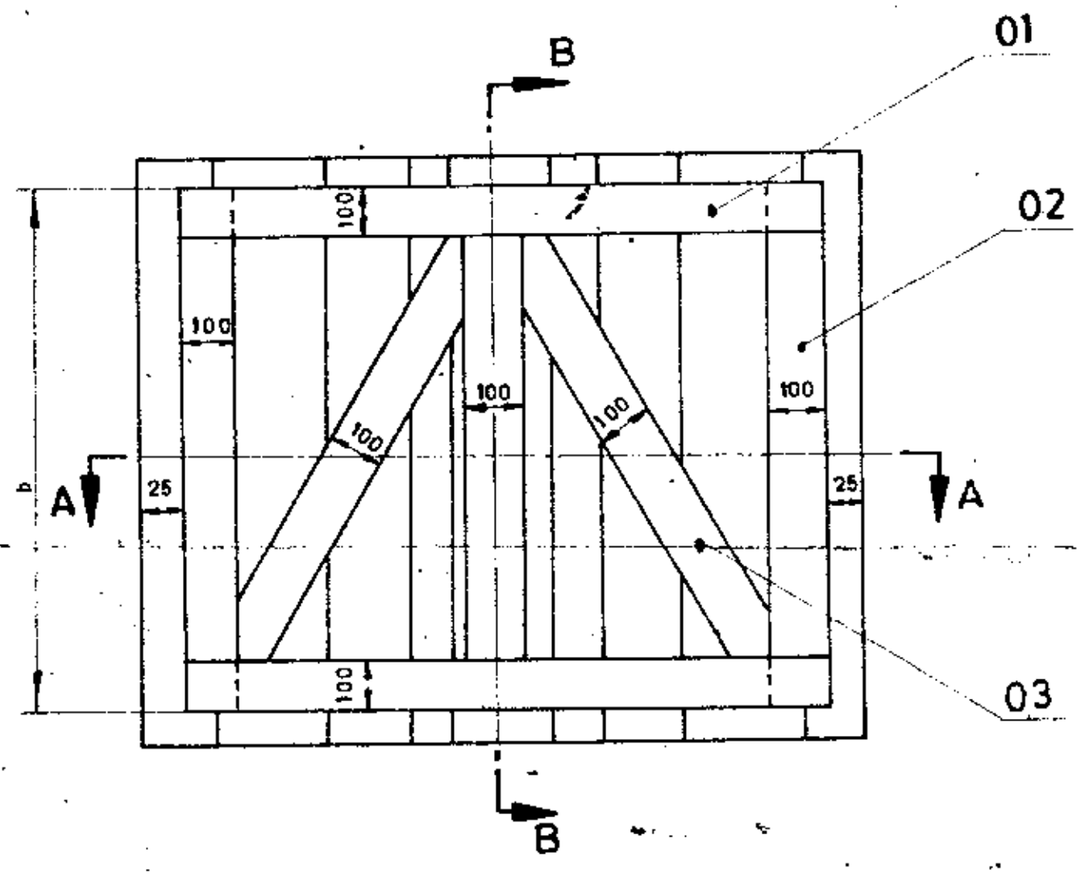
TITLE: BASE SHOOK

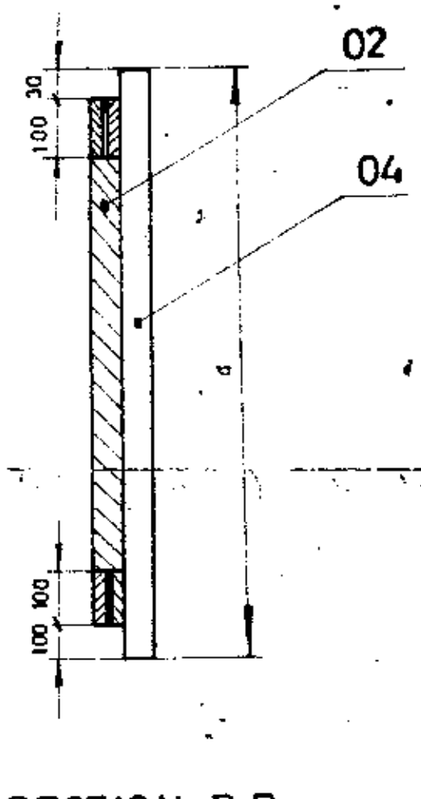
DRAWING NO: 2 SH B 001 A|B

REV

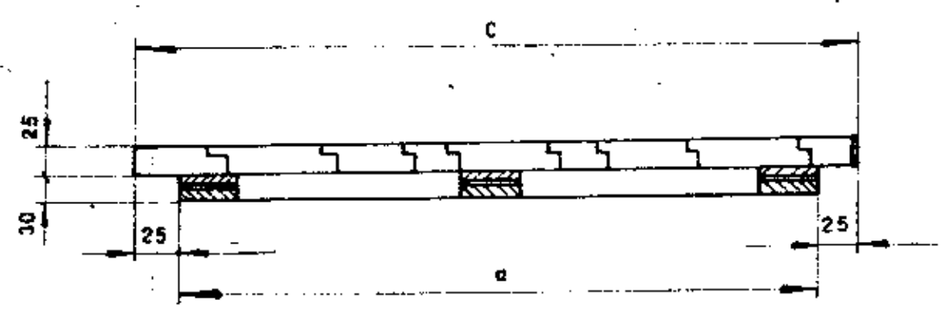
DRAWING NO: 2-SH-B-001 - A|B

DRAWING NO: 2-SH-B-001B/B





SECTION-B B



SECTION - AA

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER PLANT STD.NO TP 023 0299

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d	800	800	1100	900
c	1010	1310	1410	1610
b	670	670	970	770
a	960	1260	1360	1560
ITEM NO.	TY:966	TY:1296	TY: 1399	TY: 1577

04	PLAKS		800X150X25 8+8	800X150X25 10+10	1100X150X25 10+10	900X150X25 12+12
03	DIAGONAL BRACE		580X100X30 2+2	690X100X30 2+2	960X100X30 2+2	860X100X30 2+2
02	VERTICAL SUPPORT		470X100X30 3+3	470X100X30 3+3	770X100X30 3+3	570X100X30 3+3
01	HORIZANTAL SUPPORT		960X100X30 2+2	1260X100X30 2+2	1360X100X30 2+2	1560X100X30 2+2
ITEM NO	DESCRIPTION		TYPE : 966	TYPE : 1296	TYPE : 1399	TYPE : 1577

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM No	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS	ZONE
					VAR No	MATERIAL SPECN.		01	QUANTITY		

REV	DATE	ALTERED
01		CHD & APPD :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI - 620014

70-413

	NAME	SIGNATURE	DATE
DRN	T. XAVIER		11/05/99
CHD	M.KALAIMANI		11 5 99
APPD	P.BALAKRISHNAN		

DEPT	CODE	ALL DIMENSIONS ARE IN MM.	PROJECTION	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG
				1:1		

TITLE: SIDE SHOOK

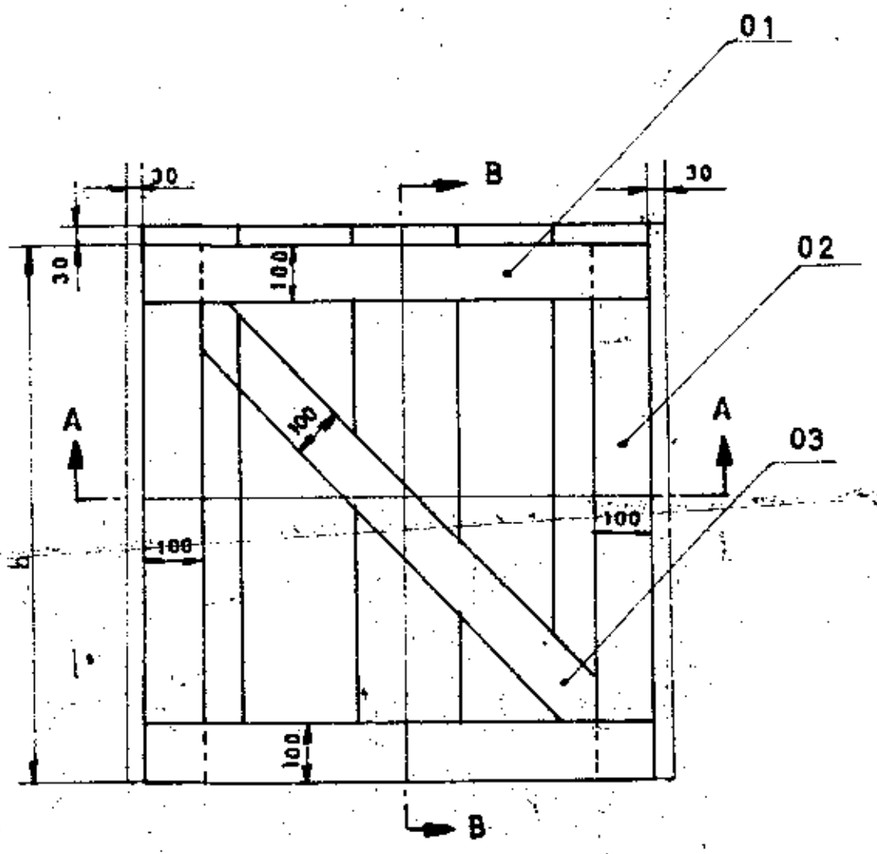
DRAWING NO: 2-SH-B-001B/B

REV

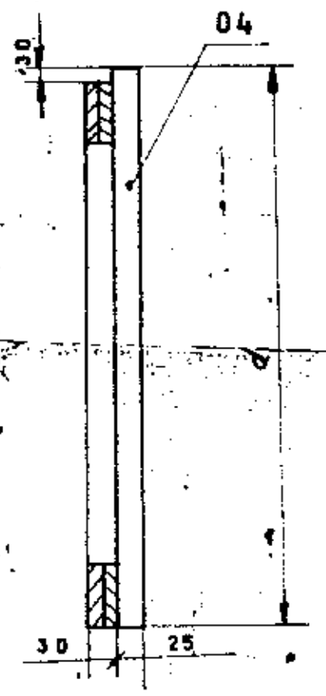
DRAWING NO. 2_SH_B_001 C B

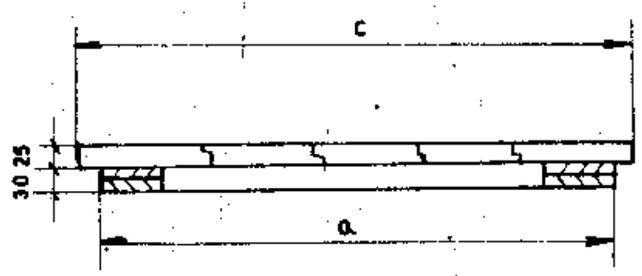
FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER, PLANT STD.NO TP 023 0299

PRINT ISSUED BY CENTRAL ... ORIGIN... GREE...



SECTION _ B B





SECTION _ A A

d		700	700	1000	800
c		660	960	960	760
b		670	670	970	770
a		600	900	900	700
ITEM NO.		TYPE :966	TYPE:1296	TYPE: 1399	TYPE 1577
04	PLANKS	700 X 150 X 25 5 + 5	700 X 150 X 25 7 + 7	1000 X 150 X 25 7 + 7	800 X 150 X 25 6 + 6
03	DIAGANAL BRACE	620 X 100 X 30 1 + 1	870 X 100 X 30 1 + 1	1060 X 100 X 30 1 + 1	760 X 100 X 30 1 + 1
02	VERTICAL SUPPORT	670 X 100 X 30 2 + 2	470 X 100 X 30 2 + 2	770 X 100 X 30 2 + 2	570 X 100 X 30 2 + 2
01	HORIZONTAL SUPPORT	600 X 100 X 30 2 + 2	900 X 100 X 30 2 + 2	900 X 100 X 30 2 + 2	700 X 100 X 30 2 + 2
ITEM NO.		TYPE : 966	TYPE : 1296	TYPE : 1399	TYPE : 1577

REV 01 | DATE | ALTERED : | CHD & APPD :

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
-TIRUCHIRAPALLI – 620014
70-413

	NAME	SIGNATURE	DATE
DRN	T. XAVIER		11/05/99
CHD	M.KALAIMANI		11.5.99
APPD	P.BALAKRISHNAN		

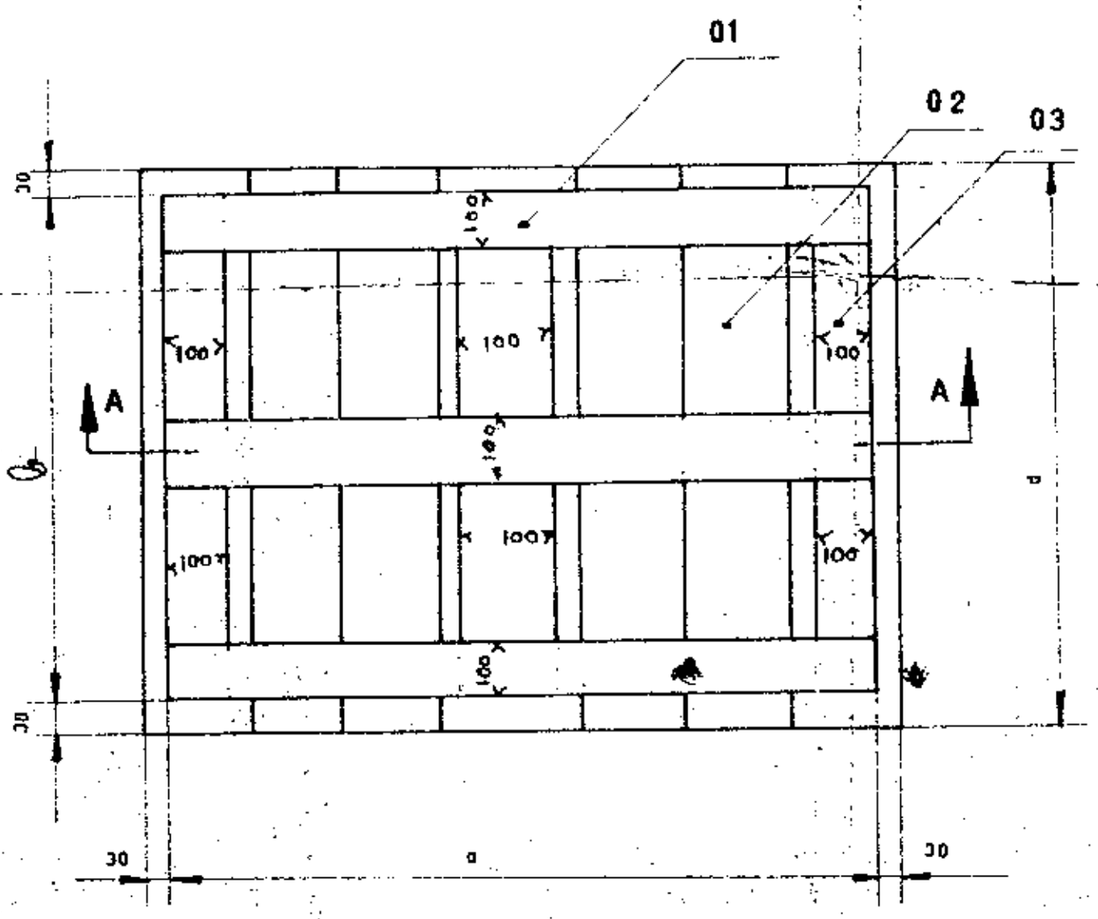
DEPT | CODE | ALL DIMENSIONS ARE IN MM. | PROJECTION | SCALE 1 : 1 | WEIGHT (Kg) | REF TO ASSY / CUS DWG

TITLE: END SHOOKS

DRAWING NO: 2. SH- B.001 C/B | REV

DRAWING NO. 2-SH-B-001/A

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER PLANT STD.NO TP 023 0299



d	710	1010	1010	810	
e	1010	1310	1410	1610	
b	650	950	950	750	
a	950	1250	1350	1550	
ITEM NO	TY 966	TY 1296	TY 1399	TY 1577	

03	TRAVERS BEAM	450 X 100 X 30 2	325 X 100 X 50 6	325 X 100 X 30 6	225 X 100 X 30 6
02	PLANK	710 X 150 X 25 7	1010 X 150 X 25 10	1010 X 150 X 25 10	810 X 150 X 25 12
01	LONGITUDINAL BEAM	950 X 100 X 30 2	1250 X 100 X 30 3	1350 X 100 X 30 3	1550 X 100 X 30 3
ITEM NO	DESCRIPTION	TYPE : 966	TYPE : 1296	TYPE : 1399	TYPE : 1577

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM No. / VAR No.	MATERIAL CODE / MATERIAL SPECN	A/C/P	UNIT / Di	UNIT WEIGHT / QUANTITY	GS	ZONE

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI – 620014
70-413

	NAME	SIGNATURE	DATE
DRN	T XAVIER		11/05/99
CHD	M.KALAIMANI		11.5.99
APPD	P.BALAKRISHNAN		

DEPT / CODE | ALL DIMENSIONS ARE IN MM. | PROJECTION | SCALE | WEIGHT (Kg) | REF TO ASSY / OLD DRG

TITLE: TOP SHOOKS

DRAWING NO : 2-SH-B-001 / B

REV

REV	DATE	ALTERED : / CHD & APPD :	ZONE
01			

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM 15

REGULATION OF WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE

(2009)

Produced by the Secretariat of the International Plant Protection Convention

Publication history

This is not an official part of the standard

1999-10 ICPM-2 added topic *Wood packing* (1999-001)

2000-06 ad-hoc EWG developed draft text

2001-02 EWG developed draft text

2001-05 ISC-3 revised draft text and approved for MC

2001-06 Sent for MC

2001-11 ISC-4 revised draft text for adoption

2002-03 ICPM-4 adopted standard

ISPM 15. 2002. *Guidelines for regulating wood packaging material in international trade*. Rome, IPPC, FAO.

2005-03 TPFQ revised Annex 1 *Methyl bromide fumigation schedule* (2005-011)

2005-05 SC revised Annex1 and approved for MC

2005-06 Sent for MC under fast-track process

2005-11 SC revised Annex 1 for adoption

2006-04 CPM-1 adopted revised Annex 1

ISPM 15. 2006. *Guidelines for regulating wood packaging material in international trade*. Rome, IPPC, FAO.

2006-04 CPM-1 added topic *Revision of ISPM No. 15* (2006-036)

2006-05 SC approved Specification 31 *Revision of ISPM No. 15*

2007-07 TPFQ revised standard

2008-05 SC revised and approved for MC

2008-06 Sent for MC

2008-11 SC revised standard for adoption

2009-03 CPM-4 adopted revised standard

ISPM 15. 2009. *Regulation of wood packaging material in international trade*. Rome, IPPC, FAO.

Publication history: Last modified August 2011

CONTENTS

Adoption

This standard was first adopted by the Fourth Session of the Interim Commission on Phytosanitary Measures in March 2002 as *Guidelines for regulating wood packaging material in international trade*. Modifications to Annex 1 were adopted by the First Session of the Commission on Phytosanitary Measures in April 2006. The first revision was adopted by the Fourth Session of the Commission on Phytosanitary Measures in March–April 2009 as the present standard, ISPM 15:2009.

INTRODUCTION

Scope

This standard describes phytosanitary measures that reduce the risk of introduction and spread of quarantine pests associated with the movement in international trade of wood packaging material made from raw wood. Wood packaging material covered by this standard includes dunnage but excludes wood packaging made from wood processed in such a way that it is free from pests (e.g. plywood).

The phytosanitary measures described in this standard are not intended to provide ongoing protection from contaminating pests or other organisms.

Environmental Statement

Pests associated with wood packaging material are known to have negative impacts on forest health and biodiversity. Implementation of this standard is considered to reduce significantly the spread of pests and subsequently their negative impacts. In the absence of alternative treatments being available for certain situations or to all countries, or the availability of other appropriate packaging materials, methyl bromide treatment is included in this standard. Methyl bromide is known to deplete the ozone layer. An IPPC Recommendation on the *Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (CPM, 2008) has been adopted in relation to this issue. Alternative treatments that are more environmentally friendly are being pursued.

References

CPM. 2008. *Replacement or reduction of the use of methyl bromide as a phytosanitary measure*. IPPC Recommendation. In *Report of the Third Session of the Commission on Phytosanitary Measures, Rome, 7–11 April 2008*, Appendix 6. Rome, IPPC, FAO.

IPPC. 1997. *International Plant Protection Convention*. Rome, IPPC, FAO.

ISO 3166-1:2006. *Codes for the representation of names of countries and their subdivisions – Part 1: Country codes*. Geneva, International Organization for Standardization (available at http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm).

ISPM 5. *Glossary of phytosanitary terms*. Rome, IPPC, FAO.

ISPM 7. 1997. *Export certification system*. Rome, IPPC, FAO.

ISPM 20. 2004. *Guidelines for a phytosanitary import regulatory system*. Rome, IPPC, FAO.

ISPM 23. 2005. *Guidelines for inspection*. Rome, IPPC, FAO.

ISPM 13. 2001. *Guidelines for the notification of non-compliance and emergency action*. Rome, IPPC, FAO.

ISPM 25. 2006. *Consignments in transit*. Rome, IPPC, FAO.

ISPM 28. 2007. *Phytosanitary treatments for regulated pests*. Rome, IPPC, FAO.

UNEP. 2000. *Montreal Protocol on Substances that Deplete the Ozone Layer*. Nairobi, Ozone Secretariat, United Nations Environment Programme. ISBN: 92-807-1888-6 (http://www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf).

Definitions

Definitions of phytosanitary terms used in this standard can be found in ISPM 5 (*Glossary of phytosanitary terms*).

Outline of Requirements

Approved phytosanitary measures that significantly reduce the risk of pest introduction and spread via wood packaging material consist of the use of debarked wood (with a specified tolerance for remaining bark) and the application of approved treatments (as prescribed in Annex 1). The application of the recognized mark (as prescribed in Annex 2) ensures that wood packaging material subjected to the approved treatments is readily identifiable. The approved treatments, the mark and its use are described.

The national plant protection organizations (NPPOs) of exporting and importing countries have specific responsibilities. Treatment and application of the mark must always be under the authority of the NPPO. NPPOs that authorize the use of the mark should supervise (or, as a minimum, audit or review) the application of the treatments, use of the mark and its application, as appropriate, by producer/treatment providers and should establish inspection or monitoring and auditing procedures. Specific requirements apply to wood packaging material that is repaired or remanufactured. NPPOs of importing countries should accept the approved phytosanitary measures as the basis for authorizing entry of wood packaging material without further wood packaging material-related phytosanitary import requirements and may verify on import that the requirements of the standard have been met. Where wood packaging material does not comply with the requirements of this standard, NPPOs are also responsible for measures implemented and notification of non-compliance, as appropriate.

REQUIREMENTS

1. Basis for Regulation

Wood originating from living or dead trees may be infested by pests. Wood packaging material is frequently made of raw wood that may not have undergone sufficient processing or treatment to remove or kill pests and therefore remains a pathway for the introduction and spread of quarantine pests. Dunnage in particular has been shown to present a high risk of introduction and spread of quarantine pests. Furthermore, wood packaging material is very often reused, repaired or remanufactured (as described in section 4.3). The true origin of any piece of wood packaging material is difficult to determine, and thus its phytosanitary status cannot easily be ascertained. Therefore the normal process of undertaking pest risk analysis to determine if measures are necessary, and the strength of such measures, is frequently not possible for wood packaging material. For this reason, this standard describes internationally accepted measures that may be applied to wood packaging material by all countries to reduce significantly the risk of introduction and spread of most quarantine pests that may be associated with that material.

2. Regulated Wood Packaging Material

These guidelines cover all forms of wood packaging material that may serve as a pathway for pests posing a pest risk mainly to living trees. They cover wood packaging material such as crates, boxes, packing cases, dunnage[1], pallets, cable drums and spools/reels, which can be present in almost any imported consignment, including consignments that would not normally be subject to phytosanitary inspection.

2.1 Exemptions

The following articles are of sufficiently low risk to be exempted from the provisions of this standard[2]:

- wood packaging material made entirely from thin wood (6 mm or less in thickness)
- wood packaging made wholly of processed wood material, such as plywood, particle board, oriented strand board or veneer that has been created using glue, heat or pressure, or a combination thereof
- barrels for wine and spirit that have been heated during manufacture
- gift boxes for wine, cigars and other commodities made from wood that has been processed and/or manufactured in a way that renders it free of pests
- sawdust, wood shavings and wood wool
- wood components permanently attached to freight vehicles and containers.

3. Phytosanitary Measures for Wood Packaging Material

This standard describes phytosanitary measures (including treatments) that have been approved for wood packaging material and provides for the approval of new or revised treatments.

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[1] Consignments of wood (i.e. timber/lumber) may be supported by dunnage that is constructed from wood of the same type and quality and that meets the same phytosanitary requirements as the wood in the consignment. In such cases, the dunnage may be considered as part of the consignment and may not be considered as wood packaging material in the context of this standard.

[2] Not all types of gift boxes or barrels are constructed in a manner that renders them pest free, and therefore certain types may be considered to be within the scope of this standard. Where appropriate, specific arrangements related to these types of commodities may be established between importing and exporting NPPOs.

3.1 Approved phytosanitary measures

The approved phytosanitary measures described in this standard consist of phytosanitary procedures including treatments and marking of the wood packaging material. The application of the mark renders the use of a phytosanitary certificate unnecessary as it indicates that the internationally accepted phytosanitary measures have been applied. These phytosanitary measures should be accepted by all NPPOs as the basis for authorizing the entry of wood packaging material without further specific requirements. Required phytosanitary measures beyond an approved measure as described in this standard require technical justification.

The treatments described in Annex 1 are considered to be significantly effective against most pests of living trees associated with wood packaging material used in international trade. These treatments are combined with the use of debarked wood for construction of wood packaging, which also acts to reduce the likelihood of reinfestation by pests of living trees. These measures have been adopted based on consideration of:

- the range of pests that may be affected
- the efficacy of the treatment
- the technical and/or commercial feasibility.

There are three main activities involved in the production of approved wood packaging material (including dunnage): treating, manufacturing and marking. These activities can be done by separate entities, or one entity can do several or all of these activities. For ease of reference, this standard refers to producers (those that manufacture the wood packaging material and may apply the mark to appropriately treated wood packaging material) and treatment providers (those that apply the approved treatments and may apply the mark to appropriately treated wood packaging material).

Wood packaging material subjected to the approved measures shall be identified by application of an official mark in accordance with Annex 2. This mark consists of a dedicated symbol used in conjunction with codes identifying the specific country, the responsible producer or treatment provider, and the treatment applied. Hereafter, all components of such a mark are referred to collectively as "the mark". The internationally recognized, non-language-specific mark facilitates identification of treated wood packaging material during inspection prior to export, at the point of entry, or elsewhere. NPPOs should accept the mark as referred to in Annex 2 as the basis for authorizing the entry of wood packaging material without further specific requirements.

Debarked wood must be used for the construction of wood packaging material, in addition to application of one of the adopted treatments specified in Annex 1. A tolerance for remaining bark is specified in Annex 1.

3.2 Approval of new or revised treatments

As new technical information becomes available, existing treatments may be reviewed and modified, and new alternative treatments and/or treatment schedule(s) for wood packaging material may be adopted by the CPM. ISPM 28:2007 provides guidance on the IPPC's process for approval of treatments. If a new treatment or a revised treatment schedule is adopted for wood packaging material and incorporated into this ISPM, material already treated under the previous treatment and/or schedule does not need to be re-treated or re-marked.

3.3 Alternative bilateral arrangements

NPPOs may accept measures other than those listed in Annex 1 by bilateral arrangement with their trading partners. In such cases, the mark shown in Annex 2 must not be used unless all requirements of this standard have been met.

4. Responsibilities of NPPOs

To meet the objective of preventing the introduction and spread of pests, exporting and importing contracting parties and their NPPOs have responsibilities (as outlined in Articles I, IV and VII of the IPPC). In relation to this standard, specific responsibilities are outlined below.

4.1 Regulatory considerations

Treatment and application of the mark (and/or related systems) must always be under the authority of the NPPO. NPPOs that authorize use of the mark have the responsibility for ensuring that all systems authorized and approved for implementation of this standard meet all necessary requirements described within the standard, and that wood packaging material (or wood that is to be made into wood packaging material) bearing the mark has been treated and/or manufactured in accordance with this standard. Responsibilities include:

- authorization, registration and accreditation, as appropriate
- monitoring treatment and marking systems implemented in order to verify compliance (further information on related responsibilities is provided in ISPM 7:1997)
- inspection, establishing verification procedures and auditing where appropriate (further information is provided in ISPM 23:2005).

The NPPO should supervise (or, as a minimum, audit or review) the application of the treatments, and authorize use of the mark and its application as appropriate. To prevent untreated or insufficiently/incorrectly treated wood packaging material bearing the mark, treatment should be carried out prior to application of the mark.

4.2 Application and use of the mark

The specified marks applied to wood packaging material treated in accordance with this standard must conform to the requirements described in Annex 2.

4.3 Treatment and marking requirements for wood packaging material that is reused, repaired or remanufactured

NPPOs of countries where wood packaging material that bears the mark described in Annex 2 is repaired or remanufactured have responsibility for ensuring and verifying that systems related to export of such wood packaging material comply fully with this standard.

4.3.1 Reuse of wood packaging material

A unit of wood packaging material that has been treated and marked in accordance with this standard and that has not been repaired, remanufactured or otherwise altered does not require re-treatment or re-application of the mark throughout the service life of the unit.

4.3.2 Repaired wood packaging material

Repaired wood packaging material is wood packaging material that has had up to approximately one third of its components removed and replaced. NPPOs must ensure that when marked wood packaging material is repaired, only wood treated in accordance with this standard is used for the repair, or wood constructed or fabricated from processed wood material (as described in section 2.1). Where treated wood is used for the repair, each added component must be individually marked in accordance with this standard.

Wood packaging material bearing multiple marks may create problems in determining the origin of the wood packaging material if pests are found associated with it. It is recommended that NPPOs of countries where wood packaging material is repaired limit the number of different marks that may appear on a single unit of wood packaging material. Therefore NPPOs of countries where wood

packaging material is repaired may require the repaired wood packaging material to have previous marks obliterated, the unit to be re-treated in accordance with Annex 1, and the mark then applied in accordance with Annex 2. If methyl bromide is used for the re-treatment, the information in the IPPC Recommendation on the *Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (CPM, 2008) should be taken into account.

In circumstances where there is any doubt that all components of a unit of repaired wood packaging material have been treated in accordance with this standard, or the origin of the unit of wood packaging material or its components is difficult to ascertain, the NPPOs of countries where wood packaging material is repaired should require the repaired wood packaging material to be re-treated, destroyed, or otherwise prevented from moving in international trade as wood packaging material compliant with this standard. In the case of re-treatment, any previous applications of the mark must be permanently obliterated (e.g. by covering with paint or grinding). After re-treatment, the mark must be applied anew in accordance with this standard.

4.3.3 Remanufactured wood packaging material

If a unit of wood packaging material has had more than approximately one third of its components replaced, the unit is considered to be remanufactured. In this process, various components (with additional reworking if necessary) may be combined and then reassembled into further wood packaging material. Remanufactured wood packaging material may therefore incorporate both new and previously used components.

Remanufactured wood packaging material must have any previous applications of the mark permanently obliterated (e.g. by covering with paint or grinding). Remanufactured wood packaging material must be re-treated and the mark must then be applied anew in accordance with this standard.

4.4 Transit

Where consignments moving in transit have wood packaging material that does not meet the requirements of this standard, NPPOs of countries of transit may require measures to ensure that wood packaging material does not present an unacceptable risk. Further guidance on transit arrangements is provided in ISPM 25:2006.

4.5 Procedures upon import

Since wood packaging materials are associated with most shipments, including those not considered to be the target of phytosanitary inspections in their own right, cooperation by NPPOs with organizations not usually involved with verification of whether the phytosanitary import requirements have been met is important. For example, cooperation with Customs organizations and other stakeholders will help NPPOs in receiving information on the presence of wood packaging material. This is important to ensure effectiveness in detecting potential non-compliance of wood packaging material.

4.6 Phytosanitary measures for non-compliance at point of entry

Relevant information on non-compliance and emergency action is provided in sections 5.1.6.1 to 5.1.6.3 of ISPM 20:2004, and in ISPM 13:2001. Taking into account the frequent re-use of wood packaging material, NPPOs should consider that the non-compliance identified may have arisen in the country of production, repair or remanufacture, rather than in the country of export or transit.

Where wood packaging material does not carry the required mark, or the detection of pests provides evidence that the treatment may not have been effective, the NPPO should respond accordingly and, if necessary, an emergency action may be taken. This action may take the form of detention while the situation is being addressed then, as appropriate, removal of non-compliant material, treatment[3],

[3] This need not necessarily be a treatment approved in this standard.

destruction (or other secure disposal) or reshipment. Further examples of appropriate options for actions are provided in Appendix 1. The principle of minimal impact should be pursued in relation to any emergency action taken, distinguishing between the consignment traded and the accompanying wood packaging material. In addition, if emergency action is necessary and methyl bromide is used by the NPPO, relevant aspects of the IPPC Recommendation on *Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (CPM, 2008) should be followed.

The NPPO of the importing country should notify the exporting country, or the manufacturing country where applicable, in cases where live pests are found. In such cases, where a unit of wood packaging material bears more than one mark NPPOs should attempt to determine the origin of the non-compliant component(s) prior to sending a notice of non-compliance. NPPOs are also encouraged to notify cases of missing marks and other cases of non-compliance. Taking into account the provisions of section 4.3.2, it should be noted that the presence of multiple marks on a single unit of wood packaging does not constitute non-compliance.

This annex is a prescriptive part of the standard.

ANNEX 1: Approved treatments associated with wood packaging material

Use of debarked wood

Irrespective of the type of treatment applied, wood packaging material must be made of debarked wood. For this standard, any number of visually separate and clearly distinct small pieces of bark may remain if they are:

- less than 3 cm in width (regardless of the length) or
- greater than 3 cm in width, with the total surface area of an individual piece of bark less than 50 square cm.

For methyl bromide treatment the removal of bark must be carried out before treatment because the presence of bark on the wood affects the efficacy of the methyl bromide treatment. For heat treatment, the removal of bark can be carried out before or after treatment.

Heat treatment (treatment code for the mark: HT)

Wood packaging material must be heated in accordance with a specific time–temperature schedule that achieves a minimum temperature of 56 °C for a minimum duration of 30 continuous minutes throughout the entire profile of the wood (including at its core). Various energy sources or processes may be suitable to achieve these parameters. For example, kiln-drying, heat-enabled chemical pressure impregnation, microwave or other treatments may all be considered heat treatments provided that they meet the heat treatment parameters specified in this standard.

Methyl bromide treatment (treatment code for the mark: MB)

Use of methyl bromide should be undertaken taking into account the IPPC Recommendation *Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (CPM, 2008). NPPOs are encouraged to promote the use of alternative treatments approved in this standard.[4]

The wood packaging material must be fumigated with methyl bromide in accordance with a schedule that achieves the minimum concentration-time product[5] (CT) over 24 hours at the temperature and final residual concentration specified in Table 1. This CT must be achieved throughout the wood, including at its core, although the concentrations would be measured in the ambient atmosphere. The minimum temperature of the wood and its surrounding atmosphere must be not less than 10 °C and the minimum exposure time must be not less than 24 hours. Monitoring of gas concentrations must be carried out at a minimum at 2, 4 and 24 hours (in the case of longer exposure times and weaker concentrations, additional measurement should be recorded at the end of fumigation).

Table 1: Minimum CT over 24 hours for wood packaging material fumigated with methyl bromide

Temperature	CT ($g \cdot h/m^3$) over 24 h	Minimum final concentration (g/m^3) after 24 h
21 °C or above	650	24
16 °C or above	800	28
10 °C or above	900	32

One example of a schedule that may be used for achieving the specified requirements is shown in Table 2.

[4] In addition, contracting parties to the IPPC may also have obligations under the Montreal Protocol on Substances that deplete the Ozone Layer (UNEP, 2000).

[5] The CT product utilized for methyl bromide treatment in this standard is the sum of the product of the concentration (g/m^3) and time (h) over the duration of the treatment.

Table 2: Example of a treatment schedule that achieves the minimum required CT for wood packaging material treated with methyl bromide (initial doses may need to be higher in conditions of high sorption or leakage)

Temperature	Dosage (g/m^3)	Minimum concentration (g/m^3) at:		
		2 h	4 h	24 h
21 °C or above	48	36	31	24
16 °C or above	56	42	36	28
10 °C or above	64	48	42	32

NPPOs shall ensure that the following factors are appropriately addressed by those involved in the application of methyl bromide treatment under this standard:

(1) Fans are used as appropriate during the gas distribution phase of fumigation to ensure that equilibrium is reached and should be positioned to ensure that the fumigant is rapidly and effectively distributed throughout the fumigation enclosure (preferably within one hour of application).

(2) Fumigation enclosures are not loaded beyond 80% of their volume.

(3) Fumigation enclosures are well sealed and as gas tight as possible. If fumigation is to be carried out under sheets, these must be made of gas-proof material and sealed appropriately at seams and at floor level.

(4) The fumigation site floor is either impermeable to the fumigant or gas-proof sheets must be laid on the floor.

(5) Methyl bromide is often applied through a vaporizer ('hot gassing') in order to fully volatilize the fumigant prior to its entry into the fumigation enclosure.

(6) Methyl bromide treatment is not carried out on wood packaging material exceeding 20 cm in cross section. Wood stacks need separators at least every 20 cm to ensure adequate methyl bromide circulation and penetration.

(7) When calculating methyl bromide dosage, compensation is made for any gas mixtures (e.g. 2% chloropicrin) to ensure that the total amount of methyl bromide applied meets required dosage rates.

(8) Initial dose rates and post-treatment product handling procedures take account of likely methyl bromide sorption by the treated wood packaging material or associated product (e.g. polystyrene boxes).

(9) The measured temperature of the product or the ambient air (whichever is the lower) is used to calculate the methyl bromide dose, and must be at least 10 °C (including at the wood core) throughout the duration of the treatment.

(10) Wood packaging material to be fumigated is not wrapped or coated in materials impervious to the fumigant.

(11) Records of methyl bromide treatments are retained by treatment providers, for a period of length determined and as required by the NPPO, for auditing purposes.

NPPOs should recommend that measures be taken to reduce or eliminate emissions of methyl bromide to the atmosphere where technically and economically feasible (as described in the IPPC Recommendation on *Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (CPM, 2008)).

Adoption of alternative treatments and revisions of approved treatment schedules

As new technical information becomes available, existing treatments may be reviewed and modified, and alternative treatments and/or new treatment schedule(s) for wood packaging material may be adopted by the CPM. If a new treatment or a revised treatment schedule is adopted for wood packaging material and incorporated into this ISPM, material treated under the previous treatment and/or schedule does not need to be re-treated or re-marked.

This annex is a prescriptive part of the standard.

ANNEX 2: The mark and its application

A mark indicating that wood packaging material has been subjected to approved phytosanitary treatment in accordance with this standard[6] comprises the following required components:

- the symbol
- a country code
- a producer/treatment provider code
- a treatment code using the appropriate abbreviation according to Annex 1 (HT or MB).

Symbol

The design of the symbol (which may have been registered under national, regional or international procedures, as either a trademark or a certification/collective/guarantee mark) must resemble closely that shown in the examples illustrated below and must be presented to the left of the other components.

Country code

The country code must be the International Organization for Standards (ISO) two-letter country code (shown in the examples as "XX"). It must be separated by a hyphen from the producer/treatment provider code.

Producer/treatment provider code

The producer/treatment provider code is a unique code assigned by the NPPO to the producer of the wood packaging material or treatment provider who applies the marks or the entity otherwise responsible to the NPPO for ensuring that appropriately treated wood is used and properly marked (shown in the examples as "000"). The number and order of digits and/or letters are assigned by the NPPO.

Treatment code

The treatment code is an IPPC abbreviation as provided in Annex 1 for the approved measure used and shown in the examples as "YY". The treatment code must appear after the combined country and producer/treatment provider codes. It must appear on a separate line from the country code and producer/treatment provider code, or be separated by a hyphen if presented on the same line as the other codes.

Treatment code	Treatment type
HT	Heat treatment
MB	Methyl bromide

Application of the mark

The size, font types used, and position of the mark may vary, but its size must be sufficient to be both visible and legible to inspectors without the use of a visual aid. The mark must be rectangular or square in shape and contained within a border line with a vertical line separating the symbol from the code components. To facilitate the use of stencilling, small gaps in the border, the vertical line, and elsewhere among the components of the mark, may be present.

No other information shall be contained within the border of the mark. If additional marks (e.g. trademarks of the producer, logo of the authorizing body) are considered useful to protect the use of

[6] At import, countries should accept previously produced wood packaging material carrying a mark consistent with earlier versions of this standard.

the mark on a national level, such information may be provided adjacent to but outside of the border of the mark.

The mark must be:

- legible
- durable and not transferable
- placed in a location that is visible when the wood packaging is in use, preferably on at least two opposite sides of the wood packaging unit.

The mark must not be hand drawn.

The use of red or orange should be avoided because these colours are used in the labelling of dangerous goods.

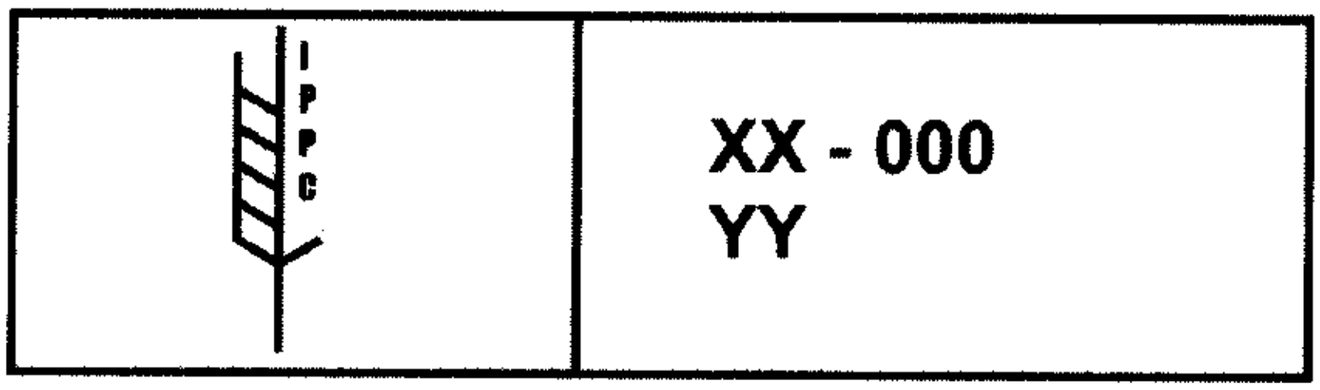
Where various components are integrated into a unit of wood packaging material, the resultant composite unit should be considered as a single unit for marking purposes. On a composite unit of wood packaging material made of both treated wood and processed wood material (where the processed component does not require treatment), it may be appropriate for the mark to appear on the processed wood material components to ensure that the mark is in a visible location and is of a sufficient size. This approach to the application of the mark applies only to composite single units, not to temporary assemblies of wood packaging material.

Special consideration of legible application of the mark to dunnage may be necessary because treated wood for use as dunnage may not be cut to final length until loading of a conveyance takes place. It is important that shippers ensure that all dunnage used to secure or support commodities is treated and displays the mark described in this annex, and that the marks are clear and legible. Small pieces of wood that do not include all the required elements of the mark should not be used for dunnage. Options for marking dunnage appropriately include:

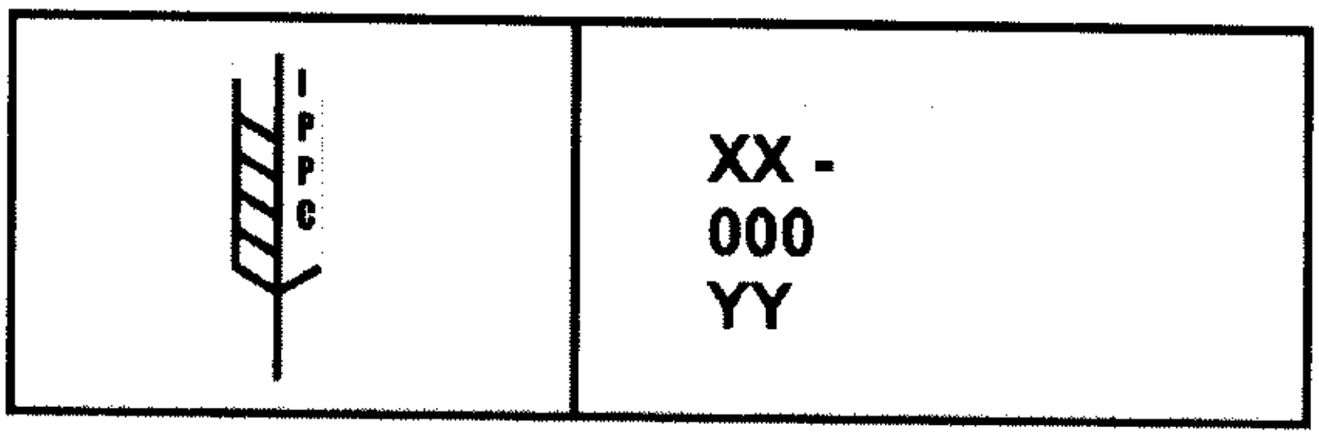
- application of the mark to pieces of wood intended for use as dunnage along their entire length at very short intervals (NB: where very small pieces are subsequently cut for use as dunnage, the cuts should be made so that an entire mark is present on the dunnage used.)
- additional application of the mark to treated dunnage in a visible location after cutting, provided that the shipper is authorized in accordance with section 4.

The examples below illustrate some acceptable variants of the required components of the mark that is used to certify that the wood packaging material that bears such a mark has been subjected to an approved treatment. No variations in the symbol should be accepted. Variations in the layout of the mark should be accepted provided that they meet the requirements set out in this annex.

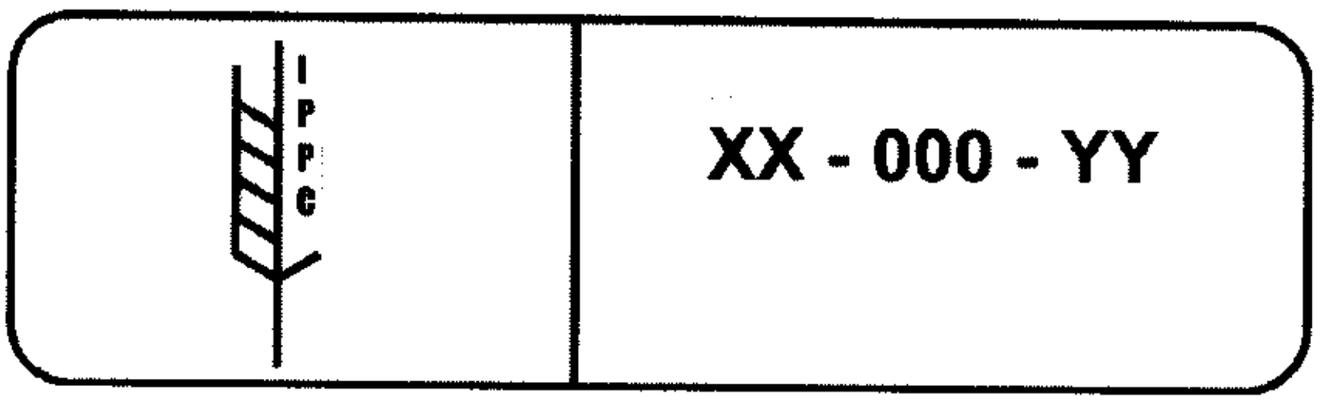
Example 1



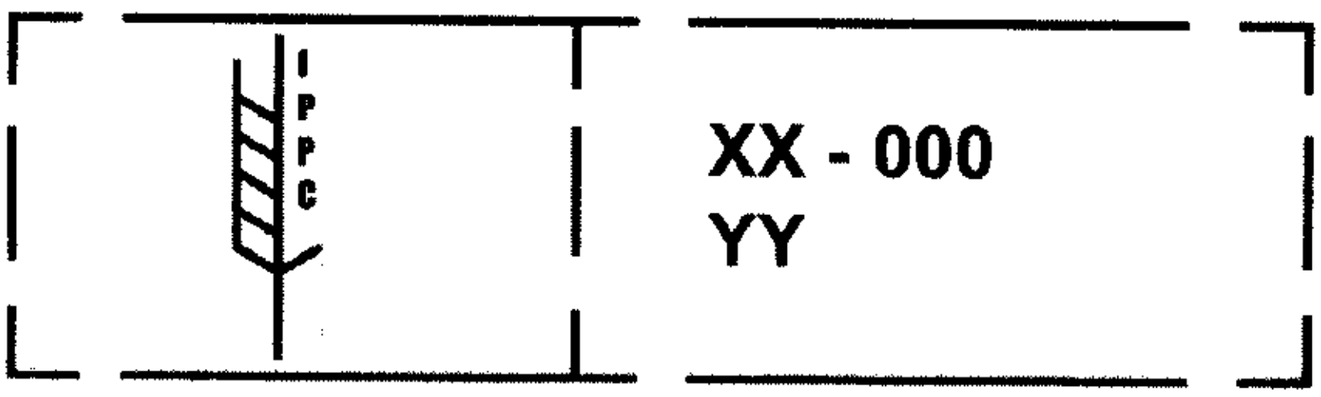
Example 2



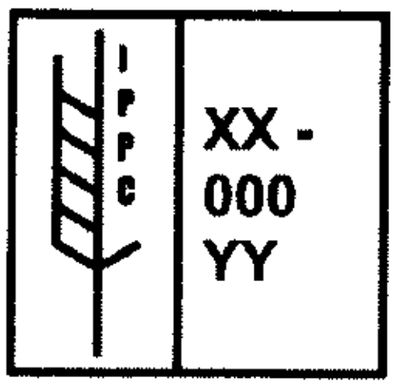
Example 3 (This represents a prospective example of a mark with the border with rounded corners.)



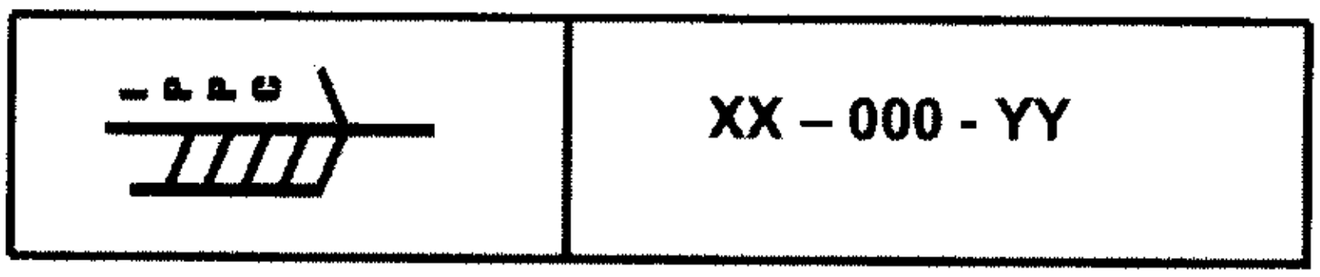
Example 4 (This represents a prospective example of a mark applied by stencilling; small gaps may be present in the border, and the vertical line, and elsewhere among the components of the mark.)



Example 5



Example 6



This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 1: Examples of methods of secure disposal of non-compliant wood packaging material

Secure disposal of non-compliant wood packaging material is a risk management option that may be used by the NPPO of the importing country when an emergency action is either not available or is not desirable. The methods listed below are recommended for the secure disposal of non-compliant wood packaging material:

(1) incineration, if permitted

(2) deep burial in sites approved by appropriate authorities (NB: the depth of burial may depend on climatic conditions and the pest intercepted, but is recommended to be at least 2 metres. The material should be covered immediately after burial and should remain buried. Note, also, that deep burial is not a suitable disposal option for wood infested with termites or some root pathogens.)

(3) processing (NB: Chipping should be used *only* if combined with further processing in a manner approved by the NPPO of the importing country for the elimination of pests of concern, e.g. the manufacture of oriented strand board.)

(4) other methods endorsed by the NPPO as effective for the pests of concern

(5) return to exporting country, if appropriate.

In order to minimize the risk of introduction or spread of pests, secure disposal methods where required should be carried out with the least possible delay.

	SPECIFICATION FOR PACKING WOOD – RUBBER WOOD	**Doc. No. PR; CHEM: 20** **Rev. No.: 03** **Date: 15.11.2005**

SPECIFICATION
FOR
PACKING WOOD – RUBBER WOOD

Prepared by	Reviewed by	Approved by		
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RECORD OF REVISIONS

Rev. No.	Date	Details of revision	Remarks
00	01.12.1992	New	--
01	25.03.1998	Clause nos. 2.2, 7.1, 7.3, 8.1 & 9.1 have been modified.	--
02	01.04.2003	Scope and requirements added. Clauses 2,8, & 9 delete, and renumbered.	--
03	15-11-2005	Clause 3.5.2 modified	Refer minutesMM/FP/PSS dt 9/11/05

	SPECIFICATION FOR PACKING WOOD – RUBBER WOOD	**Doc. No. PR: CHEM: 20** **Rev. No.: 03** **Date: 15.11.2005**

1.0 SCOPE:

This specification prescribes the requirements of rubber wood intended for packing purposes.

2.0 DEFINITION:

RUBBER WOOD – Seasoned and chemically treated rubber wood in converted form (scantlings, boxes / shooks) intended for packing cases to be stored outside and exposed.

3.0 REQUIREMENTS:

3.1 Supply of planks to shipping / FB shall be with one side planning, joint planed and two longitudinal edges prepared for lap joints of 12.5 mm on opposite sides.

3.2 The rubber wood to be supplied shall be seasoned as per IS 1141 – 1993. "SEASONING OF TIMBER – CODE OF PRACTICE".

3.3 The process for chemical preservative treatment shall be as per IS 401 – 2001, "PRESERVATION OF TIMBER – CODE OF PRACTICE".

3.4 For chemical treatment, the preservative chemicals used shall be Copper. Chrome, and Boron (CCB) composition.

3.5 DIMENSIONS AND ITS TOLERANCE:

3.5.1 Dimensions shall be as specified in Purchase Order.

3.5.2 The dimensional tolerance shall be as follows:

Length	: ± 10 mm
Width	: ± 4 mm
Thickness	: ± 3 mm for thickness up to 30 mm : ± 4 mm for thickness above 30 mm
Bow	: ± 4 mm per 300 mm

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3.6 **FREEDOM FROM DEFECTS:**

3.6.1 Planks, Scantlings, Battens shall be free from defects like cracks, bends and knots.

3.7 The material shall also comply with the requirements given in Table – 1.

Table – 1 REQUIREMENTS FOR RUBBER WOOD

S. No.	Characteristics	Requirement
1	Species	Rubber
2	Chemical depth penetration Test	6.0 mm, (min)

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SPECIFICATION FOR PACKING WOOD – SEASONED AND CHEMICALLY TREATED COUNTRY WOOD

Prepared by	Reviewed by	Approved by		
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RECORD OF REVISIONS

Rev. No.	Date	Details of revision	Remarks
00	**27.10.2010**	New	Recorded notes of meeting for finalizing technical procedure for procurement of country wood (Non-coniferous wood) for general packing purpose held on 30/09/2010 at MM/MFG/Purchase conference hall

1.0 SCOPE:

This specification prescribes the requirements of country wood intended for packing purposes.

2.0 DEFINITION:

COUNTRY WOOD – Seasoned and chemically treated wood (All the timbers species of group I & II of IS 6662-1993 AND as per Annex B of IS 1141) in converted form (scantlings, boxes / shooks) intended for packing cases to be stored outside and exposed.

3.0 REQUIREMENTS:

3.1 Supply of planks to shipping / FB shall be with one side planning, joint planed and two longitudinal edges prepared for lap joints of 12.5 mm on opposite sides.

3.2 The country wood to be supplied shall be seasoned as per IS 1141 – 1993. "SEASONING OF TIMBER – CODE OF PRACTICE".

3.3 The process for chemical preservative treatment shall be as per IS 401 – 2001, "PRESERVATION OF TIMBER - CODE OF PRACTICE".

3.4 For chemical treatment, the preservative chemicals used shall be Copper, Chrome, and Boron (CCB) composition.

3.5 DIMENSIONS AND ITS TOLERANCE:

3.5.1 Dimensions shall be as specified in Purchase Order.

3.5.2 The dimensional tolerance shall be as follows:

Length	:± 25 mm	Per RUBBER ± 10 mm
Width	: ± 4 mm	± 4 mm.
Thickness	: ± 3 mm for thickness up to 30 mm : ± 5 mm for thickness above 30 mm	± 3 ± 4
Bow	: ± 5 mm per 300 mm	± 4

Silvercot
IS 596
L +10 -0
W +3 -
Tk +3 -

Bowed = 2 mm

Moisture within 50 % as per IS 401/2

3.6 **FREEDOM FROM DEFECTS:**

3.6.1 Planks, Scantlings, Battens shall be free from defects like cracks, bends and knots.

3.7 The material shall also comply with the requirements given in Table – 1.

Table – 1 REQUIREMENTS FOR COUNTRY WOOD

S. No.	Characteristics	Requirement
1	Species	Country wood SPECIES all the timbers species of group I & II of IS 6662-1993 AND as per Annex B of IS 1141
2	Chemical depth penetration Test	6.0 mm, (min)

****

Recorded notes of meeting for finalizing technical procedure for procurement of country wood (Non-coniferous wood) for general packing purpose held on 30/09/2010 at MM/MFG/Purchase conference hall

Participants

Rajesekahran.V/DM/LABS

Vivekanathan.M/Manager/Logistics

Raja .M/Dy.Engineer/Logistics

Nexo .M .A/DGM/Logistics

Vijayakumaran .D/ DGM/Valves/Purchase

Manavalan. I/SM/MM/MFG

Anbumani.S/SM/MM/MFG

MM/MFG/PUR expressed that the rubber wood avilablity has reduced due to the following reasons: 1. The logs become scarce since rubber trees are not felled due to the fact that the rubber latex is fetching higher price than the logs for their owners. 2.The plywood industry is buying the rubber logs for their use and more plywood manufactures have come into the field in Kerala.3.The wood usage is increasing in the in the construction sector as door, window etc4.The wood usage in the furniture and other common uses also increasing. Hence there are more buyers for the logs and due to this the demand is more hence the price is increasing .

In view of the above it is felt that a technical procedure is required to procure country wood as an alternate to rubber wood. All the members are agreed the need to establish for a Technical procedure for procurement of country wood.(Non-coniferous wood)

The members suggested that the wood shall be chemically treated to 6mm(Min) chemical depth penetration and moisture content shall be limited to 40% . (Max) .

The members suggested to fix the dimensional tolerance as given below

Length =+/- 25mm ; Width==+/-4mm ;
Thickness = +/-3mm for thickness upto 30mm
=+/-5mm for thickness above 30mm
Bow = 5mm per 300mm

The members suggested to include all the timbers species of group I & II of IS 6662-1993 .

Members suggested to note and record the local languages names for the all the botanical names of the species of wood in group I & II of IS 6662-1993 for the easy understanding of the species by all the users of the procedure.

Plant /Lab agreed to compile a technical procedure considering the guide lines from the corporate purchase spec AA51402 and the other national standards and the suggestions of the members.

S.ANBUMANI
SM/MM/MFG/PSS