



An ISO 9001
Company

Bharat Heavy Electricals Limited
(High Pressure Boiler Plant)
Tiruchirappalli – 620014, TAMIL NADU, INDIA
PURCHASE/PSS/MM/MFG

TITLE: SUPPLY OF PACKING WOOD	Phone: +91 431 2577257 Fax : +91 431 252 0719 Email : imanavalan@bheltry.co.in
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Reference Number: Enquiry FB-190/PSS/WOOD/OT/01	Enquiry Date: 30.01.13	Due date for submission of quotation: 26.02.13
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You are requested to quote the Enquiry number & date and due date in all your correspondences. This is only a request for quotation and not an order

Sealed Tenders are invited for **Supply of Packing wood** as per Spec and Drawings enclosed.

BHEL commercial terms & conditions with Price Bid formats and all annexure can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units) Bharat Heavy Electricals Limited) under enquiry reference "FB-190/PSS/WOOD/OT/01 "

Tenders should reach us before 14:00 hours on the due date
Technical bid will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present.

Yours faithfully,
For Bharat Heavy Electricals Limited

The Senior Manager/Purchase/PSS/MM/MFG
Bldg 24, BHEL, Tiruchirappalli-620014
Ph: 0431- 2577257, Fax: 0431- 2520719
Email: imanavalan@bheltry.co.in



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**BHARAT HEAVY ELECTRICALS LIMITED
(A GOVT. OF INDIA UNDERTAKING)**

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI - 620 014
DEPT: PURCHASE(PSS)/MATLS. MANAGEMENT/FOSSIL BOILERS



: (OFF) 91 (0431) 2577257

FAX: 91 (0431) 2520719, 2577929 E-MAIL : imanavalan@bheltry.co.in

Enquiry Ref./No. FB-190/PSS/WOOD/OT /01

Date: 30.01.2013

ENQUIRY

To
All Packing Wood suppliers

Sub: Procurement of Packing Wood

We require the following Packing Wood as per the specification given below:

Kiln Seasoned Chemically Treated Rubber Wood Scantlings, Reepers, Boxes and Cradles

Sl.No.	Description and Size	Applicable Specification/Drawing No.	Material Code	Quantity(in Nos.)
01	Scantlings 70 x 30 x 2000mm	Spec.PR:CHEM:20/Rev.03	200053000000	1,000
02	Reepers 70 x 30 x 2700mm	Spec.PR:CHEM:20/Rev.03	200053220000	2,000
03	Reepers 70 x 30 x 3000mm	Spec.PR:CHEM:20/Rev.03	200053230000	9,000
04	Scantlings 100 x100 x 2500mm	Spec.PR:CHEM:20/Rev.03	200053050000	3,000
05	Scantlings 100 x 100 x 2700mm	Spec.PR:CHEM:20/Rev.03	200053060000	15,000
06	Scantlings 150 x 120 x 500mm	Spec.PR:CHEM:20/Rev.03	200054320000	700
07	Scantlings 150 x 120 x 2700mm	Spec.PR:CHEM:20/Rev.03	200053090000	4,000
08	Silver Oak Planks 100 x 30 x 3000mm	Spec.PR:CHEM:20/Rev.03	200053520001	1,100
09	Silver Oak Planks 150 x 25 x 3000mm	Spec.PR:CHEM:20/Rev.03	200053520003	4,000
10	Silver Oak Planks 200 x 25 x 3000mm	Spec.PR:CHEM:20/Rev.03	200054330001	3,700
11	Box Size 600 x 500 x 400mm	3-SH-B-004/c Rev,03	200054040000	100
12	Box Size 900 x 600 x 600mm	2-SH-CRT-00002/Rev.B	200054050000	1,500
13	Box Size 1200 x 900 x 600mm	2-SH-CRT-00002/Rev.B	200054060000	1,500
14	Box Size 1500 x 700 x 700mm	2-SH-CRT-00002/Rev.B	200054080000	1,700
15	Box Size 1050 x 1050 x 500mm	3-SH-B-004/C Rev.C	200054090000	120
16	Box Size 1600 x 900 x 1000mm	3-SH-B-005	200054100000	1,600
17	Box Size 1100 x 400 x 400mm	3-SH-B-004/B Rev.01	200054150000	200

Contd...2....

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Sl.No.	Description & Size	Applicable Specification/Drawing No.	Material Code	Quantity (Nos.)
18	Box Size 1100 x 500 x 500mm	3-SH-B-004/B Rev.01	200054250000	60
19	Box Type SPE Size 200 x 200 x 200mm	40-SPM-SH-00001/01	200054220000	30
20	Box Type SPG Size 1500 x 500 x 400mm	40-SPM-SH-00001/01	200054160000	100
21	Box Type T-1A Size: 320 x 250 x 260mm	4-V-4000-07183 Rev.2	200151080000	2,500
22	Box Type T-1 Size: 320 x 250 x 430mm	4-V-4000-07183 Rev.2	200150330000	4,800
23	Box Type T-2 Size: 430 x 370 x 430mm	4-V-4000-07183 Rev.2	200150320000	4,500
24	Box Type T-3 Size: 670 x 670 x 470mm	2-V-0000-05779 Rev.02	200150300000	1,000
25	Box Type T-4 Size: 710 x 630 x 600mm	2-V-0000-05779 Rev.02	200150800000	1,000
26	Box Type T-6 Size: 1000 x 770 x 670mm	2-V-0000-05779 Rev.02	200150820000	1,500
27	Box Type T-10 Size: 1300 x 770 x 1050mm	2-V-0000-05779 Rev.02	200150840000	1,000
28	Box Type T-11 Size: 2500 x 850 x 800mm	2-V-0000-05780	200150930000	150
29	Box Type T-12 Size: 2000 x 1500 x 1200mm	2-V-0000-05780	200150940000	400
30	Box Type T-14 Size: 1850 x 1050 x 1250mm	2-V-0000-05779 Rev.02	200150950000	450
31	Box Type T-15 Size: 2000 x 800 x 800mm	2-V-0000-05779 Rev.02	200150880000	50
32	Box Type T-17 Size: 2600 x 1500 x 1600mm	2-V-0000-05780	200150970000	425
33	Box Type T-23 Size: 300 x 300 x 700mm	1-V-0000-11136 Rev.04	200150740000	200
34	Box Type T-24 Size: 380 x 380 x 880mm	1-V-0000-11136-Rev.04	200150750000	200
35	Box Type T-27 Size: 570 x 575 x 1875mm	1-V-0000-11136-Rev.04	200150780000	400
36	Box Type T-28 Size: 575 x 570 x 1400mm	1-V-0000-11136-Rev.04	200150790000	400
37	Box Type T-52 Size: 2000 x 950 x 740mm	2-V-4600-03636 Rev.08	200151000000	500
38	Box Type T-53 Size: 1600 x 1120 x 700mm	2-V-4600-03636 Rev.08	200151010000	500

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Sl.No.	Description & Size	Applicable Specification/ Drawing No.	Material Code	Quantity(Nos.)
39	Box Type T-54 Size: 2500 x 2000 x 1200mm	2-V-4600-03636 Rev.08	200151060000	200
40	Box Type T-56 Size: 3000 x 1000 x 900mm	2-V-4600-03636 Rev.08	200151090000	100
41	Box Type T-58 Size: 2200 x 1100 x 750mm	2-V-4600-03636 Rev.08	200151110000	100
42	Box Type T-61 Size: 675 x 675 x 2000mm	2-V-4600-03636 Rev.08	200151120000	100
43	Box Type T-62 Size: 600 x 1000 x 1125mm	2-V-7503-10463	200151130000	100
44	Box Type T-7 Size: 1100 x 430 x 670mm	2-V-0000-05779 Rev.02	200150830000	400
45	Box Type SPY Size: 450 x 200 x 200mm	40-SPM-SH-00001 Rev.01	200054450000	400
46	Box Size 1300 x 900 x 900mm	2-SH-CRT-00002 Rev.B	200054070000	3,000
47	Cradle Type T-SV31	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051760000	300
48	Cradle Type T-SV32	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051770000	250
49	Cradle Type T-SV33	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051780000	250
50	Cradle Type T-SV34	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051790000	250
51	Cradle Type T-SV35A	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200150530000	300
52	Cradle Type T-SRV35	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051110000	400

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Sl.No.	Description & Size	Applicable Specification/Drawing No.	Material Code	Quantity(Nos.)
53	Cradle Type T-SRV36	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051720000	300
54	Cradle Type T-37	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051820000	300
55	Cradle Type T-38	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051830000	300
56	Cradle Type T-39	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051840000	200
57	Cradle Type T-40	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200051850000	200
58	Cradle Type ERV 7503 T-SB03	3-V-0000-10448/01 3-V-0000-10573/01 3-V-0000- 13794 3-V-7506-10541 3-V-7503-10463	200150600000	300

Quantity Required:: 58 SIZES AS MENTIONED ABOVE

Tender Opening Date : 26.02.2013(Technical Bid)


20/01/2013

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**BHARAT HEAVY ELECTRICALS LIMITED
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NOTE:

- (1) **Only MSME vendors have to participate in this Tender . Relevant documents for "MSME" are to be submitted along with offer.**
- (2) Price: Please quote for price F.O.R./Destination BHEL/STORES/TIRUCHY-620 014 Basis including Freight & Other Costs.
- (3) Delivery Requirement: **Within Two Months**
- (4) **Payment Terms:** 100% payment within 45 Days after receipt and acceptance of material.
- (5) The quotation is to be sent in two part bid (Technical Bid & Price Bid) as indicated in the Annexure-A.
- (6) Enclosures: Annexure-A & B Terms and conditions
- (7) Relevant BHEL Specification PR:CHEM:20'; PR:CHEM:24 and above mentioned main drawings along with the drawings for Top Shook, Base Shook, Side Shook, End Shook (2-SH-B-001/B, 2-SH-B-001 A/B, 2-SH-B-001B/B, 2-SH-B-001 C/B, for the relevant sizes of wooden Boxes are enclosed.. Cradles Drawings 3-V-0000-10448/01, 3-V-0000-10573/01, 3-V-0000-13794, 3-V-7506-10541 & 3-V-7503-10463 are also enclosed.

Please send your offer before 26.02.2013 for our further action.

Thanking you,

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED,

(I.MANAVALAN) 30/01/2013
SR.MANAGER/PSS/MM/MFG.

L. MANAVALAN
Senior Manager
Purchase & Stores / PSS
Matl. Mgmt. / Manufacturing
BHEL, Tiruchirappalli - 620 014.

Regd.Office: BHEL House, Siri Fort, New Delhi - 110 049

ANNEXURE-A

REF: LETTER ENQUIRY NO.FB-190/PSS/WOOD/OT/01 Dt.30.01.2013

THE FOLLOWING TERMS & CONDITIONS ARE APPLICABLE TO THIS ENQUIRY

1. The quotation shall be submitted as two part bids.
 - (a) **Technical bid** containing all technical details, data sheets, etc. and all commercial terms like Percentage of P&F chargves, ED, Cess, Taxes,. Delivery terms, delivery schedule, payment Terms (except price details), acceptance for LD clause, Risk Purchase Clause etc. shall be put In a cover and superscribed as "TECHNICAL BID AGAINST LETTER ENQUIRY NO. FB-190/PSS/WOOD/OT/01 Dt.30.01.2013"
 - (b) **Price bid** containing price details shall be put in a separate cover and superscribed as "PRICE BID AGAINST LETTER ENQUIRY NO.FB-190/PSS/WOOD/OT/01 Dt.30.01.2013
2. Both the covers shall be put inside a larger envelope and this envelope shall be superscribed as "TECHNICAL BID AND PRICE BID AGAINST LETTER ENQUIRY NO.FB-190/PSS/WOOD/OT/01 Dt.30.01.2013
3. On the due date of tender opening, **only the technical bids will be opened**. Technical bids will be evaluated and clarifications required, if any, will be called for from the bidders on technical and commercial points.
4. BHEL reserves the right to go in for "**REVERSE AUCTION**" instead of opening the submitted sealed bid and it will be decided after tender evaluation of technical bids.
5. BHEL reserves the right to increase or decrease the tendered quantity.
6. Lowest price received against BHEL tenders need not be technically acceptable one and in that case, BHEL reserves the right not to consider the same.
7. BHEL reserves the right to negotiate or re-float the tender opened if L1 price is not the lowest acceptable price to them inter-alias other reasons.


SR.MANAGER/PSS/MM/MFG. 20/01/2013

L. MANAVALAN
Senior Manager
Purchase & Stores / PSS
Matl. Mgmt. / Manufacturing
BHEL, Tiruchirappalli - 620 014.



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BHARAT HEAVY ELECTRICALS LIMITED
(A GOVT. OF INDIA UNDERTAKING)
HIGH PRESSURE BOILER PLANT, TIRUCHIRAPPALLI - 620 014
DEPT: PURCHASE(PSS)/MATLS. MANAGEMENT/FOSSIL BOILERS

ANNEXURE-B ENQUIRY TERMS AND CONDITIONS

TERMS AND CONDITIONS

1. a) **QUOTATIONS** : Each tender should be sent in double cover, inner cover should be sealed with tenderer's distinctive seal and superscribed with correct tender No. item of supply and due date of opening. The outer cover should only bear the address of this office and should not have any indication that a tender is within. Two or more quotations should not be sent in one cover but the quotation against each tender should be sent separately to avoid confusion. Tender should not be addressed to any individual's name but only by designation.
- b) Tenders should be free from **CORRECTION AND ERASURES**. Corrections if any must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
- c) Price should be net F.O.R. despatching station inclusive of risk in transit and remain valid for 60 days from the due date.
- d) If any Sales Tax is payable as extra to the quoted price it should be specifically stated in quotations alongwith CST & TNGST No failing which the purchaser will not be liable for payment of Sales Tax. Our T.N.G.S.T No 3560005 Dt 01-04-1995 CST No. 239363 Dt. 11.8.1991.
- e) No revision of prices will be entertained after tenders are opened.
- f) Manufacturer's Name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required alongwith quotation wherever necessary.
- g) Products with I.S.I Certification marks will be preferred.
- h) The purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any tender in part or full without assigning any reason whatsoever.
2. **SAMPLES** : Wherever possible, sample should be submitted separately whether specifically requested or not so as to reach the purchaser on or before the due date of the enquiry. They should be clearly marked with the enquiry No and the date on the outside cover to facilitate identification.
3. **PACKING AND MARKING**: The supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit.
4. **TERMS OF PAYMENT**: Payment will be made within 45 days of satisfactory receipt of materials at site. Wherever required by the purchaser, the successful tenderer must send the operation and maintenance manuals, test certificates, drawings, etc., for the materials ordered. These should be sent immediately after despatch of the materials and a statement to that effect should be made in the invoice. Failure to comply with this provision will result in delay in payment of the bills. Goods despatched either by V.R.P. or by the document presented through bank will not be accepted unless agreed to by the Purchaser.
- The duplicate copy of the invoice meant for the transporters should accompany the material as stipulated under C.E. Rules 52A and 173C (or) 57GG. A photostat copy of the above invoice for each delivery challan should be submitted alongwith the original bills routed through bank or submitted directly to BHEL Finance Department.
5. **SECURITY DEPOSIT** : For purchases over Rs. 5,000/- the successful tenderer's may be requested to furnish a Bank Guarantee, Security Deposit for an appropriate value as may be determined by BHEL.
6. **LIQUIDATED DAMAGES/ PENALTY AND INTEREST ON ADVANCES FOR DELAY IN DELIVERY**:
If the supplier fails to deliver the raw material / equipment / components within the period specified in the contract the purchaser shall deduct Liquidated Damages a sum equivalent to 0.5 % of the price for each week of delay upto a maximum of 15% of the price of the delayed / undelivered goods. In addition to the recovery of interest at normal cash credit rate plus 2% for the unadjusted portion of the advances. If the delay in delivery of a part contributes to delay in execution of total system, LD and interest on advances will be recovered on the total contract price / total advance paid.
7. **RISK PURCHASE** : Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefor. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in clause 6 above.
8. **PREFERENTIAL DELIVERY** : It should be noted if a contract is placed on a higher tenderer as a result of this invitation to tender in preference to the lowest acceptable offer in consideration of the earlier delivery, the seller will be liable to pay to the purchaser the difference between the contract rate and that of the lowest acceptable tender on the basis of final price F.O.R. destination, including all elements of freight, sales tax, duties and other incidents, incidental in case of failure to complete supplies in terms of such contract within the date of delivery specified in the tender and incorporated in the contract.
9. **MODVAT CREDIT** : If any Excise Duty is payable, the chapter head/sub-head reference and the rate of the duty should be quoted. If the tender is availing MODVAT credit for this input materials, the effect of proforma credit should be passed on to the purchaser. Tenderer under "MODVAT" shall be preferred.
10. **Purchase** : Preference will be given to CPSUs as per Government Guidelines.
11. **GENERAL** : The purchaser reserves the right to split up the tender and place order for individual terms with different tenderers and also increase or decrease the quantity.
- Any Other conditions which might have been quoted by the Seller and are in contravention to the terms prescribed in the order and which have not been specifically accepted in by Purchaser will not be applicable to the contract.


SR MANAGER/PURCHASE/PSS/MMM/MFG

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L. MANAVALAN
Senior Manager
Purchase & Stores / PSS
Matl. Mgmt. / Manufacturing
BHEL, Tiruchirappalli - 620 014.



**SPECIFICATION FOR
PACKING WOOD -
RUBBER WOOD**


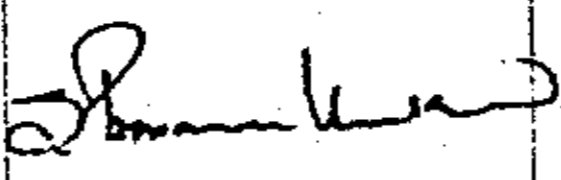
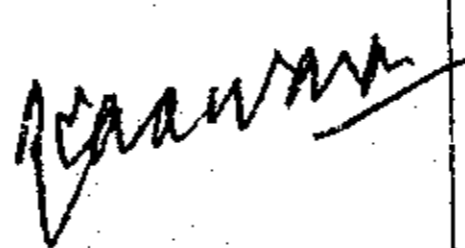

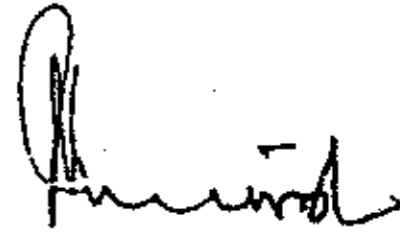
Doc. No. PR; CHEM: 20

Rev. No.: 03

Date: 15.11.2005

**SPECIFICATION
FOR
PACKING WOOD - RUBBER WOOD**

One
with
specification

Prepared by	Reviewed by	Approved by		
 V. Rajasekaran Sr. Scientific Officer Plant Laboratory	 S. Prasanna Venkatesan Sr. Manager Plant Laboratory	 R. Easwaran SDM/QA(Proc)& Plant Laboratory	 D. Joseph SM Shipping/FB	 M. Murugiah MM/FB/PSS

एम. मुरुगिया / M. MURUGIAH
 उप महाप्रबंधक / Dy. GENERAL MANAGER
 सा. प्र.-एफ बी / MM-FB
 भारत हेवी इलेक्ट्रिकल्स लिमिटेड / BHARAT HEAVY ELECTRICALS L
 तिरुचिरापल्ली / TIRUCHIRAPPALLI - 620 014



CBF113664

**SPECIFICATION FOR
PACKING WOOD –
RUBBER WOOD**

Doc. No. PR: CHEM: 20

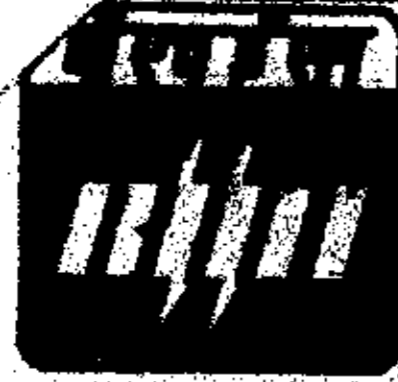
Rev. No.: 03

Date: 15.11.2005

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

CBF113664



CBF113664



**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 planing, 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

CBF113664



**SPECIFICATION FOR
PACKING WOOD –
RUBBER WOOD**

Doc. No. PR: CHEM: 20

Rev. No.: 03

Date: 15.11.2005

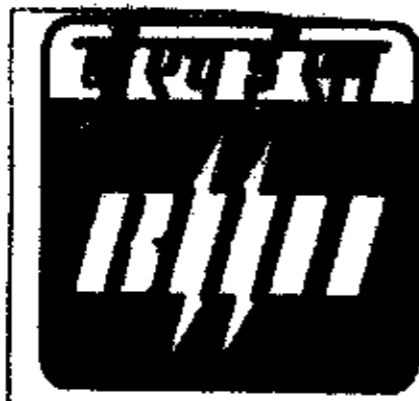
3.6 FREEDOM FROM DEFECTS:

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)






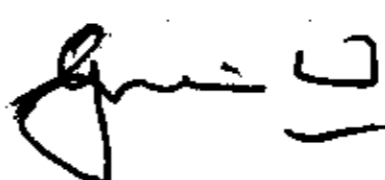
**SPECIFICATION FOR
PACKING WOOD –
COUNTRY WOOD**

Doc. No. PR: CHEM: 24

Rev. No.: 00

Date: 27.10.2010

**SPECIFICATION
FOR
PACKING WOOD – SEASONED AND
CHEMICALLY TREATED COUNTRY WOOD**

Prepared by	Reviewed by	Approved by		
 V. Rajasekaran Dy. Manager Plant Laboratory	 S. Anbumani SM MM/MFG/PSS	 V. Srinivasan AGM/ MM/MFG/FB	 Dr. G. Ravichandran AGM/ Plant Laboratory	P. T. Chelladurai AGM/ SHIPPING



**SPECIFICATION FOR
PACKING WOOD –
COUNTRY WOOD**

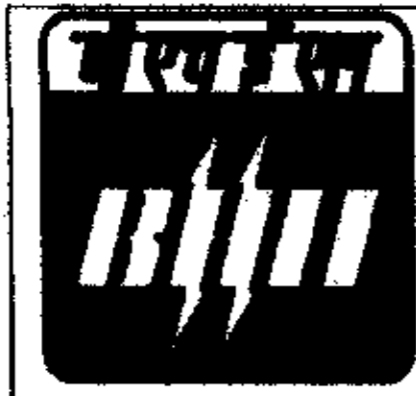
Doc. No. PR: CHEM: 24

Rev. No.: 00

Date: 27.10.2010

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



**SPECIFICATION FOR
PACKING WOOD –
COUNTRY WOOD**

Doc. No. PR: CHEM: 24

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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 planing, 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	SILVERO IS 596 L +10 - 0
Width	: ± 4 mm	± 4 mm	W +3 - 0 TK +3 - 0
Thickness	: ± 3 mm for thickness up to 30 mm	± 3	Round = 2 mm
	: ± 5 mm for thickness above 30 mm	± 4	Moisture
Bow	: ± 5 mm per 300 mm	± 4	within 50 % as per IS 401/2

	SPECIFICATION FOR PACKING WOOD – COUNTRY WOOD	Doc. No. PR: CHEM: 24
		Rev. No.: 00 Date: 27.10.2010

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

Rajesekharan.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 availability 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 etc. 4. 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.

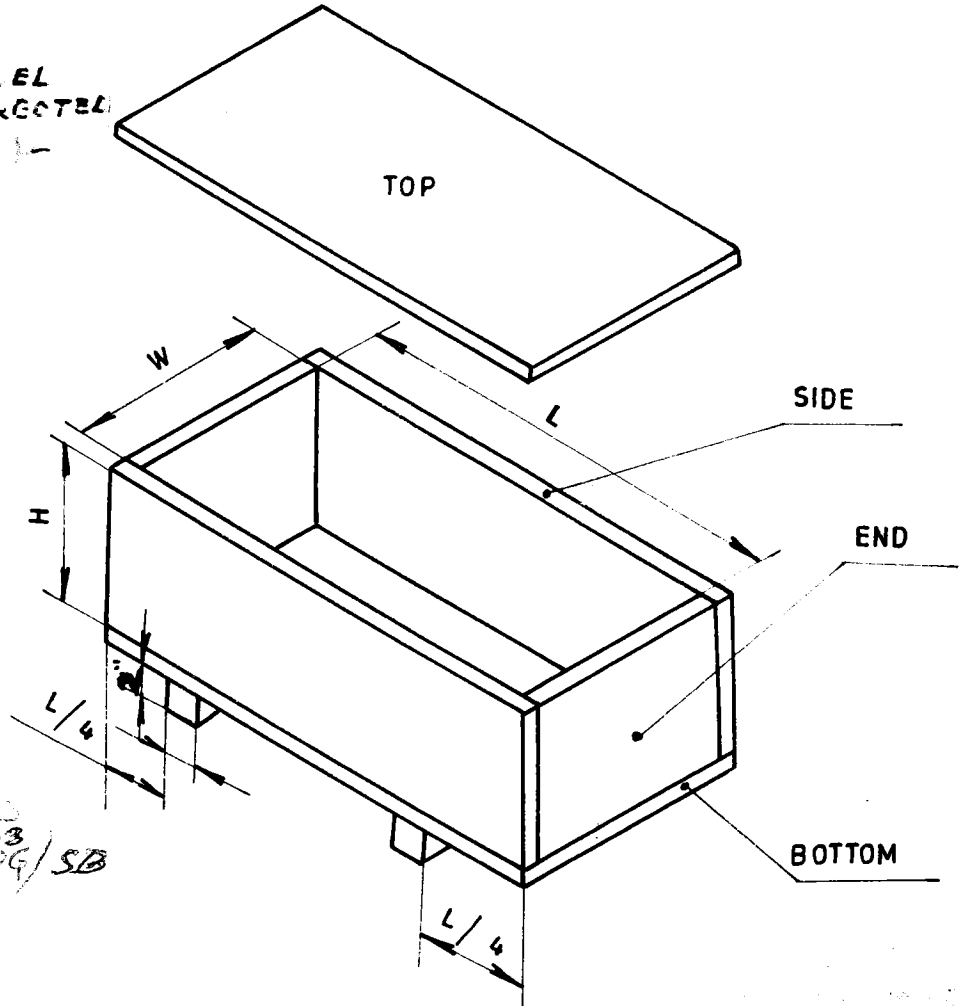
S.ANBUMANI
SM/MM/MFG/PSS

DETAILS OF wooden BOX DIMENSION , WEIGHT AND VOLUME								
BOX TYPE	BOX WT (KG)	INSIDE DIMENSION IN MM			OUTSIDE DIMENSION IN MM			VOLUM IN CUBIC METER
		LENGTH	BREADTH	HEIGHT	LENGTH	BREADTH	HEIGHT	
1A	10	320	250	260	450	300	280	0.038
1	15	320	250	430	450	370	580	0.097
2	25	430	370	430	570	490	590	0.165
3	65	670	670	470	770	770	700	0.415
4	75	710	630	600	810	730	840	0.497
5	95	850	630	670	950	730	900	0.624
6	100	1000	770	670	1100	870	915	0.876
7	80	1100	430	670	1200	520	900	0.562
8	170	1200	1200	900	1300	1300	1150	1.944
10	155	1300	770	1050	1400	860	1320	1.589
11	225	2500	850	800	2600	950	1050	2.594
12	305	2000	1500	1200	2100	1600	1400	4.704
14	260	1850	1050	1250	1950	1150	1480	3.319
15	180	2000	800	800	2100	900	990	1.871
16	345	3000	1050	1000	3100	1220	1250	4.728
17	470	2600	1500	1600	2700	1600	1830	7.906
29	390	3600	1100	1100	3700	1220	1350	6.094
21	25	250	250	600	380	380	770	0.111
22	30	250	250	880	380	380	1040	0.150
23	25	300	300	700	425	425	850	0.154
24	45	380	380	880	510	510	1050	0.273
27	80	570	570	1400	700	700	1560	0.764
28	105	575	575	1875	710	710	2040	1.028
62	130	600	1000	1125	700	1200	1325	1.113
63	55	800	370	750	900	500	800	0.360
51	260	2775	850	680	2870	950	950	2.590
52	255	2000	950	740	2100	1050	1050	2.315
53	220	1600	1120	700	1700	1220	980	2.033
54	490	2500	1900	1200	2600	2000	1450	7.540
55	525	2900	1900	1400	3000	2000	1650	9.900
56	370	3000	1000	900	3100	1100	1200	4.092
57	450	3200	2200	850	3300	2300	1100	8.349
58	325	2200	1100	750	2300	1200	1050	2.898
60	485	2300	2200	1200	2350	2300	1500	8.108
61		675	675	2000				
304 MM = 1 FEET								

REV DATE ALTERED CHECKED

ALL DIMENSIONS ARE IN MILLIMETRES

01.17.95 20-SPY INCLUDED
-MATE CORRECTED



APPROVED

23/4/03
Sr MGR / SHIPPING / SB

TYPE NO.	INTERNAL DIMENSIONS		
	L	W	H
SPA	800	200 200	200 200
SPB	1500	200 200	200 200
SPC	2000	200 200	200 200
SPD	1100	200 200	200 200
SPE	200	200	200
SPY	450	200	200

PLANK THICKNESS (t) = 25 mm

LUG SIZE = 30 mm X 30 mm

WIDTH OF PLANK
MINIMUM 200 mm EACH
HEIGHT MINIMUM 200 mm

01

DEPT	VL	GRADE OF UNTO DIM	SCALE	WEIGHT (KG)	REF. TO ASSY, OLD DRG.	ITEM NO.	NO. OF ITEMS
CODE	320	C / M / P	N.T.S	-	4V.MISC 90547		



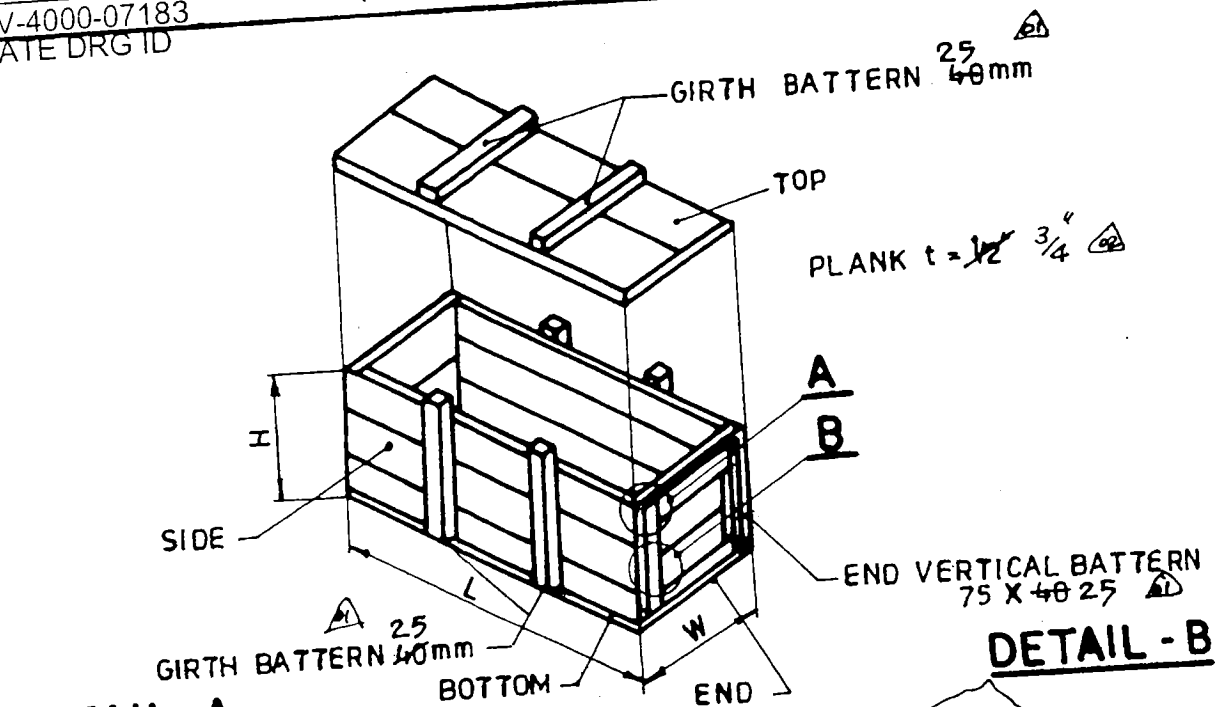
BHARAT HEAVY ELECTRICALS LTD.
UNIT, HIGH PRESSURE BOILER PLANT
(CHENCHERAPALLI 520014)

DRW	INDCO SERVE	DATE	10-06-95	NO. OF VAR
CHKD	D-JAYABALAN	DATE	10-06-95	
APPRD	P.P. SELVAM	DATE	10-06-95	

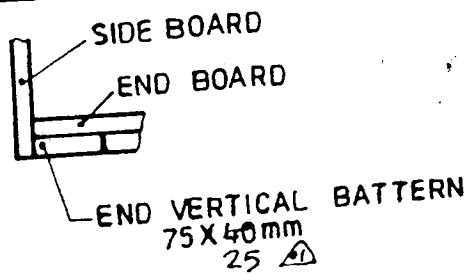
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CODE	320	C / M / P	N.T.S	-	4V.MISC 90547		

TITLE	WOODEN BOX (FOR STEM & SMALL COMPONENTS)	CARD CODE	40-SPM-SH-00001	REV	01
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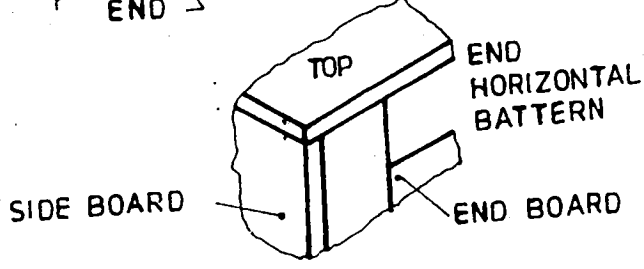
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DETAIL - A



DETAIL - B



TYPE NO.	L	W	H	
1A	320	250	260	
1	320	250	430	
2	430	370	430	

NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. L, W, H ARE INNER DIMENSIONS OF THE BOX.
3. FOR TYPE NO 1A & 1 END VERTICAL BATTEN SHALL BE FLUSH ON BOTH ENDS WITH HARD BOARD TO WRITE THE DESPATCH DETAILS.

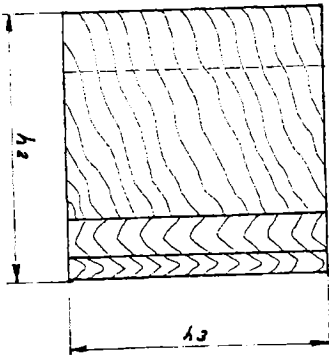
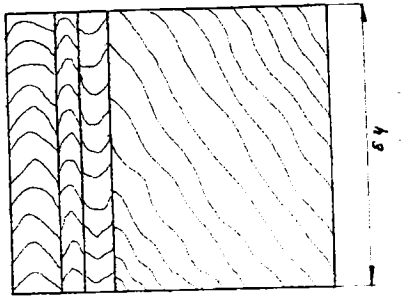
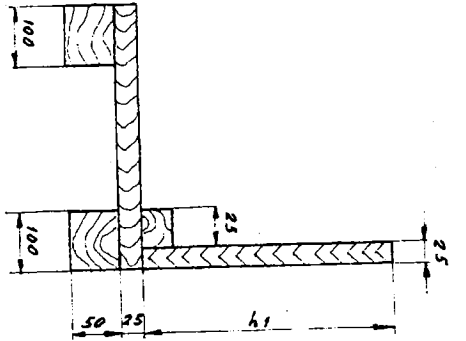


NO. OF PIECES	NAME - DIMENSIONS	SEMI-PRODUCT	FINAL MATERIAL	INITIAL MATERIAL	SCRAP BORT	NET WT (kg)	GROSS WT (kg)	DRAWING NO.	TYPE NO.
REMARKS				TOTAL NET WT (kg)		ALTERATIONS		DATE	
SCALE				DRAWN		CHECKED		APPROVED	
DATE				STDS. OFFICER		TRANS. COPY NO.		OLD DRG.	
TYPE				GROUP		DRAWING NO.		NEW DRG.	



WOODEN PACKING CASE

4 - V - 4000 - 07183



TYPE CRADLE OF VALVE	WT. OF CRADLE (KGS)	MATERIAL	DIMENSIONS IN MM			DRG. NO.	APPLICABLE TO VALVE TYPE NO.
			h1	h2	h3		
1	4.4	3R	260	240	260	3-V-9001-13794	1305 D, E, F, G, 1306 D, E, G, 1310 D, E, 1318 D, E, 1311 F, G, H, J
2	5.37	5R	320	290	290	3-V-9005-13794	1305 H, J, 1308 H, J, 1310 F, G, 1314 D, E, F, 1316 D, E, F
3	8.62	11R	370	370	370	3-V-9007-13794	1305 K, L, M, 1306 K, L, M, 1310 H, J, K, 1312 H, J, 1314 H, J, 1316 G, H, 1318 D, E, F, G, 1311 K, L, M, N
4	12.14	21R	460	460	460	3-V-9010-13794	1305 N, P, 1306 N, P, 1310 L, M, N, 1312 L, M, N, 1314 K, L, M, N, 1316 J, K, L, 1311 P, Q
5	13.87	36R	460	500	500	3-V-9012-13794	1305 R, S, 1306 R, S, 1310 P, Q, R, 1312 P, Q, 1314 P, Q, 1316 I, J, K, L, 1318 D, E, F, G, H, 1311 R, S, T
6	18.93	47R	520	560	560	3-V-9014-13794	1305 T, 1306 T, 1310 T, 1312 A, T

**SV & SRV PACKING CRADLE
FLANGED VALVE**

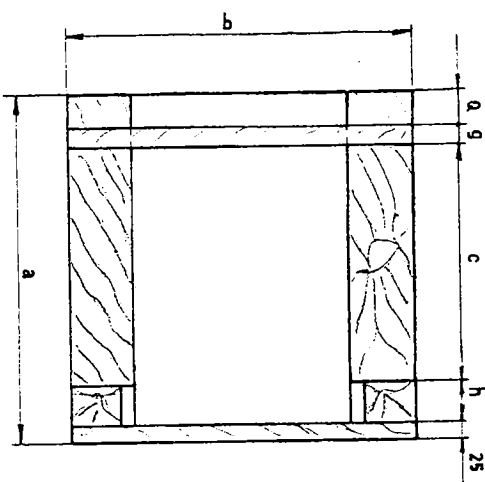
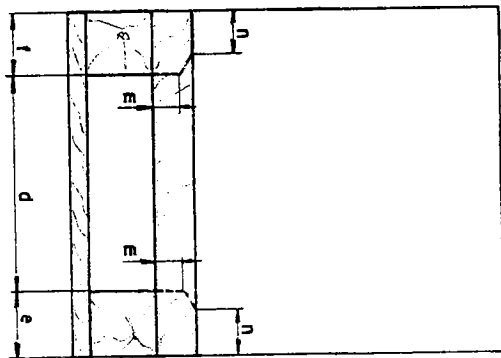
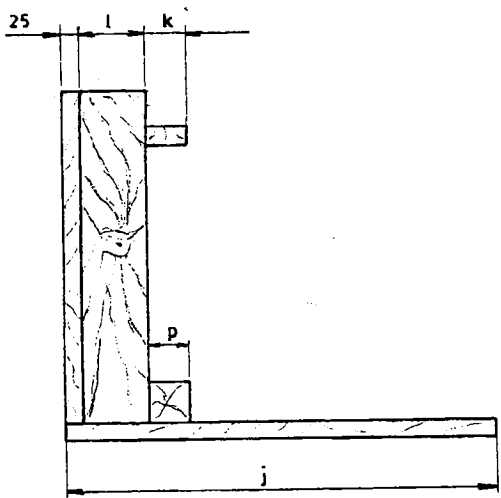
NOTES:-

- WOOD MATERIALS SHALL BE USED AS PER BPS 015501 OR IS 1503-1987.
- RUNNER PLANKS SHOULD BE USED, IF SINGLE PLANKS OF 25 X 42 X 3 AND 25 X 41, X 43 ARE NOT USED FOR LADDLER CONSTRUCTION.
- LADDLES SHOULD BE RIGID AND STRONG, TO CARRY THE LOAD GIVEN AGAINST EACH TYPE.

NO OF PIECES	DESCRIPTION	SEM NO. / SEQ NO.	INT. MAT. / SEQ. NO.	FINAL MATERIAL	TOTAL QTY	NET GROSS WT (KG)	DRAWING NO.

**BHARAT HEAVY ELECTRICALS LTD.,
BOILER PLANT UNIT, TIRUCHIRAPPALLI-14**

FIRST ANGLE	SCALE	DRAWN	CHECKED	DATE	TITLE
	N/T	M. R. C. N.	K. R. RAO	9/6/89	PACKING CRADLE
<p align="center">CAUTION</p> <p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LTD. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM THE COMPANY. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED.</p>					
<p align="center">33-115</p>					



DRAWING NO.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	p	TYPE NO.
575 X 575 X 1875	60	500	500	295	200	150	150	60	60	800	47	200	40	142	47	75 A/W, 75 W
3-V-7002-10573																
575 X 575 X 1875	110	500	500	245	190	155	155	60	60	550	36	230	29	147	38	55 N
3-V-7047-10573																
675 X 675 X 2000	100	900	600	355	240	180	180	80	60	750	98	200	95	175	98	83A, 3X10
3-V-7081-10573																
575 X 575 X 1875	100	550	550	305	250	150	150	60	60	800	47	200	65	140	80	750W 6"
3-V-7041-10573																
575 X 575 X 1875	80	550	550	325	250	150	150	60	60	600	47	200	65	140	80	85W, 88W, 85 RW, 86 RW
3-V-7003-10573																

NO. OF PIECES	DESCRIPTION	SIM. PROJ. NO.	INT. MAT. / SEQ. NO.	FINAL MATERIAL	EQM. / WELD. / COLL. NO.	NET. QTY. / ISS. /	DRAWING NO.	ITEM NO.

BHARAT HEAVY ELECTRICALS LTD.,
BOILER PLANT UNIT, TIRUCHIRAPPALLI-14

FIRST ANGLE	SCALE	DRAWN	CHECKED	APPROVED	DATE	TOTAL NET WT. (KG)	TYPE
		K. P. LEON	<i>V. P. ...</i>	<i>K. P. ...</i>	5-X-87		

CAUTION

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SAFETY VALVE	
PACKING CRADLE	

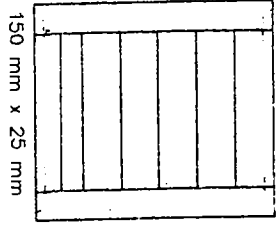
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REVISION **01**

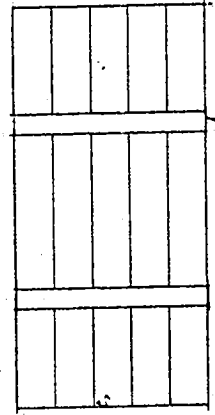
REV	DATE	ALTERED	CHECKED
01	16.12.87		

BY: *[Signature]*
 DIM. C, g & h ALTERED
 DIM. a ADDED.

DETAIL OF ALL SIDES PROJECTION
INTERNALS

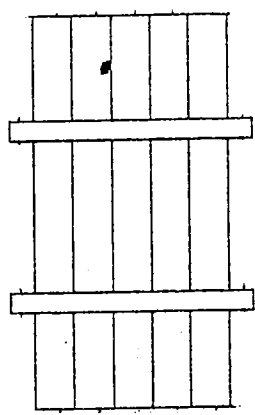


ENDS
2 Nos.

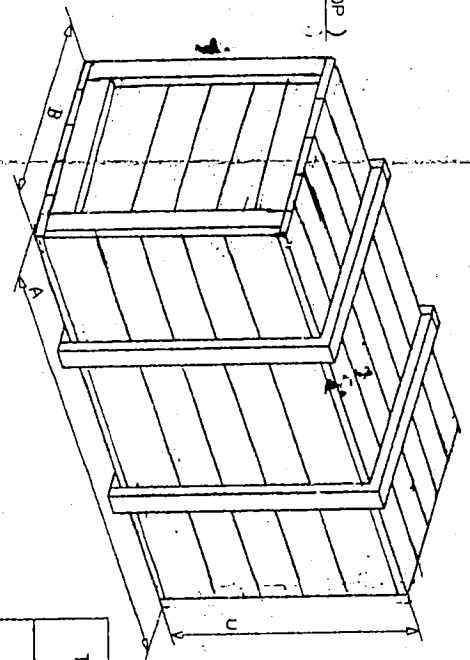


TOP & BASE
2 No.

02 100 mm x 30 mm (FOR TOP)



SIDES
2 Nos.



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

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	QTY	DRAWING NUMBER	ITEM NO	MATERIAL CODE	UNIT WEIGHT
	03.	NAILS 2 1/2" - 10 G					
	02.	BATTONS 100 x 30					
	01.	BLANKS 25 x 150					

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REV	DATE	ALTERED :
01		CHD & APPD.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT: **10105**

TYPE: **654** DIMS: **600x500x400**

UNIT: **1050x1050x500**

DEPT: **355-055**

ALL DIMENSIONS ARE IN MM

PROJECTION SCALE

WEIGHT (kg)

REF TO ASST / OLD DWG

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

BOILER COMPONENT
PACKING BOXES



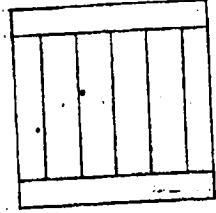
Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TRUCHIRAPALLI - 620014

NAME	SIGNATURE	DATE

REV	DATE	ALTERED :
C		

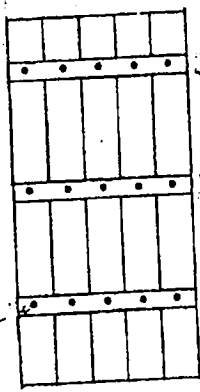
500-B-HS-E
DRAWING NO.

DETAIL OF ALL SIDES PROJECTION
INTERNALS



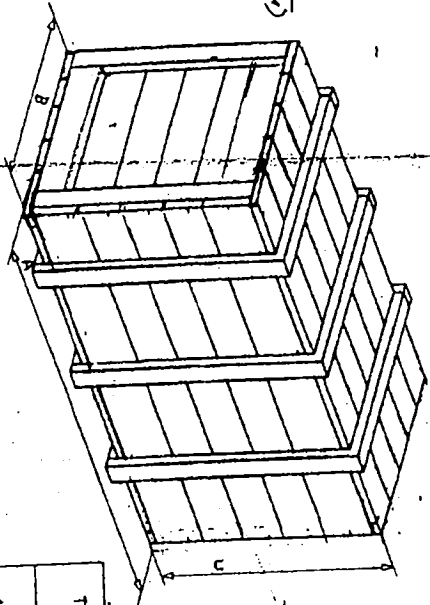
150 mm x 25 mm
ENDS
2 Nos.

TOP & BASE
2 No.

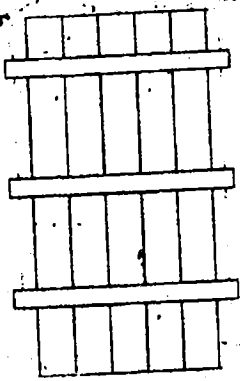


02 100 mm x 30 mm (FOR TOP)
100 mm x 50 mm (FOR BOTTOM)

03



SIDES
2 Nos.



VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	RS	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C	UNIT	QUANTITY
03	01	NAILS 2 1/2" - 3 1/2"							
02	02	BATTONS 100 x 30 / 100 x 50							
01	03	BLANKS 25 x 150							

TYPE No.	A	B	C
16910	1600	900	1000

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT: **TYPE: 16910-1600x900x1000**

Bharat Heavy Electricoils Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TRUCHIRAPALLI - 620014

PRODUCTION SCALE: **ALL DIMENSIONS ARE IN MM**

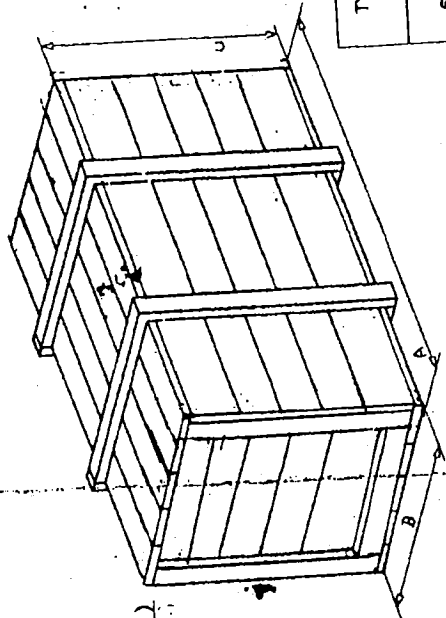
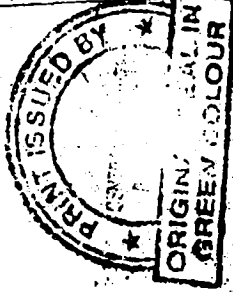
WEIGHT (Kg):

DRAWING NO: **3-SH-B-005**



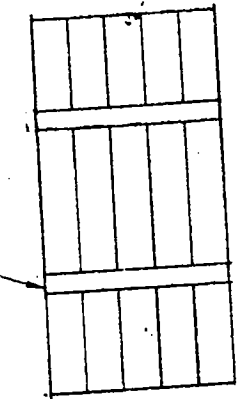
REV	DATE	ALTERED:
01		CMD & APP'D:

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



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

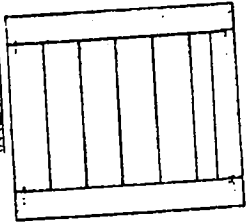
02 100 mm x 30 mm (FOR TOP)



TOP & BASE

2 Nos.

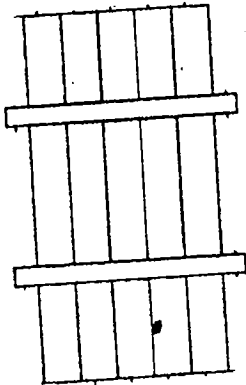
DETAIL OF ALL SIDES PROJECTION INTERNALS



150 mm x 25 mm

ENDS

2 Nos.



SIDES

2 Nos.

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	QTY	DRAWING NUMBER	ITEM NO	MATERIAL CODE	MATERIAL SPECN	UNIT WEIGHT	QUANTITY
	03.	NAILS 2 1/2" - 10 G							
	02.	BATTONS 100 x 30							
	01.	BLANKS 25 x 150							

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT: TYPE: 654, 600x500x400, 1050x1050x500

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

395-088
ALL DIMENSIONS ARE IN MM
PROJECTION SCALE
WEIGHT (KG)
REF TO ASST / OLD DWG

TITLE: BOILER COMPONENT PACKING BOXES
DRAWING NO.: 3-SH-B-004/C

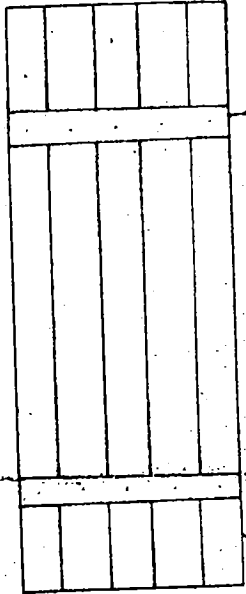
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REV	DATE	ALTERED	CHKD & APPD:
01			
ZONE			

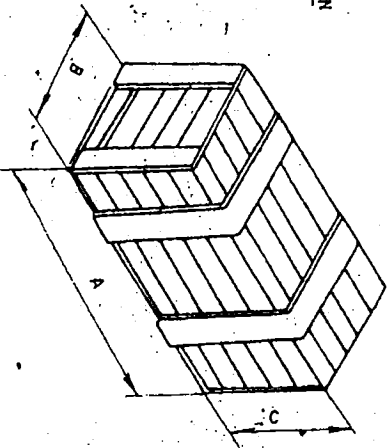
B/400 - B-HS - 3
ON SHEET/DWG

02 100MM X 30MM

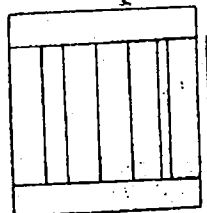
01 150MM X 25MM



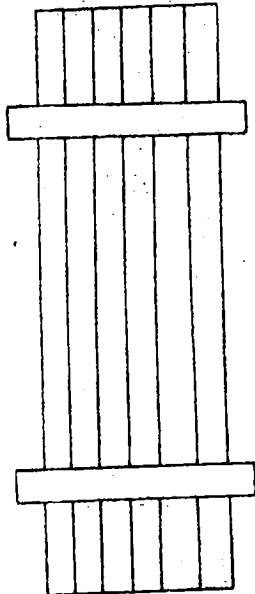
TOP & BASE
(2 NO.)



DETAILS OF ALL SIDES PROTECTION
INTERNAL



ENDS
(2 NOS)



SIDES
(2 NOS.)

TYPE NO.	DIMNS. (MM)		
	A	B	C
1144	1100	600	400
1122	1100	200	200
694	600	500	400
633	600	300	300
1133	1100	500	300
1155	1100	500	500

VAR NO.	ITEM NO.	DESCRIPTION	QTY	DRAWING NO.
03		NAILS	2 1/2 - 106	
02		BATTONS	100 X 30	
01		PLANKS	25 X 150	

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BHARAT HEAVY ELECTRICALS LTD.
 UNIT: HIGH PRESSURE BOILER PLANT
 TIRUCHIRAPPALLI - 60004

TYPE OF PRODUCT: TYPE 1144
 OR NAME OF CUSTOMER/PROJECT: 1122
 654
 633
 600 X 400 X 400MM
 1100 X 200 X 200MM
 500 X 500 X 400MM
 300 X 300 X 300MM

DEPT: **HT**
 GRADE OF UNTO/DWG: C / M / E
 SCALE:
 WEIGHT (KGS):
 DWN: G. KARAPPAH
 CHD: T. KOLAVYATH
 APD: P. PANDURANGAN
 REF TO ASSY/OLD DWG.

DATE: 09/07/87

**BOILER COMPONENT
PACKING BOXES**

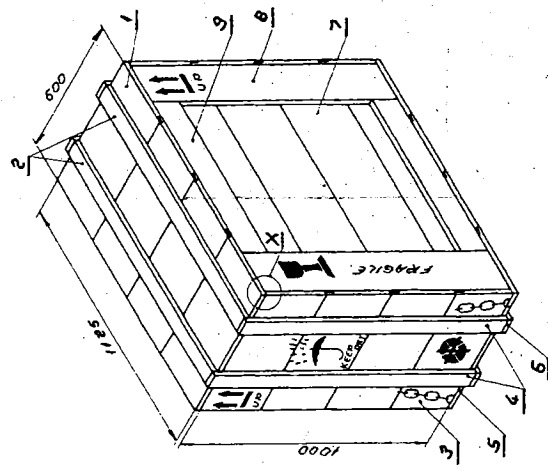
CARD CODE: U 01
 DRAWING NO: 3-SH-B-004/B



ALL DIMENSIONS ARE IN MILLIMETRES

TYPE - 62

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)



- 1. TOP BOARD - 25 THICK
- 2. TOP GIRTH BATTENS - 25 WIDTH X 60 THICK (EQUALLY SPACED)
- 3. SIDE BOARD - 25 THICK
- 4. SIDE GIRTH BATTENS - 25 W/1075 X 40 THICK
- 5. BOTTOM BOARD - 25 THICK
- 6. BOTTOM GIRTH BATTENS - 25 WIDTH X 75 THICK
- 7. END BOARD - 25 THICK
- 8. END VERTICAL BATTENS - 25 WIDTH X 60 THICK
- 9. END HORIZONTAL BATTENS - 25 WIDTH X 40 THICK
- 10. PLANK SIZE 25 X 25 X 420
- 11. PLANK SIZE 50 X 25 X 420
- 12. PLANK SIZE 20 X 20 X 420

NOTE: THE NUMBER AND WIDTH OF THE SIDE & END BOARDS BE DECIDED DEPENDINGS UPON THE HEIGHT

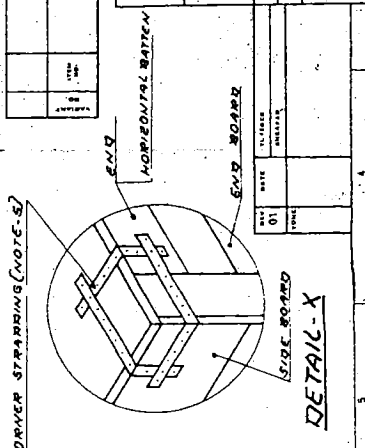
NOTES:

- 1. THE INSIDE OF ALL SIDES SHEET BOTTOM & TOP SHEET SHALL BE FULLY COVERED BY A SINGLE BITUMINISED PAPER AND SUITABLY FIXED. THE INSIDE OF TOP & SIDE SHALL BE FIXED WITH BITUMINISED PAPER AND ROUVETHYLENE SHEET. THE ROUVETHYLENE SHEET SHALL BE PROTECTING 50MM ON ALL SIDES. AFTER PUTTING THE TOP FOR CLOSING THE CASE, THE BITUMINISED ROUVETHYLENE SHALL BE SUITABLY TACKLED INSIDE SO AS TO PREVENT DIRECT ACCESS OF WATER FROM THE TOP OF THE CASE.
- 2. THE VALVE ALONG WITH CRACKLE ASSEMBLY SHALL BE COVERED BY A ROUVETHYLENE SHEET AND THEN ALACED INSIDE THE BOX.
- 3. PAINT MARKINGS AS SHOWN IN DRG ON ALL SIDES OF BOX.
- 4. WOOD MATERIALS SHALL BE AS PER DRG. 015501 OR IS-1503-1967
- 5. CORNER STRAPPING SHALL BE USED ON ALL CORNERS. STRAPPS SHALL NOT BE LESS THAN 20MM WIDE AND 0.8MM THICK. STRAPPS MAY BE WIRE ROUNCHED OR DIPPLED.

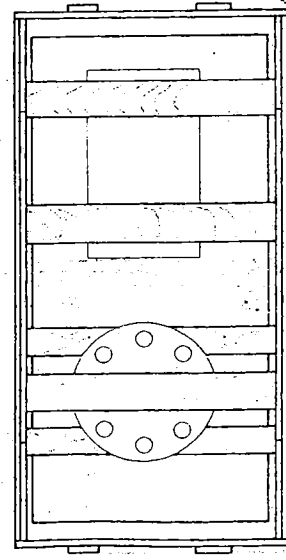
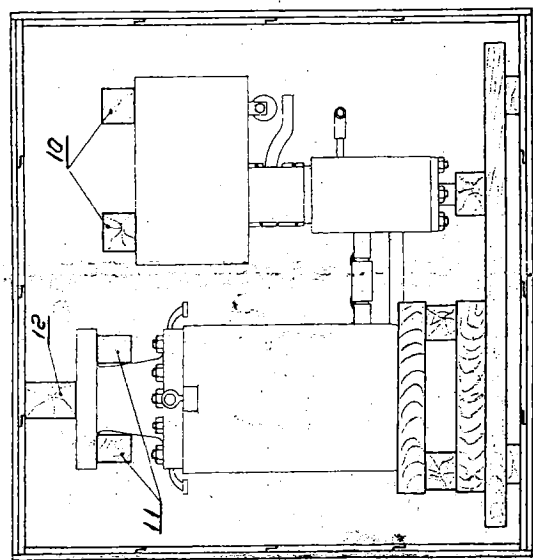
TYPE - 62

REGISTRATION	ISSUE NO.	REV. NO.	REV. DATE	REV. BY

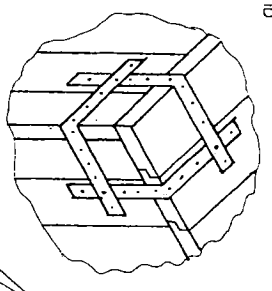
MICROFILMED ON
 TICAL ISSUES
 TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT
 Bharat Heavy Electricals Ltd.,
 BOILER PLANT UNIT
 TRICHURAPALLI-620 014
 DATE: 01/01/75
 DRAWN BY: S. RAJAN
 CHECKED BY: S. RAJAN
 SCALE: 1:1
 SHEET NO. 3-K-7503-10663
 DRAWING NO. 3-K-7503-10663
 PACKING DRABLE DRAWING
 3-K-7503-10663



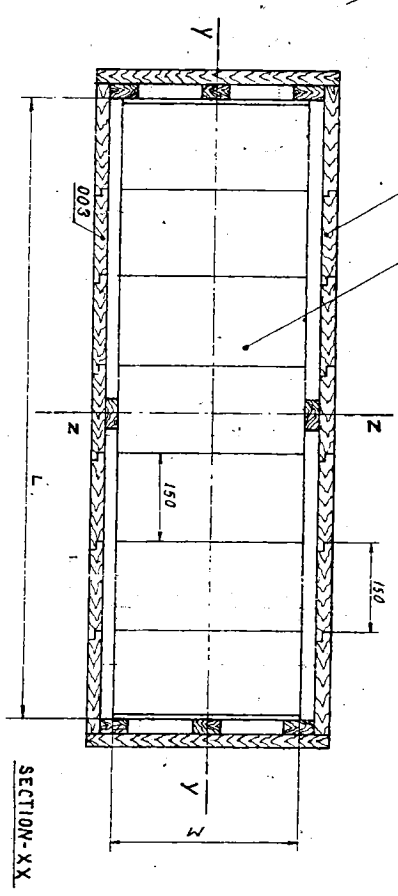
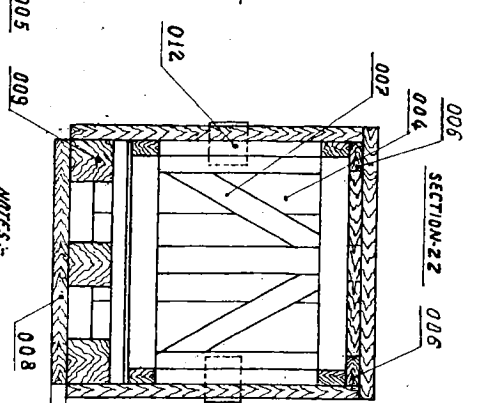
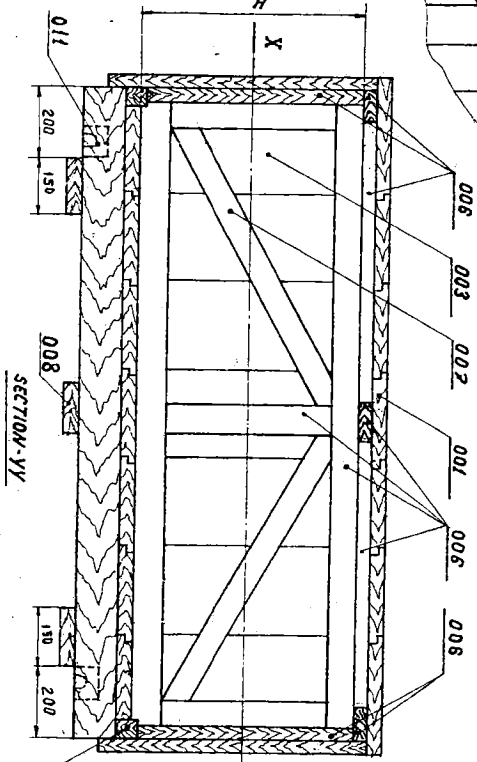
2-V-7503-10122



TYPE - 62



CORNER STRAPPING
(SEE MARK-3)



ITEM NO	TYPE	L	W	H	QTY	APPROX. LOAD TO BE CARRIED
301	BOX TYPE NO. 57	3000	1000	900	200	2000 KG
302	BOX TYPE NO. 57	2300	2300	950	200	2000 KG
303	BOX TYPE NO. 59	2900	1000	750	200	2000 KG
304	BOX TYPE NO. 59	2900	1950	850	200	2000 KG
305	BOX TYPE NO. 59	2900	1950	850	200	2000 KG
306	BOX TYPE NO. 60	2300	2200	1200	200	2000 KG

ITEM NO	TYPE	L	W	H	QTY	APPROX. LOAD TO BE CARRIED
296	BOX TYPE NO. 51	2775	850	680	200	2000 KG
297	BOX TYPE NO. 52	2000	950	740	200	2000 KG
298	BOX TYPE NO. 53	1800	1120	700	200	2000 KG
299	BOX TYPE NO. 54	2500	2000	1200	200	2000 KG
300	BOX TYPE NO. 55	2900	1900	1400	200	2000 KG

- 001 TOP BOARD : 25 MM THICK.
 - 002 BOTTOM BOARD : 25 MM THICK.
 - 003 SIDE BOARD : 25 MM THICK.
 - 004 END BOARD : 25 MM THICK.
 - 005 END TRAVELER BAR : 25 X 50
 - 006 ALL SIDE GIRTH BATTENS : 100 X 25
 - 007 ALL DIAGONAL BRACES : 100 X 25
 - 008 RESTING BEAMS : 150 X 50
 - 009 RUNNERS : 150 X 100
 - 010 SUPPERS : 150 X 100
 - 011 SLING PLATE (MS SHEET)
 - 012 SIDE PLATE (MS SHEET)
- X ALL LOADS SHOULD BE OF QUALITY WOOD.

NOTES:-

1. THE INSIDE OF ALL SIDES EXCEPT BOTTOM AND TOP SIDE SHALL BE FULLY COVERED BY SINGLE BITUMINISED PAPER AND SUITABLY FIXED. THE INSIDE OF TOP SIDE SHALL BE FIXED WITH BITUMINISED PAPER AND POLY ETHYLENE SHEET. THE POLY ETHYLENE SHEET SHALL BE PROTECTING 50 MM ON ALL SIDES. AFTER PUTTING THE TOP FOR CLOSING THE CASE, THE PROTECTING POLY ETHYLENE SHALL BE SUITABLY TACKLED INSIDE SO AS TO AVOID DIRECT ACCESS OF WATER FROM THE TOP OF THE CASE.
2. TO INDICATE TOP SIDE OF BOX PAINT SUITABLY BY MARKING (PREFERABLY BY UMBRELLA MARKING (6" X 6") ON ALL SIDES OF THE BOX.
3. CORNER STRAPPING SHALL BE USED ON ALL CORNERS. STRAPS SHALL NOT BE LESS THAN 20 MM WIDE AND 0.6 MM THICK. STRAPS MAY BE PRE-RUNCHED OR DRAILED.
4. THE NUMBER AND WIDTH OF THE SIDE AND END BOARDS SHALL BE DECIDED DEPENDING UPON THE HEIGHTS.
5. COMPONENTS LIKE SLIP, TUBING HANGERS, FASTENERS, RT GAUGES, PK GAUGES, ETC. ARE TO BE PACKED SEPARATELY IN A BOX AND PLACED INSIDE THE MAIN BOX.
6. SECURE THE ASSEMBLIES WITH ENOUGH SIDE SUPPORTS TO AVOID MOVEMENTS OF ASSEMBLIES DURING TRANSPORT AND ALSO SECURE SUITABLY TO AVOID VERTICAL MOVEMENT.

REV	DATE	BY	CHKD	DESCRIPTION
01	28.4.86			TOP BOARD 25 MM WAS 50
02				BOTTOM BOARD 25 MM WAS 50
03				SIDE BOARD 25 MM WAS 50
04				END BOARD 25 MM WAS 50
05				END TRAVELER BAR 25 X 50 WAS 100 X 25
06				ALL SUPPORTS REMOVED.
07				BOX TYPE NO. 57 & 59
08				BOX TYPE NO. 51
09				BOX TYPE NO. 52 & 53
10				BOX TYPE NO. 54 & 55

REV	DATE	BY	CHKD	DESCRIPTION
01	28.4.86			TOP BOARD 25 MM WAS 50
02				BOTTOM BOARD 25 MM WAS 50
03				SIDE BOARD 25 MM WAS 50
04				END BOARD 25 MM WAS 50
05				END TRAVELER BAR 25 X 50 WAS 100 X 25
06				ALL SUPPORTS REMOVED.
07				BOX TYPE NO. 57 & 59
08				BOX TYPE NO. 51
09				BOX TYPE NO. 52 & 53
10				BOX TYPE NO. 54 & 55

BHARAT HEAVY ELECTRICALS LTD.,
TIRUCHIRAPPALLI-14

BOILER PLANT UNIT,

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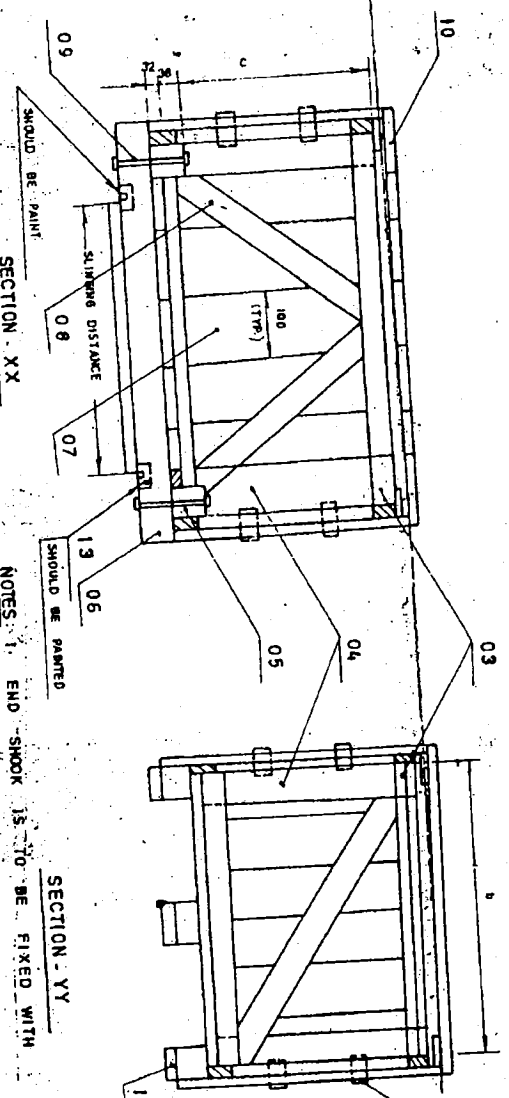
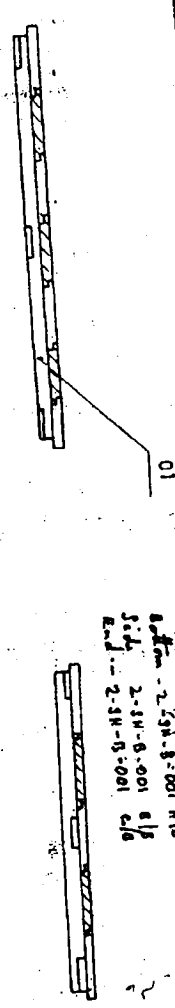
CAUTION

FOR OIL FIELD EQUIPMENTS

PACKING BOX

2-V-4600-03636

For Mill drawings please refer to
 Top - 2-SH-B-0015
 Bottom - 2-SH-B-0018
 Side - 2-SH-B-0019
 End - 2-SH-B-0020

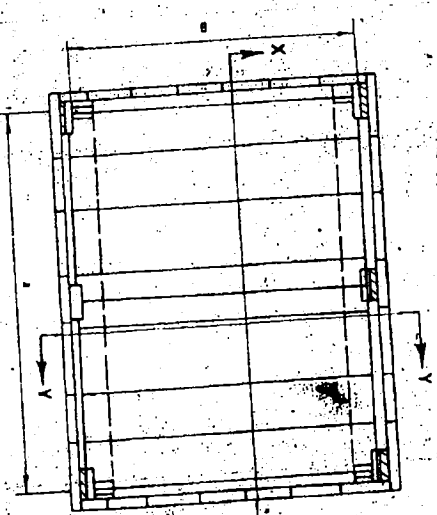


SECTION XX

SECTION YY

NOTES: 1. END SHOOK IS TO BE FIXED WITH BASE & NAILS 9 GAUGE.

- 2. ALL OTHER NAILING SHOULD BE 2 1/2" 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.

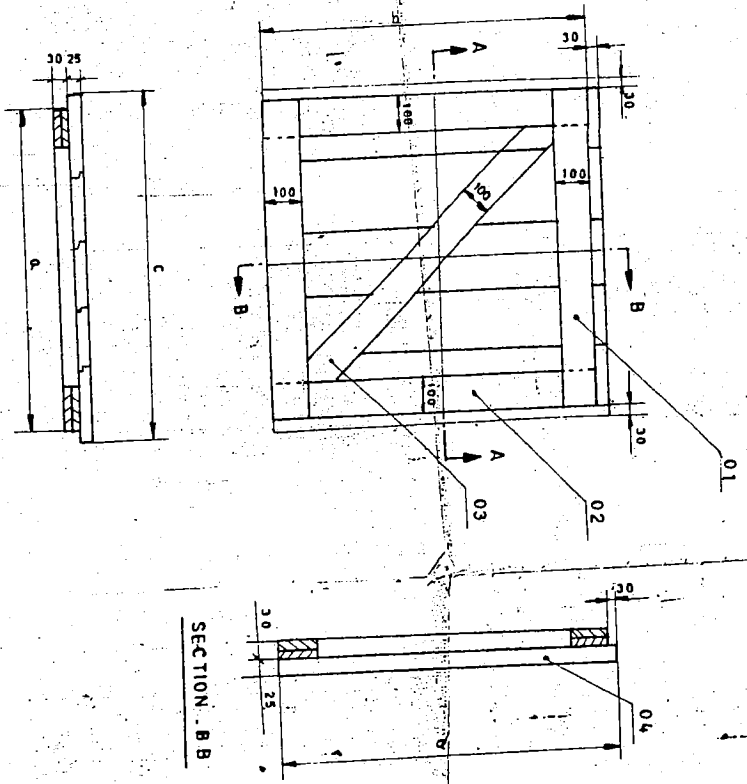
TYPE	A	B	C
1577	1500	700	700
1299	1300	900	500
1295	1200	500	500
988	900	800	500

15	SQUARE DISTANCE SHOULD BE PAINTED	550	2000
14	CORNER PLATE	4905	40 X 100
13	SLING PLATE 155 X 75 X 0.5mm SHOULD BE PAINTED	250 X 75 X 0.5	150 X 2.5
12	RESTING BOARD	150 X 2.5	20 X 100
11	SHOCK PLATE SHOULD BE PAINTED & NAILS 2"	150 X 2.5	20 X 100
10	THICKNESS OF SHEATHING PLANK	150 X 2.5	20 X 100
9	PLATE SIZE	150 X 2.5	20 X 100
8	DIAGONAL BRACE	150 X 2.5	20 X 100
7	INTERMEDIATE VERTICAL SUPPORT	150 X 2.5	20 X 100
6	END TRAVEL BAR	150 X 2.5	20 X 100
5	PLATE END TRAVEL BAR	150 X 2.5	20 X 100
4	VERTICAL PANEL AND END PANEL VERTICAL SUPPORT	150 X 2.5	20 X 100
3	VERTICAL PANEL AND END PANEL HORIZONTAL SUPPORT	150 X 2.5	20 X 100
2	VERTICAL BEAM	150 X 2.5	20 X 100
1	END TRAVEL BAR	150 X 2.5	20 X 100

BOILER COMPONENT
 PACKING BOX
 2-SH-CRT-00002

TYPE OF PRODUCT OR NAME OF ALL DIMENSIONS SHOWN FOR TV 1296 BOX

SHANKAR MECH. & ELECTRICALS LTD.
 10/11, P. B. S. I. COLONY, P. O. BOX 100, CHENNAI 600 002



ITEM NO	DESCRIPTION	QTY	TYPE	QTY	TYPE	QTY	TYPE	QTY	TYPE
04	PLANKS	700 X 150 X 25	9 + 5	700 X 150 X 25	1000 X 150 X 25	6 + 5	700 X 150 X 25	6 + 5	700 X 150 X 25
03	DIAGONAL BRACE	870 X 100 X 30	7 + 2	870 X 100 X 30	1060 X 100 X 30	7 + 2	870 X 100 X 30	7 + 2	870 X 100 X 30
07	VERTICAL SUPPORT	670 X 100 X 30	2 + 2	670 X 100 X 30	770 X 100 X 30	1 + 1	670 X 100 X 30	2 + 2	670 X 100 X 30
01	HORIZONTAL SUPPORT	600 X 100 X 30	2 + 2	600 X 100 X 30	900 X 100 X 30	2 + 2	600 X 100 X 30	2 + 2	600 X 100 X 30

ITEM NO.	TYPE	QTY	TYPE	QTY	TYPE	QTY
A	700	700	1000	900		
C	660	660	660	760		
B	670	670	970	770		
A	600	900	900	700		

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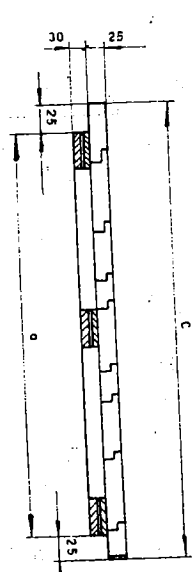
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT
 Bharat Heavy Electricals Ltd
 UNIT: HIGH PRESSURE BOILER PLANT
 THIRUCHIRAPPALLI - 620014

DATE 11/05/99
BY M. KARLIMANN
CHECKED P. SRIKRISHNA
SCALE 1:1
WEIGHT (kg)

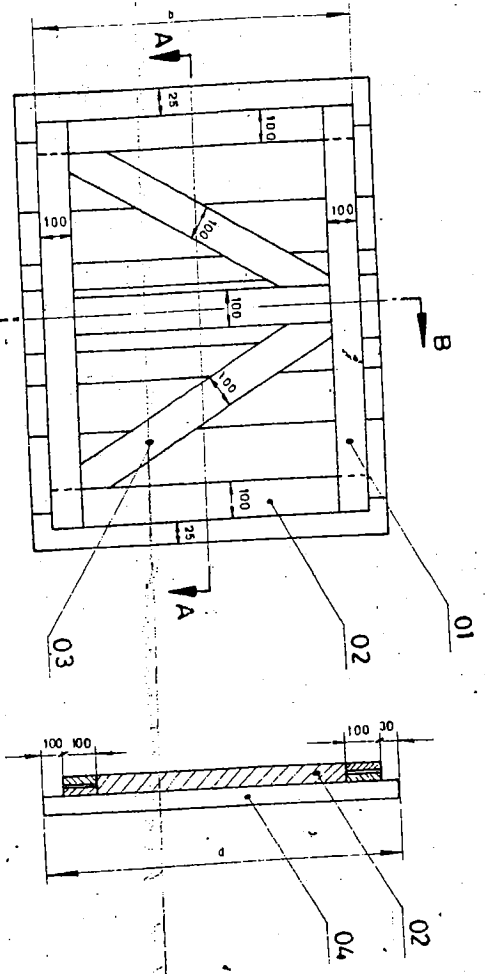
TITLE END SHOOKS
DRAWING NO. 2-SH-B.001 C/B

CADRENT - 10/10/10

DRAWING NO: B/B100-B-HS-2



SECTION-AA



SECTION-B-B

ITEM NO	DESCRIPTION	TYPE	QTY	UNIT WEIGHT
01	HORIZONTAL SUPPORT	966	2+2	1560 X 100 X 30
02	VERTICAL SUPPORT	1296	3+3	1360 X 212
03	DIAGONAL SUPPORT	1399	2+2	1560 X 100 X 30
04	PLANKS	1577	2+2	800 X 150 X 25

ITEM NO.	TY: 966	TY: 1296	TY: 1399	TY: 1577
d	800	800	1100	900
c	1010	1310	1410	1610
b	670	670	970	770
a	560	1260	1760	1560

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	UNIT NO	UNIT CODE	UNIT WEIGHT	QTY	ZONE

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TYPE OF PRODUCT
OR NAME OF CUSTOMER/PROJECT:

SHARAT HEAVY ELECTRICALS LTD
Bhorol Heavy Electricals Ltd
UNIT, HIGH PRESSURE BOILER PLANT
TRICHURAPALLI - 620014

DESIGNER: T. ARYAN
CHECKER: M. KRISHNAN
DATE: 11.5.10

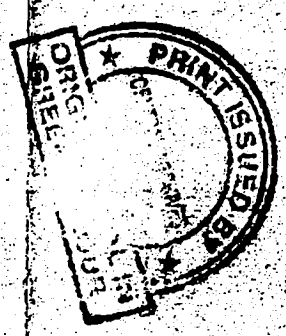
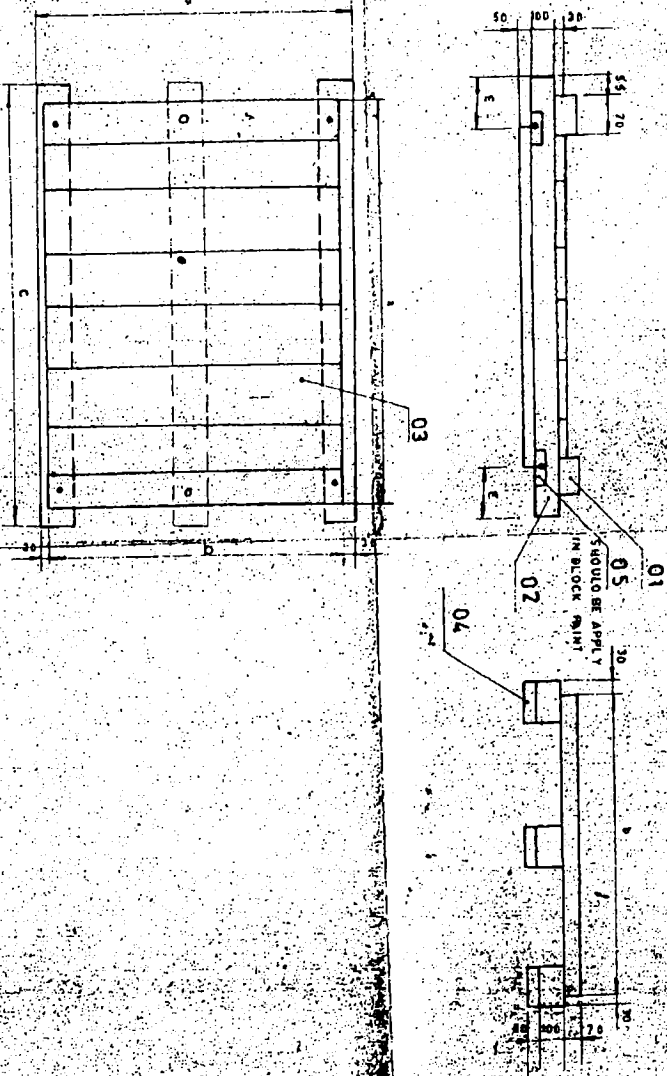
SCALE: 1:1

TITLE: SIDE SHOOK

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

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

2 SH-B-001 - A/B



FOR THE PURPOSES OF IDENTIFICATION
 THIS SHEET IS IDENTIFIED BY THE NUMBER
 2 SH-B-001-A/B

ITEM NO.	DESCRIPTION	TYPE	QTY	TYPE	TYPE
01	BASE RESINITE BOARD	710 X 170 X 50	1010 X 100 X 50	1010 X 100 X 50	1010 X 100 X 50
02	BASE PLANKS	500 X 100 X 30	500 X 150 X 30	500 X 150 X 30	500 X 150 X 30
03	WASTE PLANKS	1010 X 100 X 100	1010 X 100 X 100	1450 X 100 X 100	1410 X 100 X 100
04	BASE AND TRAVEL	500 X 70 X 70	500 X 70 X 70	500 X 70 X 70	700 X 70 X 70
05					

ITEM NO.	TYPE	QTY	TYPE	TYPE
01	150 - 150	150	200 - 200	200 - 200
02	650	650	650	700
03	1010	1310	1410	1410
04	500	500	500	700
05	500	1700	1300	1500
06	1288	1288	1288	1288
07	1577	1577	1577	1577

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HEAVY ELECTRICAL LTD.
 1800 CHERRY AVE. S. SASKATOON, SASK. S0N 0A0

TYPE OF PRODUCT OR NAME OF CUSTOMER/PRODUCT: **BASE SHOOK**

Customer: **Shook Heavy Electricals Ltd**
 Unit, West Precast, 6000 West Precast Blvd, Saskatoon, Sask. S0N 0A0

Drawn by: **T. J. GILBERT**
 Checked by: **P. GILBERT**

DATE: **11/5/79**

Drawing No.: **2 SH-B-001 A/B**

