



INVITATION TO TENDER

Ref.: OS/24-25/7936&8062/DI/39/039

Date: 24.03.2025

Sub: Fabrication of Upper Drum Internals against S.O. Nos. 7936 & 8062 at vendor works with free issue materials

Dear Sir,

Sealed tenders are invited for the subject work in **two-part bid** system from Vendors who are experienced in fabrication of similar jobs and fulfil the eligibility criteria specified below in clause-1. Scope of work and techno-commercial terms and conditions are as follows.

1. ELIGIBILITY CRITERIA:

- 1.1 Bidders must have an experience of successful completion of similar works i.e., **Fabrication & Machining of components** during last 7 years ending 28.02.2025 for a minimum of one project. Bidders shall enclose Work Order, Work Completion Certificate and all other relevant documents from the customer in support of successful and satisfactory completion of the work.
- 1.2 Bidders shall also enclose the documents of Registration of Firm/ Factory License/ Certificate of Incorporation, PAN, GSTIN, Udyam Registration (if registered with MSME) etc.
- 1.3 The works executed in own name of the individual / firm of the tenderer will only be considered for eligibility criteria.

2. LOCATION OF WORK SPOT:

- 2.1 The fabrication work is to be carried out **at Vendor's works.**

3. SCOPE OF WORK:

- 3.1 Fabrication of Drum Internals of Total weight of **4 MT approx.** is to be carried out as detailed at Annexure-II and applicable drawings.
- 3.2 Complete Fabrication of Drum Internals which includes items like Corrugated Sheet Basket Assembly, Feed Header Assembly, Primary Screen Box, Secondary Screen Box, Blow Down Header, End Sheet, End Plate, End Cover, Bend Plate, Bend Panel, Bent Strip, Panel Sheet, Chemical Dosing Header etc., as per applicable Drawings, GMS, Shipping List, QAP, WPS, Standards & Specifications.
- 3.3 Collection & Transportation of Free issue Raw materials from HPVP stores to Vendor works and Transportation & handing over of Finished items to HPVP Production shops.
- 3.4 Free issue materials cleared by QC (Stores) are to be collected within 3 days from the date of intimation by Outsourcing dept. without any failure.
- 3.5 NDT like DPT, MPT etc., wherever applicable, shall be carried out as per approved QAP / drawings.
- 3.6 Trial assembly of fabricated items wherever required as per drawings / QAP.
- 3.7 For cut to size Sheets / Plates, welding of joints if any required due to issue of shorter dimensions of Sheets / Plates is included in vendor's scope and no extra cost shall be payable for the same by BHEL.
- 3.8 Application of Rust prevent oil is in vendors scope. **Rust prevent oil shall be issued as Free Issue by BHEL-HPVP.**
- 3.9 The fabricated items shall strictly conform to the dimensions and tolerances indicated in the drawings. It must be ensured that correct dimensions and deviations, if any, are recorded properly and is made available to BHEL officials or their authorized agencies.
- 3.10 Rectification of Raw materials such as straightening etc., if any as per Drawings and rectification of defects, if any attributable to vendors, found after handing over to HPVP shops.
- 3.11 Submission of economic cutting plans for all plate materials and sections issued by BHEL and obtaining approval of competent authority is mandatory before taking up of fabrication.
Wherever fabrication is done without proper approved cutting plans, any loss of materials arising due to the same will be recovered as per BHEL recovery rates.
- 3.12 No extra rates are applicable for the additional joints to be made in Plates, sheets & Rolled sections.

- 3.13 The work is to be executed as per the latest approved Drawings, Group Manufacturing Specification (GMS), Shipping List released for each PGMA, QAP, WPS, Standards & Specifications etc.
- 3.14 All indirect materials, consumables like electrodes, gases, grinding wheels etc. required for fabrication are in the scope of the Vendor.
- 3.15 Identification of all items shall be stenciled with paint in a specific format with details of Sale Order No., PGMA No., DU No., Qty., Weight, match marking etc., for identification and dispatch as per the instructions of the BHEL Engineer-in-charge. Completed job without proper identification will not be accepted by HPVP - Shops.
- 3.16 Vendors shall return the excess / balance materials including off-cuts and total scrap available with them exclusive of process allowance & invisible wastage to HPVP Stores after material reconciliation but before submission of their final bill. In case the same are not returned by the vendors, Recovery shall be made as per BHEL Rates / MSTC rates plus applicable taxes, prevailing at the time of processing of the final bills.
- 3.17 Required tools & tackles and Measuring instruments like Tape, Fillet & Butt Weld Gauges, Plumb bobs with magnets etc., shall be calibrated and valid calibration certificates must be presented, whenever required.
- 3.18 Any modification work due to revision of the drawings during fabrication is to be carried out by the vendor without any additional cost.
- 3.19 Though not mentioned specifically, any activity which is required for completion of the work as per the drawings and QAP is deemed to be included in the scope of work of vendor without any price implication.

4. BHEL SCOPE: BHEL – HPVP shall provide the following as free issue:

- 4.1 Drawings, GMS, QAP, WPS, Standards & Specifications.
- 4.2 Raw materials like full / off-cut Plates, Pipes & Tubes, Round Bars, Structural items, Rust Preventive Oil, BOCs etc., as per GMS.

5. INSPECTION:

- 5.1 Inspection shall be carried out by M/s. BHEL-HPVP, Vizag / BHEL Authorized Inspection Agency (TPIA) / Customer as per approved QAP. Vendor shall offer for Stage wise and Final inspection as per approved QAP and obtain necessary stage wise & final clearances before proceeding for further operations along with all necessary documentation.
- 5.2 Fabrication Vendor shall be solely responsible for preparation and submission of all Inspection Reports & documents duly certified by Inspection Authority along with the finished equipments.
- 5.3 All the documentation related to inspection clearance of M/s. BHEL/TPIA/Customer, Generation of Inspection Reports, Preparation of Final Documents as per BHEL standard formats etc., are included in the scope of vendor and scanned copy as well as hard copy of the same is to be submitted to BHEL-QA.

6. DELIVERY:

- 6.1 Finished items shall be delivered **within 60 Days** along with inspection documents & certificates.

The delivery period will be calculated from the date of issue of last consignment of materials to the date of delivery of finished items against respective DUs. The delivery period includes the time involved in collection of all raw materials, cutting plan approval, handing over of finished items at HPVP- Shops.

Note: In case the delivery period offered by the vendor is more than the tender delivery, Price quoted by the bidder shall be loaded for additional period @ 0.5% per week or part thereof for the purpose of evaluation of Bidder Status.

7. PRICE:

- 7.1 The price shall be quoted in the **Price Bid** as per the Schedule of Quantities & Rates for the detailed scope of work and the quoted price shall be inclusive of all applicable taxes & duties except GST.
- 7.2 The prices shall be fixed & firm without any escalation during the entire period of contract and till completion of the work.
- 7.3 GST shall be reimbursable to the vendor as detailed in Clause - 8 and as per Annexure – GST.
- 7.4 Income tax will be deducted at applicable rates from RA & Final bills.

8. GOODS & SERVICES TAX (GST):

- 8.1 Bidders shall make a note of the following points of GST before submission of their offer:
 - a) Vendors shall have to mention their GSTIN no. (15 Digits) in their Technical Bid. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.
 - b) Semi-finished goods are to be delivered by the Vendors in BHEL, HPVP premises within a maximum period of one year from the date of issue of the material, failing which the whole transaction will be considered as

Supply & Sale and GST is required to be paid along with interest (calculated @ SBI Base Rate + 6%) along with penalty, if any, from the date of Challan on the whole value of materials. Hence vendors shall have to ensure that materials issued to them are returned within 365 days.

- c) After fabrication, the vendors shall have to deliver the Semi - finished Goods by fulfilling the following formalities:
 - i) GST invoice should be raised by the vendors by paying GST on job work charges at applicable rates and by incorporating the HPVP GSTIN no. in the invoice for availing the reimbursement of GST from HPVP.
 - ii) The vendor shall also have to enter in their GST Return -1 (GSTR-1) the details of invoice raised for payment of GST so as to enable HPVP to avail input credit.

9. **REVERSE AUCTION:**

- 9.1 BHEL shall be resorting to Reverse Auction (RA) for this tender. RA shall be conducted among the eligible techno-commercially qualified bidders. Business Rules for Reverse Auction are given at Annexure – V. Bidder may refer Guidelines for Reverse Auction available on our website, www.bhel.com → supplier registration → Guidelines for Reverse Auction, before submission of their offer.
- 9.2 Sealed envelope / Electronic Price bids of all the techno-commercially qualified bidders shall be opened and the same shall be considered as initial bids of the bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.
- 9.3 BHEL will inform bidders the details of service provider who will provide business rules, all necessary training and assistance before commencement of online bidding. The bidders participating in the Reverse Auction shall have to necessarily submit '**Process Compliance Form**' (PCF) to the designated Service Provider.
- 9.4 Bidders are advised to read the 'Business Rules' (Annexure – V) indicating details of RA event carefully, before reverse auction event.

10. **RISK PURCHASE:**

In case the contractor fails to execute the work within the scheduled time or due to any other reasons, BHEL - HPVP reserves the right to get the same completed through some other party at the risk & cost of the contractor and any additional expenditure incurred due to the same shall be charged to the contractor. Non-performance of contract attracts penal provisions in line with BHEL Guidelines for Suspension of Business Dealings.

11. **VALIDITY OF OFFER:**

The offer shall be valid for a period of **3 months** from the date of Reverse Auction.

12. **GENERAL:**

- 12.1) The bidders shall study the Tender documents, Drawings, Quality Documents and all other relevant documents in detail for understanding the scope of work and the processes involved before submission of offer. Bidders shall get clarifications, if any, from concerned officials on the scope of work or any other details of the tender document, over phone between 09:00 AM and 04:00 PM on any working day or through e-mail.
- 12.2) **Conditional / Partial Price Bids** and any other deviations to the tender terms & conditions are not acceptable and BHEL reserves the right to reject such offers without further correspondence. Bidders shall confirm their acceptance to all the terms & conditions of the tender enquiry in the Techno-commercial Bids without any deviations.
- 12.3) BHEL reserves the right to modify or cancel the tender enquiry at any stage without assigning any reasons thereof.
- 12.4) The General Terms & Conditions, if any, contradicting with the specific terms & conditions given in the tender, then specific terms & conditions shall only be considered.
- 12.5) Other Terms & Conditions, whichever applicable, shall be as per Annexure – III enclosed.

13. The following documents shall form part of the tender enquiry including this Notice Inviting Tender:

PART - 1: TECHNO-COMMERCIAL BID

- | | |
|-------------------------------------------------------|------------------|
| i) Schedule of Quantities | : Annexure – I |
| ii) Details of Components to be fabricated & drawings | : Annexure – II |
| iii) General Terms & Conditions | : Annexure – III |
| iv) Acceptance to tender terms & conditions | : Annexure – IV |

- v) Business Rules for Reverse Auction : Annexure – V
- vi) GST Compliance for Indigenous Suppliers : Annexure – GST
- vii) Drawings

PART - 2: PRICE BID

- viii) Price Bid (Schedule of Quantities & Rates)

14. TENDER SUBMISSION (Through e-Procurement system):

- 14.1 The tender completed in all respects shall be submitted in **Two parts** (Techno-commercial bid and Price Bid) through online e-procurement portal (<https://eprocurebhel.co.in>) latest by **13:00 Hrs. on 03.04.2025**.

Note: Techno-commercial bid along with all the tender documents shall be duly signed & stamped by the bidder on all pages.

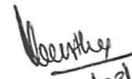
- 14.2 Submission of offer by the bidder implies that all the tender documents were read by the bidder and the bidder is aware of the scope and specifications of the job.

- 14.3 **OFFERS SENT IN ANY OTHER FORM WILL BE TREATED AS INVALID AND WILL BE SUMMARILY REJECTED.**

15. TENDER OPENING:

- 15.1 Techno-commercial Bids will be opened on **03.04.2025 at 15:00 Hrs.** in online e-procurement portal.
- 15.2 After evaluation of the Techno-commercial Bids, intimation regarding date & procedure of conducting Reverse Auction shall be given by the service provider to all the eligible techno-commercially qualified bidders through an e-mail in advance at an appropriate time.

For Bharat Heavy Electricals Limited,


24/03/2025

D. N. MURTHY
Manager (OS)
Bharat Heavy Electricals Ltd
4PVP Visakhapatnam-530 011

SCHEDULE OF QUANTITIES

Tender Enquiry ref : OS/24-25/7936&8062/DI/39/039

Date: 24.03.2025

Sub: Fabrication of Upper Drum Internals against S.O. Nos. 7936 & 8062 at vendor works with free issue materials

SL. No.	S.O. No.	Description of Item	Unit	Total Qty.
1	7936 & 8062	Fabrication of Upper Drum Internals as per Annexure-II	MT	4
		TOTAL		4

Notes :

- 1) **L1 status will be evaluated based on total quoted price**
- 2) The quantity and weights indicated above are tentative and may slightly vary on both sides depending upon the requirement at the time of ordering / execution. However, payment shall be made for the actual quantities & weights only.
- 3) The quoted price shall be inclusive of all applicable taxes & duties except GST. GST shall be reimbursable to the vendor as per applicable rules. Income tax shall be deducted at applicable rates from the vendor's bills.
- 4) The prices shall be fixed & firm without any escalation during the entire period of contract and till completion of the work.
- 5) The bidders are advised to go through all the drawings & documents before quoting the tender.
- 6) The evaluation currency for this tender shall be **INR**.

Signature of Bidder with stamp

ANNEXURE-II

DETAILS OF COMPONENTS TO BE FABRICATED & REFERENCE DRAWINGS

Tender Enquiry ref : OS/24-25/7936&8062/DI/39/039

Date: 24.03.2025

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SO No.	PGMA	DU No.	BOM No	Item No.	Drawing Number	Rev	Var	Description	Material Description	Quantity	Unit	Weight (KG)
7936	04-114	001	90	04	1-04-114-U8073	00	00	INTERNALS FOR UPPER DRUM		1	NO	2040.545
7936	04-114	001	15	01	3-04-114-U8442	00	00	CORRUGATED SHEET BASKET ASSEMBLY		74	NO	1156.472
7936	04-114	001	16	01	3-04-114-U8442	00	00	TOP COVER PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	74	NO	118.400
7936	04-114	001	16	02	3-04-114-U8442	00	00	END PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	148	NO	222.000
7936	04-114	001	16	03	3-04-114-U8442	00	00	BOT. PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	74	NO	81.400
7936	04-114	001	16	04	3-04-114-U8442	00	00	ROD D 6.0 MM	ROD D 6.0 MM-IS2062GRA SAE1010/SAE1018	296	NO	15.392
7936	04-114	001	16	05	3-04-114-U8466	00	01	SHEET 0.63 MM - IS513D	SHEET 0.63 MM - IS513D	2146	NO	347.652
7936	04-114	001	16	06	3-04-114-U8466	00	02	SHEET 0.63 MM - IS513D	SHEET 0.63 MM - IS513D	2294	NO	371.628
7936	04-114	001	15	02	3-04-114-U8443	00	00	END PLATE		2	NO	27.140
7936	04-114	001	17	01	3-04-114-U8443	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	24.580
7936	04-114	001	17	02	3-04-114-U8443	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	4	NO	0.960
7936	04-114	001	17	03	3-04-114-U8443	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	4	NO	1.280
7936	04-114	001	17	04	3-04-114-U8443	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	4	NO	0.320
7936	04-114	001	15	03	3-04-114-U8444	00	00	BENT PANEL		4	NO	144.248
7936	04-114	001	18	01	3-04-114-U8444	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	4	NO	144.000
7936	04-114	001	18	02	3-04-114-U8444	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	4	NO	0.248
7936	04-114	001	15	04	3-04-114-U8445	00	00	BENT PANEL PLATE	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	29.880
7936	04-114	001	15	05	3-04-114-U8446	00	00	BENT STRIP		2	NO	3.020
7936	04-114	001	19	01	3-04-114-U8446	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	1.180
7936	04-114	001	19	02	3-04-114-U8446	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.640
7936	04-114	001	19	03	3-04-114-U8446	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.160
7936	04-114	001	19	04	3-04-114-U8446	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.560
7936	04-114	001	19	05	3-04-114-U8446	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.480
7936	04-114	001	15	06	3-04-114-U8447	00	00	BENT STRIP		2	NO	3.020
7936	04-114	001	20	01	3-04-114-U8447	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	1.180
7936	04-114	001	20	02	3-04-114-U8447	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.640
7936	04-114	001	20	03	3-04-114-U8447	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.160
7936	04-114	001	20	04	3-04-114-U8447	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.560
7936	04-114	001	20	05	3-04-114-U8447	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.480
7936	04-114	001	15	07	4-04-144-U8431	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	4	NO	2.080
7936	04-114	001	15	08	3-04-114-U8448	00	00	ANGLE 50 X 50 X 6	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	1	NO	39.285
7936	04-114	001	15	09	1-04-114-U8073	00	00	TUBE OD 31.80 X 2.90 X 11000 - SA210GRA1	TUBE OD 31.80 X 2.90 X 11000 - SA210GRA1	36	NO	56.520
7936	04-114	001	15	10	4-04-114-U8432	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	1	NO	17.540
7936	04-114	001	15	11	4-04-114-U8433	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	1	NO	8.790

SO No.	PGMA	DU No.	BOM No	Item No.	Drawing Number	Rev	Var	Description	Material Description	Quantity	Unit	Weight (KG)
7936	04-114	001	15	12	4-04-114-U8434	00	00	END PLATE		1	NO	10.100
7936	04-114	001	21	01	4-04-114-U8434	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	1	NO	9.300
7936	04-114	001	21	02	4-04-114-U8434	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	1	NO	0.800
7936	04-114	001	15	13	4-04-114-U8435	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	1	NO	0.550
7936	04-114	001	15	14	4-04-114-U8436	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	1	NO	0.600
7936	04-114	001	15	15	3-04-114-U8449	00	00	PANEL SHEET		1	NO	24.480
7936	04-114	001	22	01	3-04-114-U8449	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	19.700
7936	04-114	001	22	02	3-04-114-U8449	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.660
7936	04-114	001	22	03	3-04-114-U8449	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	4.120
7936	04-114	001	15	16	3-04-114-U8450	00	00	PANEL SHEET		3	NO	70.320
7936	04-114	001	23	01	3-04-114-U8450	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	3	NO	56.520
7936	04-114	001	23	02	3-04-114-U8450	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	6	NO	1.980
7936	04-114	001	23	03	3-04-114-U8450	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	6	NO	11.820
7936	04-114	001	15	17	3-04-114-U8451	00	00	PANEL SHEET		1	NO	15.552
7936	04-114	001	24	01	3-04-114-U8451	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	12.240
7936	04-114	001	24	02	3-04-114-U8451	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.672
7936	04-114	001	24	03	3-04-114-U8451	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	2.640
7936	04-114	001	15	18	3-04-114-U8452	00	00	BENT PANEL		1	NO	24.478
7936	04-114	001	25	01	3-04-114-U8452	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	23.600
7936	04-114	001	25	02	3-04-114-U8452	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.720
7936	04-114	001	25	03	3-04-114-U8452	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.158
7936	04-114	001	15	19	3-04-114-U8453	00	00	BENT PANEL		3	NO	70.260
7936	04-114	001	26	01	3-04-114-U8453	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	3	NO	67.680
7936	04-114	001	26	02	3-04-114-U8453	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	6	NO	2.160
7936	04-114	001	26	03	3-04-114-U8453	00	00	PLATE 5THK.	PLATE 5.00 MM-IS2062E250A(Fe410W)	6	NO	0.420
7936	04-114	001	15	20	3-04-114-U8454	00	00	BENT PANEL		1	NO	16.080
7936	04-114	001	27	01	3-04-114-U8454	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	15.220
7936	04-114	001	27	02	3-04-114-U8454	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.720
7936	04-114	001	27	03	3-04-114-U8454	00	00	PLATE 5.00 MM	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.140
7936	04-114	001	15	21	3-04-114-U8455	00	00	BENT PANEL		1	NO	17.130
7936	04-114	001	28	01	3-04-114-U8455	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	16.330
7936	04-114	001	28	02	3-04-114-U8455	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.800
7936	04-114	001	15	22	3-04-114-U8456	00	00	BENT PANEL		1	NO	20.150
7936	04-114	001	29	01	3-04-114-U8456	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	19.350
7936	04-114	001	29	02	3-04-114-U8456	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.800
7936	04-114	001	15	23	3-04-114-U8457	00	00	BENT PANEL		1	NO	20.150
7936	04-114	001	30	01	3-04-114-U8457	00	00	BENT PANEL	SHEET 3.15mm-IS1079 D	1	NO	19.350
7936	04-114	001	30	02	3-04-114-U8457	00	00	BENT PANEL	SHEET 3.15mm-IS1079 D	2	NO	0.800
7936	04-114	001	15	24	3-04-114-U8458	00	00	BENT PANEL		1	NO	9.518

SO No.	PGMA	DU No.	BOM No	Item No.	Drawing Number	Rev	Var	Description	Material Description	Quantity	Unit	Weight (KG)
7936	04-114	001	31	01	3-04-114-U8458	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	8.694
7936	04-114	001	31	02	3-04-114-U8458	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.824
7936	04-114	001	15	25	3-04-114-U8459	00	00	BENT PANEL		1	NO	10.920
7936	04-114	001	32	01	3-04-114-U8459	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	10.460
7936	04-114	001	32	02	3-04-114-U8459	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.460
7936	04-114	001	15	26	3-04-114-U8460	00	00	BENT PANEL		2	NO	28.044
7936	04-114	001	33	01	3-04-114-U8460	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	27.120
7936	04-114	001	33	02	3-04-114-U8460	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	4	NO	0.924
7936	04-114	001	15	27	3-04-114-U8461	00	00	BENT PANEL		1	NO	6.460
7936	04-114	001	34	01	3-04-114-U8461	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	6.000
7936	04-114	001	34	02	3-04-114-U8461	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	2	NO	0.460
7936	04-114	001	15	28	4-04-114-U8437	00	00	PIPE DIA 88.9 X 5.49	PIPE DIA 88.9 X 5.49 SA106GRB	1	NO	4.000
7936	04-114	001	15	29	3-04-114-U8462	00	00	WELDMENT		1	NO	110.034
7936	04-114	001	35	01	3-04-114-U8462	00	00	PIPE DIA 88.9 X 5.49	PIPE DIA 88.9 X 5.49 SA106GRB	1	NO	110.000
7936	04-114	001	35	02	3-04-114-U8462	00	00	END PLATE 5 MM	PLATE 5.00 MM-IS2062E250A(Fe410W)	2	NO	0.034
7936	04-114	001	15	30	4-04-114-U8438	00	00	ANGLE 50 X 50 X 6	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	1	NO	0.027
7936	04-114	001	15	31	4-04-114-U8439	00	00	DIA 16MM	DIA 16mm-IS2062FE410GRA SAE1010/SAE1018	1	NO	0.550
7936	04-114	001	15	32	1-04-114-U8073	00	00	NUT -M12 -CL4-IS1363P3	NUT -M12 -CL4-IS1363P3	285	NO	5.700
7936	04-114	001	15	33	1-04-114-U8073	00	00	PUN WASHER-M12 -IS2016-A	PUN WASHER-M12 -IS2016-A	285	NO	2.850
7936	04-114	001	15	34	3-04-114-U8463	00	00	TUBE 44.5X5	TUBE 44.5X5 SA210GRA1	1	NO	21.707
7936	04-114	001	15	35	4-04-114-U8440	00	00	ANGLE 50 X 50 X 6	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	1	NO	0.027
7936	04-114	001	15	36	3-04-114-U8464	00	00	TUBE OD 38.1 X 4.5	TUBE OD 38.1 X 4.5 -SA210GRA1(5%)	1	NO	17.626
7936	04-114	001	15	37	4-04-114-U8441	00	00	ANGLE 50 X 50 X 6	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	1	NO	0.027
7936	04-114	001	15	38	4-04-114-U8442	00	00	DIA 8 MM	DIA 8 MM - IS2062GRA SAE1010/SAE1018	5	NO	0.350
7936	04-114	001	15	39	4-04-114-U8443	00	00	DIA 8 MM	DIA 8 MM - IS2062GRA SAE1010/SAE1018	5	NO	0.300
7936	04-114	001	15	40	1-04-114-U8073	00	00	TAPER WASHER 9.5 IS:5372 FOR BOLT M8	TAPER WASHER 9.5 IS:5372 for Bolt M8	20	NO	0.260
7936	04-114	001	15	41	1-04-114-U8073	00	00	NUT -M 6 -CL4-IS1363P3	NUT -M 6 -CL4-IS1363P3	20	NO	0.060
7936	04-114	001	15	42	1-04-114-U8073	00	00	HEX HD SCRU-M12X40 -4.6-IS1363P2	HEX HD SCRU-M12x40 -4.6-IS1363P2	265	NO	13.250
7936	04-114	001	15	43	3-04-114-U8465	00	00	WELDMENT		1	NO	30.990
7936	04-114	001	36	01	3-04-114-U8465	00	00	PIPE OD 33.4 X 4.55	PIPE OD 33.4 x 4.55 - SA106GRB	1	NO	30.100
7936	04-114	001	36	02	3-04-114-U8465	00	00	PIPE OD 33.4 X 4.55	PIPE OD 33.4 x 4.55 - SA106GRB	1	NO	0.810
7936	04-114	001	36	04	3-04-114-U8465	00	00	PLATE 5.00 MM	PLATE 5.00 MM-IS2062E250A(Fe410W)	1	NO	0.080
8062	04-116	*	01		9-04-114-80015	01	00	DRUM INTERNALS FOR HP UPPER DRUM		1	NO	1424.290
8062	04-116	001	03		3-04-114-80118	00	00	PANEL		4	NO	79.528
8062	04-116	001	03	01	3-04-114-80118	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	4	NO	73.928
8062	04-116	001	03	02	6101-3001-70	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	8	NO	5.600
8062	04-116	002	04		3-04-114-80119	00	00	PANEL		4	NO	41.256
8062	04-116	002	04	01	3-04-114-80119	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	4	NO	38.600
8062	04-116	002	04	02	6101-3001-74	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	8	NO	2.656

SO No.	PGMA	DU No.	BOM No	Item No.	Drawing Number	Rev	Var	Description	Material Description	Quantity	Unit	Weight (KG)
8062	04-116	003	05		3-04-114-80120	00	00	PANEL		4	NO	41.536
8062	04-116	003	05	01	3-04-114-80120	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	4	NO	38.864
8062	04-116	003	05	02	6101-3001-74	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	8	NO	2.672
8062	04-116	004	06		3-04-114-80121	00	00	PANEL		4	NO	85.272
8062	04-116	004	06	01	3-04-114-80121	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	4	NO	79.672
8062	04-116	004	06	02	6101-3001-71	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	8	NO	5.600
8062	04-116	005	07		3-04-114-80122	00	00	PANEL		4	NO	16.852
8062	04-116	005	07	01	3-04-114-80122	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	4	NO	16.252
8062	04-116	005	07	02	6101-3001-72	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	8	NO	0.600
8062	04-116	006	02	06	3-04-114-80123	00	00	END COVER	SHEET 3.15mm-IS1079 D	2	NO	24.800
8062	04-116	007	02	07	6101-3001-84	00	00	BENT PLATE	PLATE 6mm-IS2062E250A(Fe410W)	8	NO	3.200
8062	04-116	008	02	08	6101-3001-85	00	00	BENT PLATE	PLATE 6mm-IS2062E250A(Fe410W)	16	NO	8.000
8062	04-116	009	02	09	6101-3001-86	00	00	BENT PLATE	PLATE 6mm-IS2062E250A(Fe410W)	8	NO	3.200
8062	04-116	010	02	10	4122212030	00	00	HEX. SCREW M12X30	HEX HD SCR M12x30 -4.6-IS1363P2	200	NO	8.200
8062	04-116	011	02	11	4130412000	00	00	HEX NUT M12	HEX NUT M12--6 IS:1364(P-3)	200	NO	13.000
8062	04-116	012	02	12	4140812000	00	00	WASHER M12	PUN WASHER-M12 -IS2016-A	400	NO	2.000
8062	04-116	013	08		2-03-000-00008	00	01	PRIMARY SCREEN BOX ASSY.(FOR IND. BOIL		23	NO	250.424
8062	04-116	013	08	01	2-03-000-00007	00	00	WIREMESH TYPE A	WIREMESH typeA drg:2:030:000:00007/0 V01	46	NO	103.500
8062	04-116	013	08	02	2-03-000-00007	00	00	WIREMESH TYPE B	WIREMESH type B drg:2.03.000.00007/0V06	23	NO	15.824
8062	04-116	013	08	03	2-03-000-00007	00	00	WIREMESH TYPE C	WIREMESH type C drg:2.03.000.00007/0V11	46	NO	52.900
8062	04-116	013	08	04	2-03-000-00008	00	01	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	46	NO	46.000
8062	04-116	013	08	05	2-03-000-00008	00	01	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	46	NO	32.200
8062	04-116	014	09		2-03-000-00009	00	01	SECONDARY SCREEN BOX ASSY.FOR IND. BO		22	NO	459.448
8062	04-116	014	09	01	2-03-000-00007	00	00	WIREMESH TYPE A	WIREMESH typeA drg:2:030:000:00007/0 V02	44	NO	109.120
8062	04-116	014	09	02	2-03-000-00007	00	00	WIREMESH TYPE B	WIREMESH type B drg:2.03.000.00007/0V07	88	NO	66.528
8062	04-116	014	09	03	2-03-000-00007	00	00	WIREMESH TYPE C	WIREMESH type C drg:2.03.000.00007/0V12	110	NO	138.600
8062	04-116	014	09	04	2-03-000-00009	00	01	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	44	NO	92.400
8062	04-116	014	09	05	2-03-000-00009	00	01	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	44	NO	52.800
8062	04-116	015	01	04	4-04-114-80158	00	00	FEED TUBE	TUBE D 63.5 X 5 - SA192	1	NO	4.696
8062	04-116	016	10		3-04-114-80113	00	00	FEED HEADER		1	NO	57.298
8062	04-116	016	10	01	3-04-114-80113	00	00	TUBE D 63.5 X 5	TUBE D 63.5 X 5 - SA192	1	NO	57.150
8062	04-116	016	10	02	3-04-114-80113	00	00	SHEET 4.00 MM	SHEET 4.00 MM - IS1079 - D	2	NO	0.148
8062	04-116	017	11		2-04-114-80032	00	00	BLOW DOWN HEADER		1	NO	30.303
8062	04-116	017	11	01	2-04-114-80032	00	00	PIPE OD 33.4 X 3.38	PIPE OD 33.4 x 3.38 - SA106GRB	1	NO	18.750
8062	04-116	017	11	02	2-04-114-80032	00	00	PIPE OD 33.4 X 3.38	PIPE OD 33.4 x 3.38 - SA106GRB	1	NO	11.125
8062	04-116	017	11	03	2-04-114-80032	00	00	PIPE OD 33.4 X 3.38	PIPE OD 33.4 x 3.38 - SA106GRB	1	NO	0.390
8062	04-116	017	11	04	2-04-114-80032	00	00	SHEET 4.00 MM	SHEET 4.00 MM - IS1079 - D	2	NO	0.038
8062	04-116	018	12		6101-3003-74	00	00	END SHEET		1	NO	5.594
8062	04-116	018	12	01	6101-3003-74	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	4.944

SO No.	PGMA	DU No.	BOM No	Item No.	Drawing Number	Rev	Var	Description	Material Description	Quantity	Unit	Weight (KG)
8062	04-116	018	12	02	6101-3003-74	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	0.650
8062	04-116	019	01	09	4-04-114-80134	00	00	U ROD	DIA 16mm-IS2062FE410GRA SAE1010/SAE1018	15	NO	4.050
8062	04-116	020	01	10	4-04-114-80160	00	00	U ROD	DIA 16mm-IS2062FE410GRA SAE1010/SAE1018	8	NO	3.392
8062	04-116	021	01	11	4-04-114-80159	00	00	ANGLE	ISA75x75x6-IS2062E250A(Fe410W)	8	NO	8.704
8062	04-116	022	01	12	4-04-114-80125	00	00	ANGLE	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	6	NO	6.342
8062	04-116	023	01	13	6101-3003-57	00	00	ANGLE	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	2	NO	5.000
8062	04-116	024	01	14	6101-3003-56	00	00	ANGLE	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	2	NO	4.600
8062	04-116	025	14		6101-3003-75	00	00	END SHEET		1	NO	5.538
8062	04-116	025	14	01	6101-3003-75	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	4.944
8062	04-116	025	14	02	6101-3003-75	00	00	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	0.594
8062	04-116	026	01	16	2-04-114-80051	00	01	END COVER		1	NO	8.965
8062	04-116	026	15	01	2-04-114-80051	00	01	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	8.276
8062	04-116	026	15	02	2-04-114-80051	00	01	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	0.497
8062	04-116	026	15	03	2-04-114-80051	00	01	SHEET 3.15MM	SHEET 3.15mm-IS1079 D	1	NO	0.192
8062	04-116	027	01	17	6101-3003-62	00	00	TUBE D44.5	TUBE 44.5X5 SA210GRA1	4	NO	10.780
8062	04-116	028	16		3-04-114-80107	00	00	BENT PLATE		1	NO	10.528
8062	04-116	028	16	01	3-04-114-80107	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	1	NO	10.228
8062	04-116	028	16	02	6101-3003-45	00	00	STIFFENER PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	2	NO	0.300
8062	04-116	029	17		3-04-114-80108	00	00	BENT PLATE		1	NO	10.528
8062	04-116	029	17	01	3-04-114-80108	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	1	NO	10.228
8062	04-116	029	17	02	6101-3003-45	00	00	STIFFENER PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	2	NO	0.300
8062	04-116	030	18		3-04-114-80109	00	00	BENT PLATE		2	NO	22.738
8062	04-116	030	18	01	3-04-114-80109	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	2	NO	22.138
8062	04-116	030	18	02	6101-3003-45	00	00	STIFFENER PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	4	NO	0.600
8062	04-116	031	01	21	3-04-114-80114	00	00	ANGLE	ANGLE 50 x 50 x 6 -IS2062E250A(Fe410W)	1	NO	30.780
8062	04-116	032	19		3-04-114-80110	00	00	BENT PLATE		1	NO	20.215
8062	04-116	032	19	01	3-04-114-80110	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	1	NO	19.257
8062	04-116	032	19	02	6101-3003-17	00	00	STIFFENER PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	2	NO	0.958
8062	04-116	033	20		3-04-114-80111	00	00	BENT PLATE		1	NO	20.257
8062	04-116	033	20	01	3-04-114-80111	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	1	NO	19.257
8062	04-116	033	20	02	3-04-114-80111	00	00	STIFFENER PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	2	NO	1.000
8062	04-116	034	21		3-04-114-80112	00	00	BENT PLATE		2	NO	43.598
8062	04-116	034	21	01	3-04-114-80112	00	00	BENT PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	2	NO	41.682
8062	04-116	034	21	02	6101-3003-17	00	00	PLATE 6MM	PLATE 6mm-IS2062E250A(Fe410W)	4	NO	1.916
8062	04-116	035	22		2-04-114-80033	00	00	CHEMICAL DOSING HEADER		1	NO	30.303
8062	04-116	035	22	01	2-04-114-80033	00	00	TUBE OD 33.4 X 3.38	PIPE OD 33.4 x 3.38 - SA106GRB	1	NO	18.750
8062	04-116	035	22	02	2-04-114-80033	00	00	TUBE OD 33.4 X 3.38	PIPE OD 33.4 x 3.38 - SA106GRB	1	NO	11.125
8062	04-116	035	22	03	2-04-114-80033	00	00	TUBE OD 33.4 X 3.38	PIPE OD 33.4 x 3.38 - SA106GRB	1	NO	0.390
8062	04-116	035	22	04	2-04-114-80033	00	00	SHEET 4.00 MM	SHEET 4.00 MM - IS1079 - D	2	NO	0.038

SO No.	PGMA	DU No.	BOM No	Item No.	Drawing Number	Rev	Var	Description	Material Description	Quantity	Unit	Weight (KG)
8062	04-116	036	01	26	4-04-114-80009	00	00	ANGLE	ISA75x75x6-IS2062E250A(Fe410W)	4	NO	6.400
8062	04-116	037	01	27	4122212030	00	00	SCREW M12X30	HEX HD SCRU-M12x30 -4.6-IS1363P2	400	NO	16.400
8062	04-116	038	01	28	4130412000	00	00	NUT	NUT -M12 -CL4-IS1363P3	400	NO	6.800
8062	04-116	039	01	29	4140812000	00	00	PUNCHED WASHER M12	PUN WASHER-M12 -IS2016-A	800	NO	4.800

GENERAL TERMS & CONDITIONS**1. TECHNICAL DELIVERY CONDITIONS:**

The work should conform to the technical data given in our drawings, GMS, Shipping List Specifications, QAP, WPS etc.

2. PARTY'S SCOPE:

The scope of the party shall be as follows: -

- a) All welding equipments, baking oven, tools, jigs and fixtures, measuring instruments duly calibrated, handling facilities, testing facilities etc.
- b) All materials other than those mentioned under "Free Issue Materials", which are required for completion of the work.
- c) All consumables such as electrodes, gases, grinding wheels etc.

Note: Electrodes of specification mentioned in the drawings / WPS and of BHEL approved brands only shall be used and MTCs of the same shall be submitted to BHEL for verification before use.

3. REVISION OF DRAWINGS:

There may be minor changes in the drawings during execution. In such a case, party should accommodate the same without any extra claim.

4. WELDING QUALIFICATION: Qualification of required number of Welders is party's responsibility at their cost.**5. X-RAY:**

All welding shall be of X-ray quality where specified on drawings. Inspection would specify the quantum of X-ray based on drawings / code requirement. Party should strictly follow the WPS and QAP issued by BHEL during welding. Getting the welds radiographed and getting them cleared by inspection is the responsibility of the party.

6. RECTIFICATIONS / REJECTIONS:

Any rectification due to defective work, if required, shall be done by the party free of charge with a suitable technology approved before hand by BHEL in writing. The cost of material, if any used for rectification work / rejection work, will be estimated by BHEL and the same shall be debited to party's account. In case any rectification / rework is to be carried out due to defective material supplied by BHEL, the replacement material and consumables will be supplied by BHEL free of Cost.

7. SECURITY DEPOSIT:

- a) Vendors shall have to submit a Bank Guarantee for **10%** of the order value in case of **HPVP ADM / Lovagarden site** (or) **25%** of the material cost in case of Vendor works towards Security Deposit and safe custody of free issue materials within 15 days from the date of intimation by Outsourcing dept. The BG shall be valid for the contract period with a claim period of 12 months. This Bank Guarantee shall be released to the contractor after completion of work and on acceptance of the same by BHEL / Owner. Bidder agrees to submit performance security required for execution of the contract within the time period mentioned above. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT/contract, from the bills along with due interest.
- b) **MODE OF DEPOSIT:** Security Deposit may be furnished in the following forms:
 - i) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL.
 - ii) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
 - iii) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).
 - iv) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL).
 - v) Insurance Surety Bond.

(Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith).

8. PERFORMANCE BANK GUARANTEE:

Vendors shall have to submit Performance Bank Guarantee (claim period of 12 months) for 10% of the order value covering for the defects liability period. If PBG is not submitted, 10% of the order value shall be deducted towards PBG from the final bill and shall be refundable after performance guarantee period, if no defects are found during this period.

9. RAW MATERIALS ISSUE:

Raw materials shall be issued with appropriate processing allowance and invisible wastage over the theoretical requirement of raw materials (**Plates, Sheets, Sections and Pipes**).

10. TRANSFER / RETURN OF LEFT-OVER MATERIALS:

Party should maintain proper records for receipt & use of all free issue materials. The left-over materials & scrap as per the material accounting statement shall be returned to HPVP stores along with finished job. Material Transfer Vouchers (MTV) from one order to another or from one vendor to another and Material Return Vouchers should be submitted immediately after transfer / return. The material reconciliation statement shall be submitted by the contractor after verification and certification by BHEL along with the final bill **within 30 days from the date of completion of work**. Otherwise, recovery for the balance materials shall be made from any of their pending bills without further intimation.

11. MATERIAL RECONCILIATION:

Orders issued to the vendors have to be completed in all respects including Material Accounting within a maximum of **180 days** from the **date of issue of material** from BHEL - HPVP stores.

Maximum of 0.5 % on the requirement of materials (**Plates, Sections and Pipes**) is admitted towards **process allowance and invisible wastage**.

Scrap quantity is permissible up to a **maximum of 1% on Structural (Beams, Channels, Angles, Rods, Pipes etc.), 2% on Sheets, 3% for Plates** on the theoretical requirement of materials.

If wastage and scrap is beyond the above limits, it should be fully justified with cutting diagrams etc. which are to be approved in advance by BHEL. **Otherwise, the cost of raw materials beyond approved limits will be recovered from the contractor as per BHEL recovery rates including applicable taxes & duties.**

Material reconciliation including return of balance materials, off-cuts is to be completed within 20 days from the date of completion of the order. The material reconciliation statement shall be submitted by the contractor after verification and certification by BHEL-HPVP along with the final bill **within 30 days from the date of completion of work**. Otherwise, recovery for the balance materials shall be made from any of their pending bills without further intimation,

Repeated occurrence of inordinate delays in returning and settling the material accounting will entail BHEL the right to terminate the contract forthwith or impose a temporary suspension on further loading at the discretion of BHEL.

12. SCRAP & OFF-CUT NORMS:

Sl. No.	Description	Scrap Size (in mm)	Off-Cut (in MM)
1.	CS/AS Sheets & Plates	Below 500 × 250	500 × 250 & above
2.	Rolled sections Rod, angles etc. (other than -tubes, pipes)	Below 1000	1000 & above
3.	Tubes & Pipes	Below 500	500 & above
4.	Universal column	Below 1000	1000 & Above
5.	SS Sheets & Plates	Below 500 × 250	500 × 250 & above
6.	SS Structural, Rods, Tubes, Pipes	Below 250	250 & above
7.	Non – ferrous: sheets & plates, rods & tubes	Below 500 × 250 (S & PL), Below 250 (Rods & Tubes)	500 × 250 & above, 250 & above
8.	Big size Scrap	(2500 & above) × (150 to 249)	-

13. INSPECTION:

Party shall contact our Quality Control Dept. for stages of inspection before commencement of job and should strictly follow the stages of inspection as per QAP.

14. WORKMANSHIP GUARANTEE:

The vendors should give workmanship guarantee for fabricated items for a period of 18 months from the date of last delivery of the order. Any defects due to incomplete work, faulty workmanship found in the fabricated items after delivery during the defects liability period shall be rectified / replaced by the vendor free of cost. Otherwise, the expenditure incurred towards the same will be recovered from the pending bills of vendors.

15. WORK PROGRESS:

The fabricator shall furnish a weekly report on the progress of work along with the status of availability of free issue materials and requirement of further materials, if any.

Outsourcing dept. personnel will visit vendor's works from time to time to assess and review the work progress. Free access shall be provided to BHEL or its inspection agency at all reasonable times of the day / night.

In case the progress is not satisfactory or supplies are delayed abnormally beyond the contractual delivery date, BHEL-HPVP, Visakhapatnam reserves the right to cancel the order in part or full or get the balance job in as is where is condition completed elsewhere by another agency at the risk and cost of Fabricator. The value of the work carried out by the party will be assessed by BHEL and the same shall be final. No compensation will be given to the fabricator in case of cancellation of order or diversion of balance job even if the jobs have been processed partly.

16. DELIVERY:

Finished items should be handed over to BHEL-HPVP on party's delivery challans along with Job completion certificate / Final Inspection Report from inspection agency / HPVP-QC department.

17. PENALTY:

Penalty calculations will be done on DU wise (Dispatchable Unit) delivery. If delivery exceeds the stipulated delivery schedule, penalty @ 1/2 % of the value of each DU per week (or) part thereof subject to a maximum of 10% of the value of each DU will be levied. However, time taken for the following will not be considered as delay on the part of the Sub-Contractor.

- 1) Intermediate operations, if any, carried out by BHEL.
- 2) Waiting time for BHEL / Third party Inspection beyond a normal time of 3 days.

18. PAYMENT TERMS:

Payment shall be made against RA Bills within 45 days for MSE (Micro & Small Enterprise), 60 days for Medium Enterprise and 90 days for non-MSEs from the date of submission of Bill.

90% payment will be made after handing over of the finished equipments along with all inspection documents to HPVP shops / Logistics dept. / ADM site / Lova Garden site, duly inspected & cleared by Inspection authority. Balance 10% payment shall be made along with the Final Bill against completion of total order in all respects including documentation.

Vendors shall have to submit the bills in the formats specified by HPVP-Outsourcing and the bills submitted in the specified format along with necessary supporting documents are only admitted for processing. The following documents shall be submitted along with the Final Bill: -

1. No Claim Certificate from the contractor
2. No Dues Certificate from BHEL
3. Work Completion Certificate from BHEL
4. Material Reconciliation Statement submitted by the Contractor and certified by concerned authority of BHEL (if applicable)
5. Workmanship Guarantee certificate from the contractor

19. SECRECY:

All the documents of BHEL inclusive of Drawings, GMS and Standards made available to the fabricator should be kept in strict confidence and under no circumstance be made available to others or allow others to make use of them. Such documents shall be returned to BHEL on demand after completion of the job. This secrecy clause is binding on the employees of the fabricators also. Violation of the same may lead to suspension of business with the vendor and necessary legal action.

20. SUB-LETTING:

In general, sub-letting of jobs will not be permitted. But in special circumstances, this may be allowed. In such case, the party should obtain written approval from BHEL-HPVP, Visakhapatnam before sub-letting.

21. FACTORY RULES AND REGULATIONS:

Party shall abide by all the rules and statutory regulations in force from time to time as per factories act. It shall be party's responsibility to ensure the safety of their workmen and fulfilling the ESI, PF and other relevant statutory regulations.

22. SAFETY:

- a) Contractor shall adhere to safe construction practices, guard against hazardous & unsafe working conditions and shall comply with the safety rules of BHEL and local authorities. He shall maintain First Aid facilities for all his employees and labour. Contractor's responsibility includes supply of welder kit, all safety items such as safety belts, white and colour glasses, goggles, safety helmets, safety shoes etc.
- b) Contractor and his employees shall follow all fire & safety, security regulations of BHEL.

23. HOUSE KEEPING:

During execution of work, the contractor at all times keep the working place and storage area clean and free from accumulation of waste materials, rubbish etc.,

24. ACCIDENT / DAMAGE / CONDUCT ETC.:

Contractor will be held responsible for any disorderly conduct / misconduct, indiscipline, theft, smoking etc., on the part of his men. He will ensure summarily eviction of such men from his premises failing which BHEL would remove them from the factory on his responsibility. Any damage to and or loss of equipment, machinery, building etc., to BHEL or BHEL employees, visitors or other contractors resulting from his own or any of his men's negligence shall be liable to be made good by him. Contractor shall be solely responsible for any accident in which you or your men or your equipment may be involved during the execution of contract on account of any reason what so ever.

25. TERMINATION OF CONTRACT:

In the event of any failure on the part of the contractor, BHEL reserves the right to terminate the contract by giving a notice of 2 weeks for any of the following lapses and contractual violations: -

- a) Failure to make labour payments in time as per the rules
- b) Failure to progress the job according to the agreed schedule
- c) Failure to mobilize adequate man power, tools & tackles and consumables in time
- d) Failure to adhere to Quality Standards of BHEL
- e) Refused to co-operate with other agencies working in the same area
- f) Failure to resolve labour disputes like strikes etc., within 7 days of occurrence
- g) Failure to comply with statutory regulations applicable at BHEL

BHEL shall also be free to intervene and take necessary remedial measures. All costs incurred with interest and overheads shall be recovered from contractor by such foreclosing or off-loading any part of the contract work.

26. CONFLICT OF INTEREST AMONG BIDDERS / AGENTS:

A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. ***The bidder found to have a conflict of interest shall be disqualified.*** A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

- a) they have controlling partner (s) in common; **or**
- b) they receive or have received any direct or indirect subsidy / financial stake from any of them; **or**
- c) they have the same legal representative / agent for purposes of this bid; **or**
- d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; **or**
- e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; **or**
- f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent / dealer. There can be only one bid from the following:
 - 1. The principal manufacturer directly or through one Indian agent on his behalf, and
 - 2. Indian/foreign agent on behalf of only one principal,
- g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, **or**
- h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sisters' common business/ management units in same/ similar line of business"

27. OVER RUN COMPENSATION (ORC) / IDLE CHARGES:

The contractor shall not be entitled to claim and the company shall not be liable to pay any amount on account of overrun compensation and idle charges, the overrun/ idling may be for whatsoever reasons.

28. DISPUTES:

Head of BHEL- HPVP Unit will be the final authority for any disputes arising out of this contract. The disputes / arbitration / settlement of contractual or legal issues shall be under the Jurisdiction of Visakhapatnam Court.

- 29.** For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of Contract / PO / WO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and / or local content in respect of this procurement, same shall be applicable.

- 30.** The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

31. Order Acceptance:

If the order acceptance is not received within 03 days from the date of release of Sub-contract order, it shall be assumed that the same has been accepted by you thereof.

Signature of the bidder with Stamp

Acceptance to Tender Terms & Conditions

I / We hereby confirm that the Tender documents, Drawings, Quality documents etc. have been studied in detail and we have fully understood the scope of work.

I / We accept to all the Terms and Conditions of the Tender Enquiry without any deviations and the prices quoted are in accordance with the same.

I / We give our acceptance to participate in reverse auction for this tender.

Tender documents duly signed on all the pages by the Owner / authorized representative of the bidder are attached herewith.

Signature of the bidder with Stamp

BUSINESS RULES FOR REVERSE AUCTION (RA)

This has reference to tender no. **OS/24-25/7936&8062/DI/39/039, dated 24.03.2025**. BHEL shall finalise the Rates for **Fabrication of Upper Drum Internals against S.O. Nos. 7936 & 8062 at vendor works with free issue materials** through Reverse Auction mode. BHEL has made arrangement with an authorized Service provider (details will be shared before reverse auction) for conducting RA. Bidders should go through the instructions given below and submit acceptance of the same.

The technical & commercial terms are as per (a) BHEL Tender Enquiry No. **OS/24-25/7936&8062/DI/39/039, dated 24.03.2025**, (b) Bidders' technical & commercial bid (in case of two-part bid) and (c) subsequent correspondences between BHEL and the bidders, if any.

1. Procedure of Reverse Auctioning:

- i) Price bids of all techno-commercially qualified bidders shall be opened.
- ii) **Reverse Auction:** The 'bid decrement' will be decided by BHEL.
- iii) The lowest bidder in sealed envelope price bid shall be shown as current L1 automatically by the system and no acceptance of that price is required. System shall have the provision to indicate this bid as current L1.
- iv) Bidders by offering a minimum bid decrement or the multiples thereof can displace a standing lowest bid and become "L1" and this continues as an iterative process. However, no bidder shall be allowed to lower its bid below the current L1 by more than 5 decrements at one go.
- v) After the completion of the reverse auction, the Closing Price shall be available for further processing.
- vi) Wherever the evaluation is done on total cost basis, after Reverse Auction, prices of individual line items shall be reduced on pro-rata basis.

2. Schedule for reverse auction: The Reverse Auction schedule will be intimated to the techno-commercially qualified bidders at a later stage.

3. Auction extension time: If a bidder places a bid in the last {...} minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another {...} minutes, for the entire auction (i.e. for all the items in the auction), from the time that bid comes in. Please note that the auto-extension will take place only if a bid comes in those last {...} minutes and if that bid gets accepted as the lowest bid. If the bid does not get accepted as the lowest bid, the auto-extension will not take place even if that bid might have come in the last {...} minutes. In case, there is no bid in the last {...} minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, bidders are advised not to wait till the last minute or last few seconds to enter their bid during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc. The above process will continue till completion of Reverse Auction.

Complaints/ Grievances, if any, regarding denial of service or any related issue should be given in writing thru e-mail/ fax to M/s. {Service provider} with a copy to BHEL within 15 minutes prior to initial closing time of Reverse Auction.

4. Bid price: The Bidder has to quote the {...} Price inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, taxes, duties, freight and insurance as specified in tender document including loading (if indicated by BHEL due to deviations in technical/ commercial terms) for the Items specified. Details are as shown in Excel Sheet for calculation of total cost to BHEL (To be specified by Unit as per NIT conditions).

5. Bidding currency and unit of measurement: Bidding will be conducted in *Indian Rupees per Unit* of the material as per the specifications mentioned in the tender.

In case of foreign currency bids, exchange rate (TT selling rate of State Bank of India) as on scheduled date of tender opening (Part-I bid) shall be considered for conversion in Indian Rupees. If the relevant day happens to be a Bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.

6. **Validity of bids:** Price shall be valid for 90 days from the date of reverse auction. These shall not be subjected to any change whatsoever.
7. **Lowest bid of a bidder:** In case the bidder submits more than one bid, the lowest bid at the end of Reverse Auction will be considered as the bidder's final offer to execute the work.
8. Unique user IDs shall be used by bidders during bidding process. All bids made from the Login ID given to the bidders will be deemed to have been made by the bidders/ bidders' company.
9. **Post auction procedure:** BHEL will proceed with the Lowest Bid in the Reverse Auction for further processing.
10. Any commercial/ technical loading shall be separately intimated to respective bidders prior to RA. The excel sheet provided in this regard shall cover all these aspects. Commercial/ technical loading if any, shall be added by the respective bidder in its price during Reverse Auction.
Modalities of loading & de-loading shall be separately intimated to the bidders. The responsibility for correctness of total cost to BHEL shall lie with the bidders.
11. Reverse auction shall be conducted by BHEL (through M/s {Service Provider}), on pre-specified date, while the bidders shall be quoting from their own offices/ place of their choice. Internet connectivity shall have to be ensured by bidders themselves.

During the RA process if a bidder is not able to bid and requests for extension of time by FAX/ email/ phone then time extension of additional 15 minutes will be given by the service provider provided such requests come before 5 minutes of auction closing time. However, only one such request per bidder can be entertained.

In order to ward-off contingent situation of connectivity failure bidders are requested to make all the necessary arrangements/ alternatives whatever required so that they are able to circumvent such situation and still be able to participate in the reverse auction successfully. Failure of power or loss of connectivity at the premises of bidders during the Reverse auction cannot be the cause for not participating in the reverse auction. On account of this, the time for the auction cannot be extended and neither BHEL nor M/s. {Service provider} is responsible for such eventualities.

12. **Proxy bids:** Proxy bidding feature is a pro-bidder feature to safe guard the bidder's interest of any internet failure or to avoid last minute rush. The proxy feature allows bidders to place an automated bid in the system directly in an auction and bid without having to enter a new amount each time a competing bidder submits a new offer. The bid amount that a bidder enters is the minimum that the bidder is willing to offer. Here the software bids on behalf of the bidder. This obviates the need for the bidder participating in the bidding process until the proxy bid amount is decrementally reached by other bidders. When proxy bid amount is reached, the bidder (who has submitted the proxy bid) has an option to start participating in the bidding process.

The proxy amount is the minimum amount that the bidder is willing to offer. During the course of bidding, the bidder cannot delete or change the amount of a proxy bid.

Bids are submitted in decrements (decreasing bid amounts). The application automates proxy bidding by processing proxy bids automatically, according to the decrement that the auction originator originally established when creating the auction, submitting offers to the next bid decrement each time a competing bidder bids, regardless of the fact whether the competing bids are submitted as proxy or standard bids. However, it may please be noted that if a manual bid and proxy bid are submitted at the same instant manual bid will be recognized as the L1 at that instant.

In case of more than one proxy bid, the system shall bid till it crosses the threshold value of 'each lowest proxy bid' and thereafter allow the competition to decide the final L1 price.

Proxy bids are fed into the system directly by the respective bidders. As such this information is privy only to the respective bidder(s).

13. Bidders are advised to get fully trained and clear all their doubts such as refreshing of Screen, quantity being auctioned, tender value being auctioned etc. from M/s. {Service provider}.

14. M/s. {Service provider}, shall arrange to demonstrate/ train the bidder or bidder's nominated person(s), without any cost to bidders. M/s. {Service provider}, shall also explain the bidders, all the business rules related to the Reverse Auction. Bidders are required to submit their acceptance to the terms/ conditions/ modalities before participating in the Reverse Auction in the process compliance form as enclosed. Without this, the bidder will not be eligible to participate in the event.
15. Successful bidder shall be required to submit the final prices (L1) in prescribed format (Annexure – VI) for price breakup, quoted during the Reverse Auction, duly signed and stamped as token of acceptance without any new condition (other than those already agreed to before start of auction), after the completion of auction to M/s. {Service provider} besides BHEL within two working days of Auction without fail.
16. Any variation between the final bid value and that in the confirmatory signed price breakup document will be considered as tampering the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings (as available on www.bhel.com).
17. Bidders' bid will be taken as an offer to execute the work/ supplies the item as per enquiry no. **OS/24-25/7936&8062/DI/39/039, dated 24.03.2025**. Bids once made by the bidder, cannot be cancelled/ withdrawn and bidder shall be bound to execute the work as mentioned above at bidder's final bid price. Should bidder back out and not execute the contract as per the rates quoted, BHEL shall take action as per extant guidelines for suspension of business dealings (as available on www.bhel.com).
18. Bidders shall be able to view the following on their screen along with the necessary fields during Reverse Auction:
 - a. Leading (Running Lowest) Bid in the Auction (only total price of package)
 - b. Bid Placed by the bidder
 - c. Start Price
 - d. Decrement value
 - e. Rank of their own bid during bidding as well as at the close of auction.
19. BHEL's decision on award of contract shall be final and binding on all the Bidders.
20. BHEL reserves the right to extend, reschedule or cancel the Reverse Auction process at any time, before ordering, without assigning any reason, with intimation to bidders.
21. BHEL shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause. In such cases, the decision of BHEL shall be binding on the bidders.
22. Other terms and conditions shall be as per bidder's techno-commercial offers and other correspondences, if any, till date.
23. If there is any clash between this business document and the FAQ available, if any, in the website of M/s. {Service provider}, the terms & conditions given in this business document will supersede the information contained in the FAQs. Any changes made by BHEL/ service provider (due to unforeseen contingencies) after the first posting shall be deemed to have been accepted if the bidder continues to access the portal after that time.
24. Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines for suspension of business dealings (as available on www.bhel.com)*, shall be initiated by BHEL.

Signature of the Bidder with Stamp

GST COMPLIANCE FOR INDIGENOUS SUPPLIERS

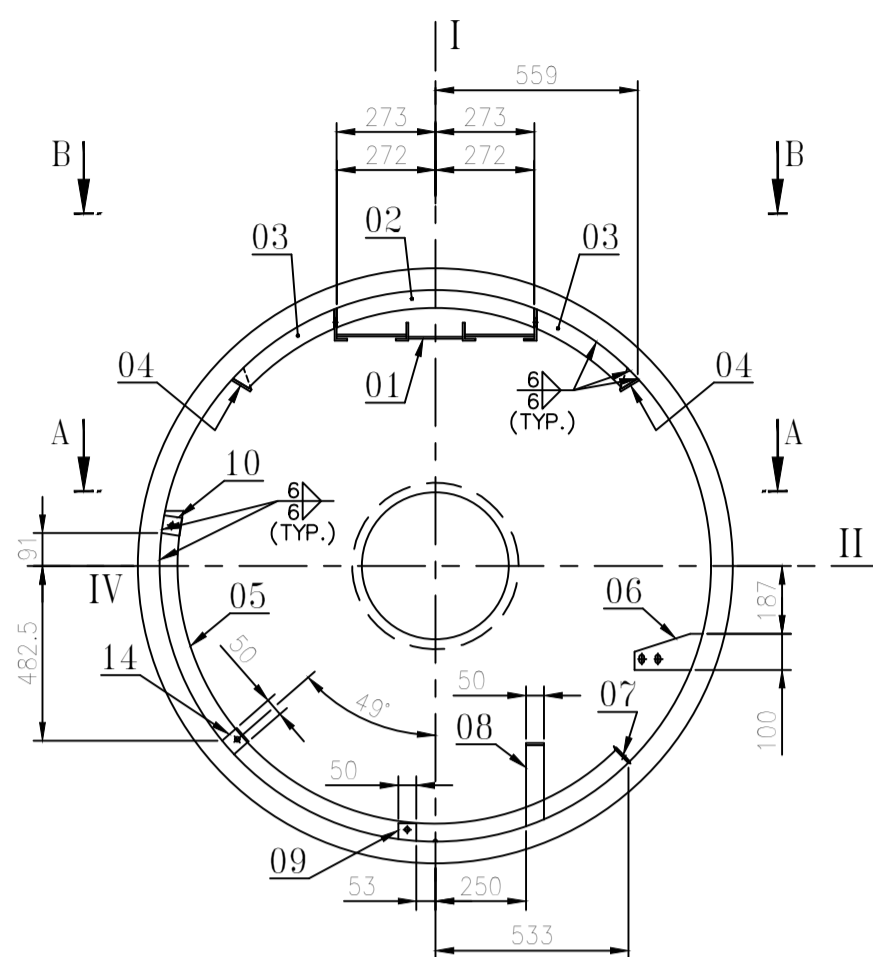
1. In Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GSTIN which should be clearly mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.
2. Supplier shall mention their GSTIN in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.
3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
4. A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.
5. All documents like Test Certificate, LR copy, Guarantee/Warrantee certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment where ever applicable. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.
6. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL.
7. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.
8. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number.
9. This is to inform that GST portion of invoice, shall be released only upon Vendor declaring such invoice in his GSTR-1 and receipt of goods and Tax invoice by BHEL and Confirmation of payment of GST thereon by vendor on GSTN portal. Alternatively, BG of appropriate value may be obtained from vendor which shall be valid At least one month after the confirmation of date of payment of GST by vendor on GSTN portal and receipt of Tax invoice and receipt of goods, whichever is later. Above is subject to receipt of goods/service and tax invoice thereof along with vendor declaring invoice in his return and paying GST within timeline prescribed for availing ITC by BHEL.
10. That in case vendor delays Declaring such invoice in his return and GST credit availed by BHEL is denied or reversed subsequently as per GST law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from vendor/contractor along with interest levied/ leviable on BHEL.

Note: The above will be followed strictly for processing vendor payments to ensure GST Compliance.

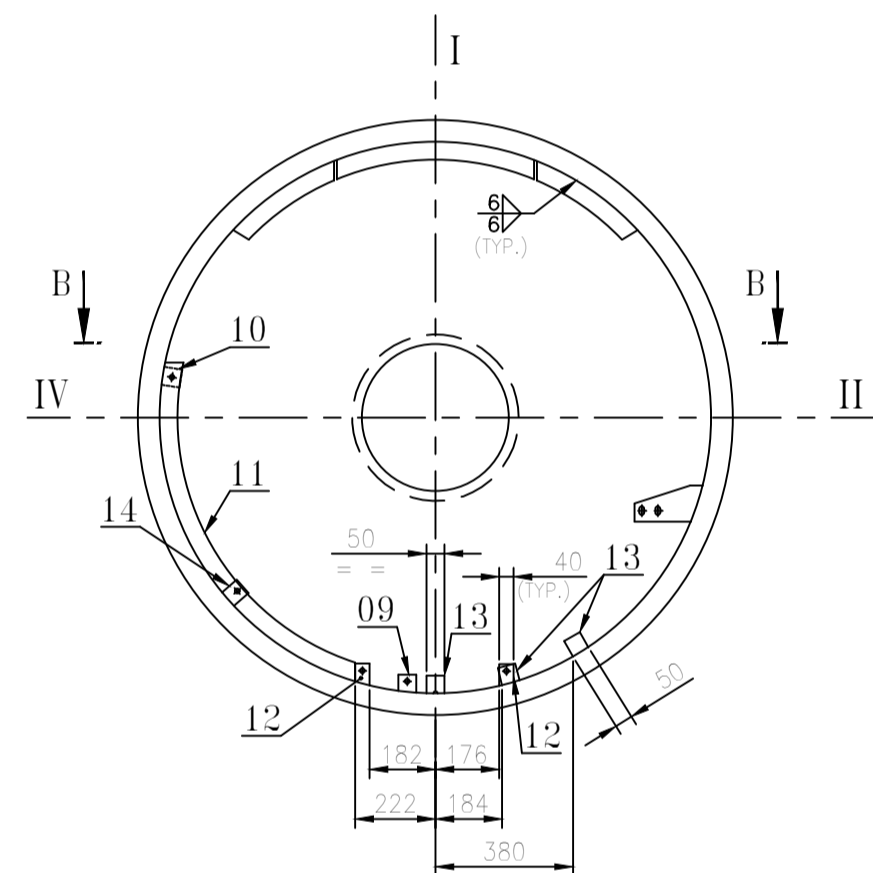
Signature of the Bidder with Stamp

DRAWING NO: 1-04-114-U8071

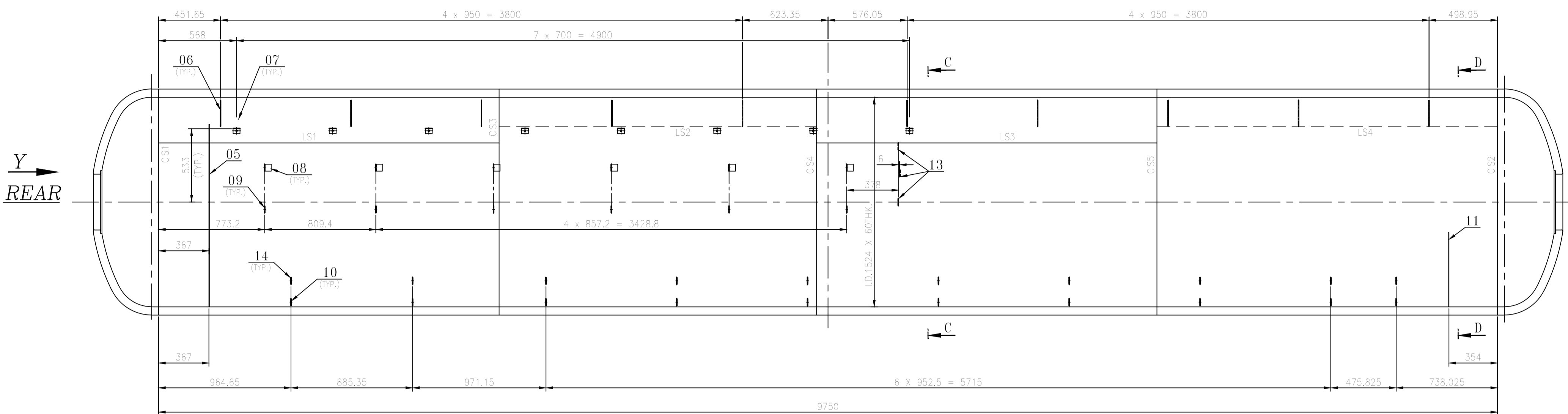
FOR TOLERANCES OF UNTOLERANCED
DIMENSIONS DURING MANUFACTURE
REFER PLANT STD. NO TP 023 0299



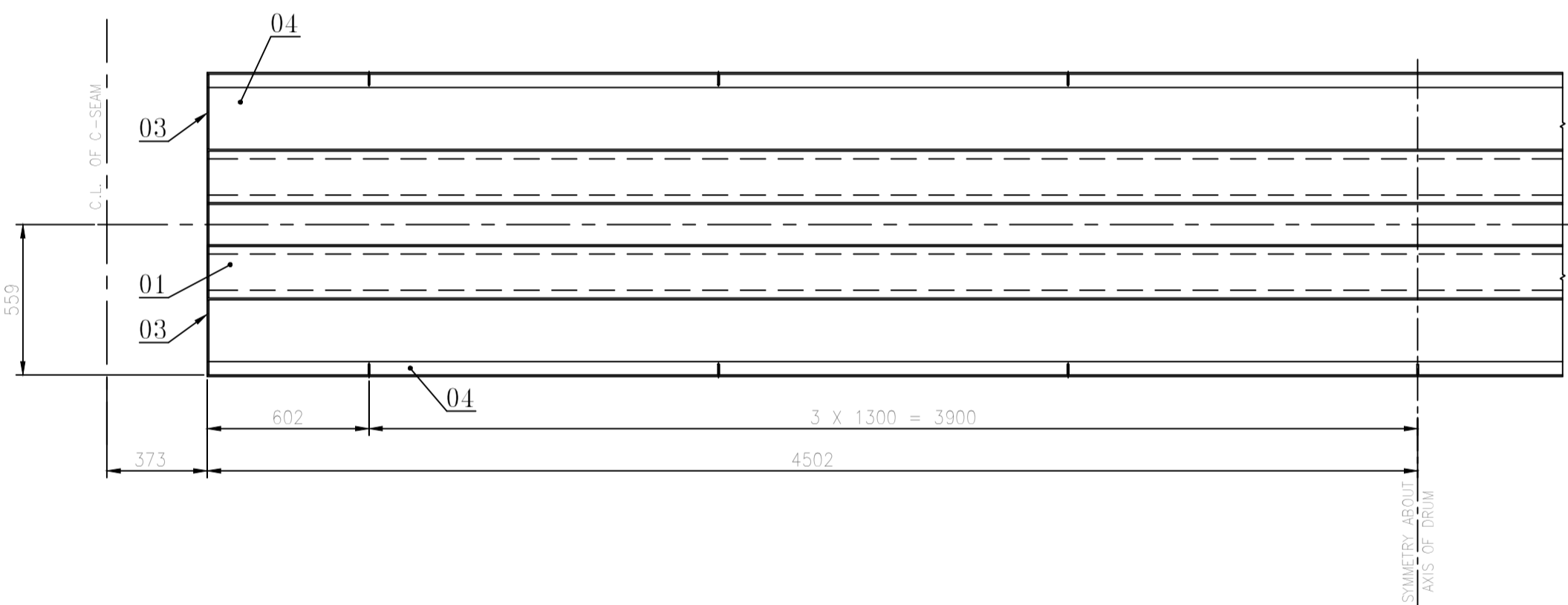
III
SECTION C-C



SECTION D-D



SECTION A-A


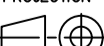


VIEW B-B

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						WELDMENT			2	
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VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO.	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	QTY
					VAR NO.	MATERIAL SPECN			QUANTITY	

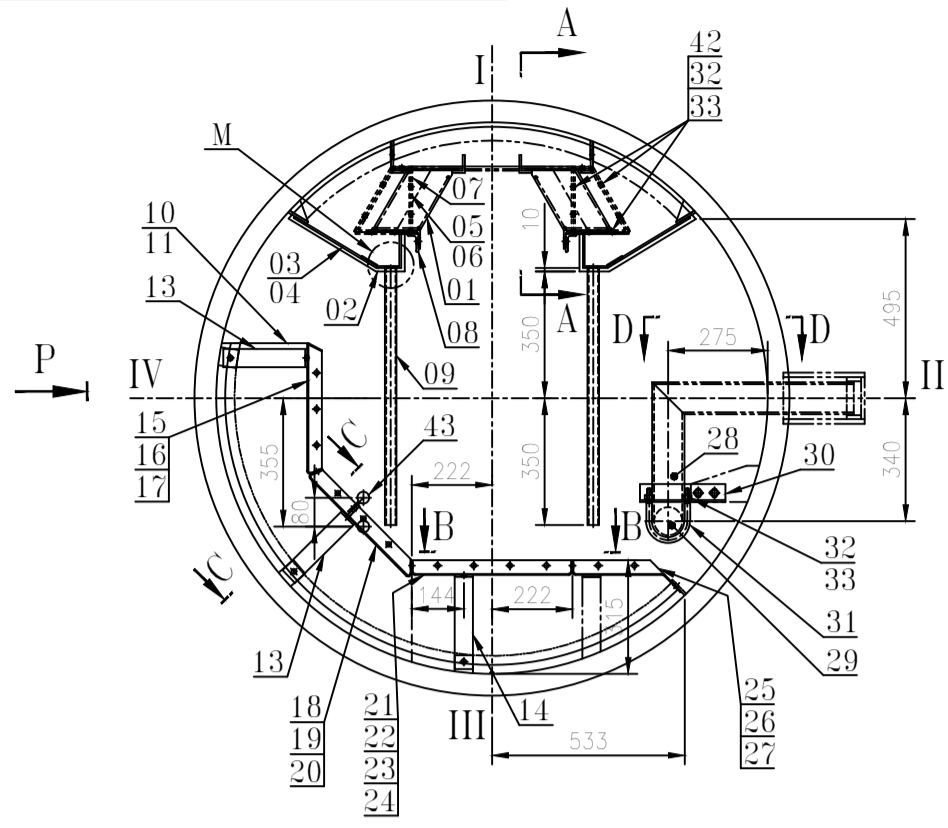
REV 01	DATE	ALTERED :
		CHD & APPD :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			PROJECT : NTPC - TALCHER S.O. NO. : 7936		
 Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISASHPATNAM - 530012			DRN G. DEMUDU	DATE 07/03/2024	
			CHD SING.NADU/ANVK.KISHORE	07/03/2024	
			APPD Y. PRASANNA KUMAR	07/03/2024	
DEPT HT ENGG CODE 320	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE 1: 20 & NTS	WEIGHT (Kg) 458.000	REF TO ASSY / OLD DWG 0-04-114-00093/01
TITLE WELDED ATTACHMENTS FOR UPPER DRUM				DRAWING NO : 1-04-114-U8071	REV 00

1-04-114-U8073
DRAWING NO.

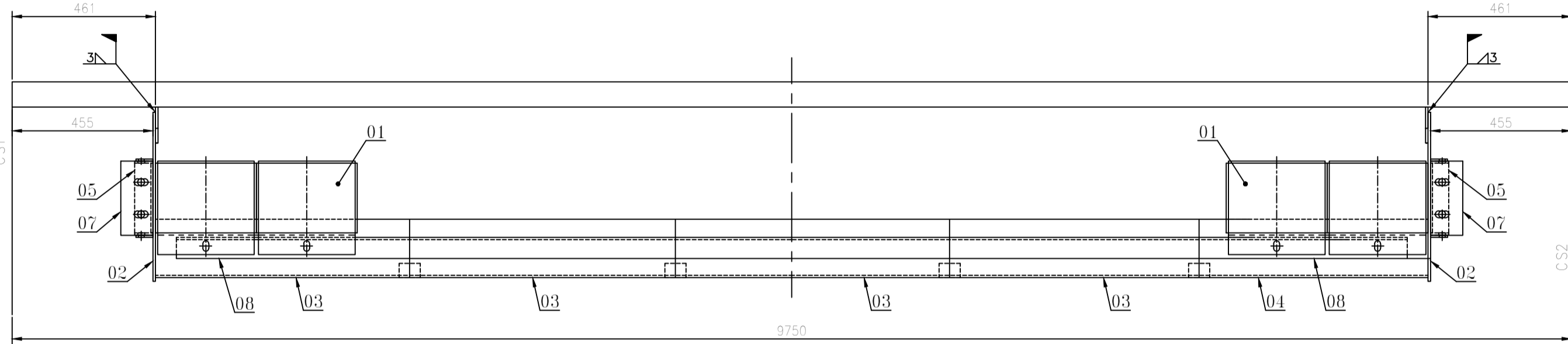
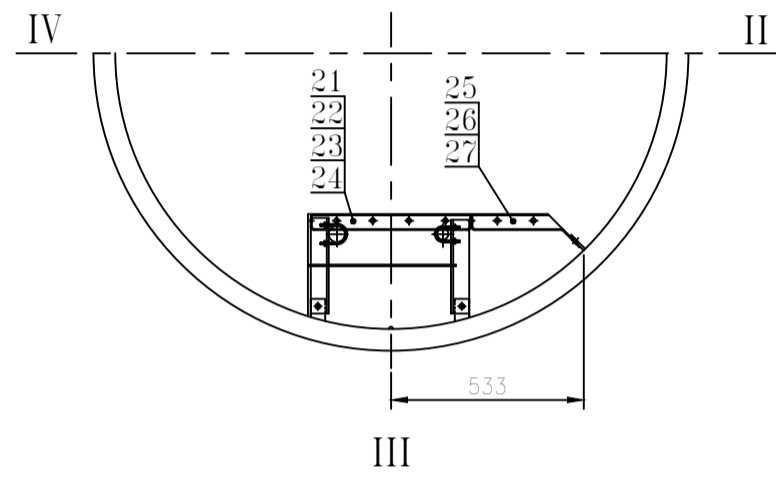
FOR TOLERANCES OF UNTOLERANCED
DIMENSIONS DURING MANUFACTURE
REFER PLANT STD. NO TP 023 0299



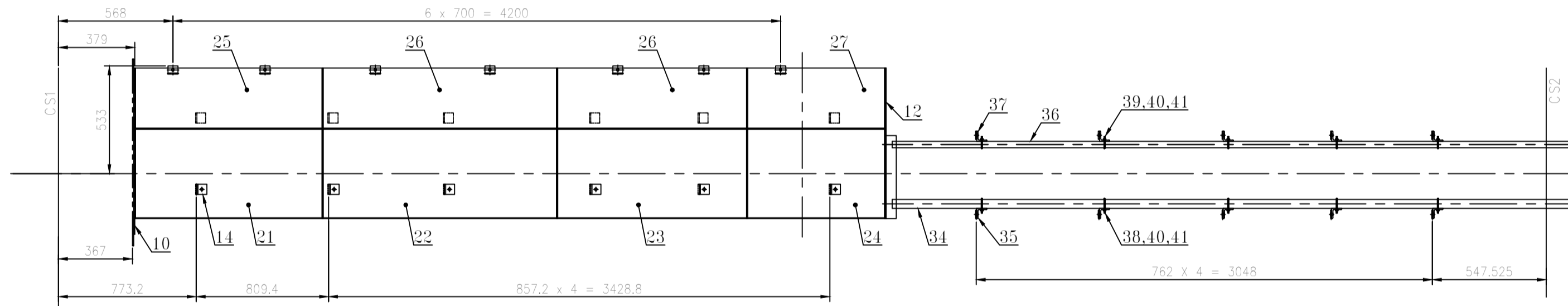
REAR

FRONT

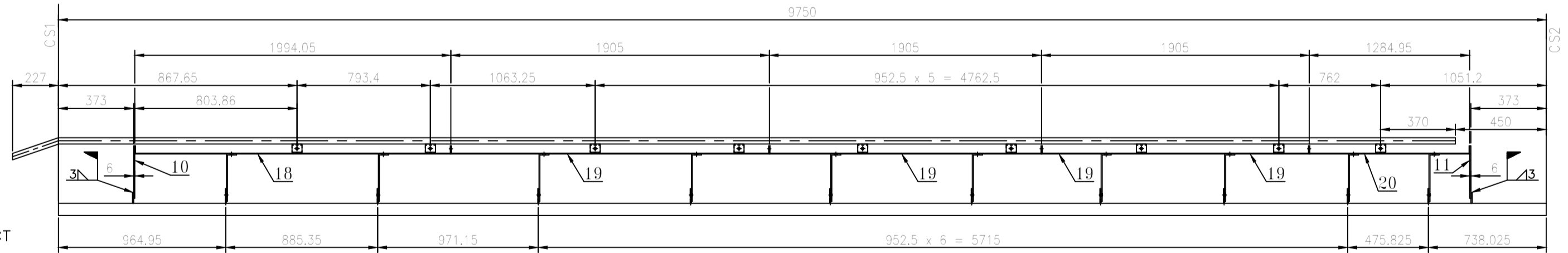
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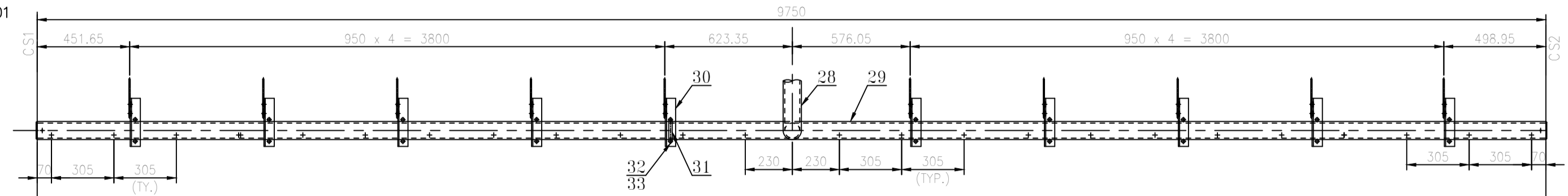
SECTION A-A



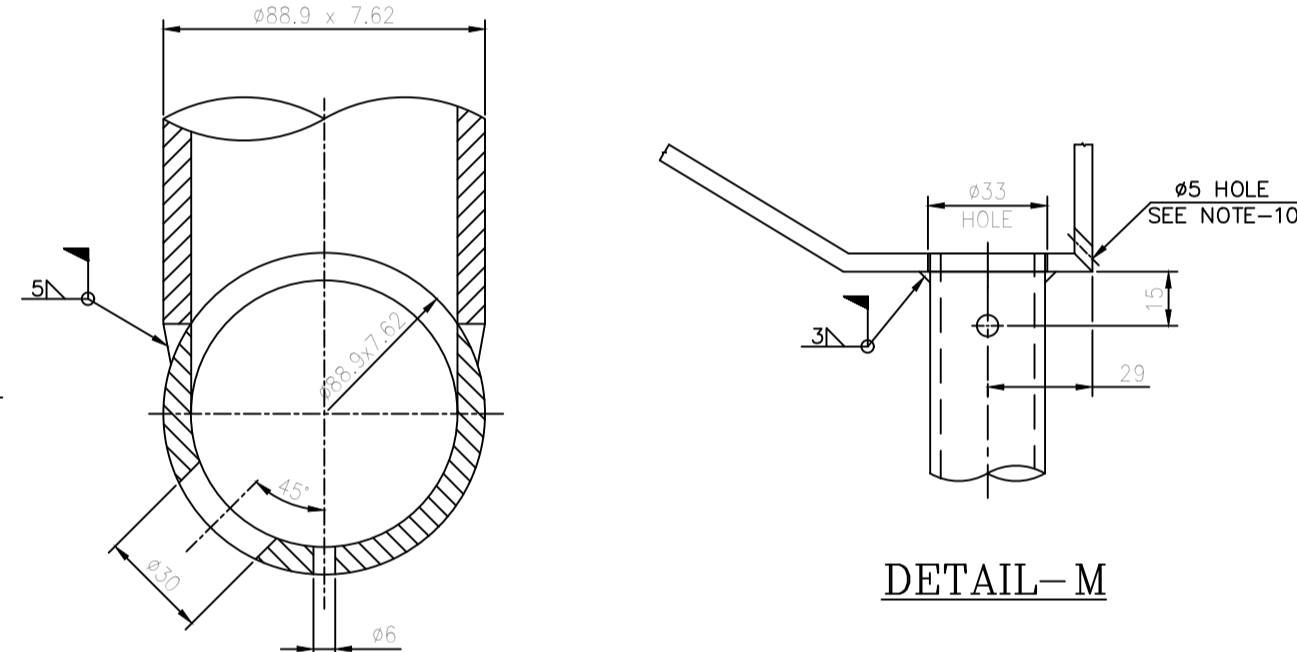
SECTION B-B



SECTION C-C



SECTION D-D



DETAIL-M

FEED CONNECTION DETAIL

ASSEMBLY NOTES FOR STEAM SEPARATOR BOX

1. INSTALL A FEW CORRUGATED SHEET BASKET ASSEMBLY (ITEM-01) INITIALLY THROUGH THE ENDS OF DRY BOX.
2. COMPLETE THE ASSEMBLY OF PANELS (ITEM-03 & 04) IN THE ABOVE ZONE.
3. ASSEMBLE END PLATES (ITEM-02) ENSURE THAT ITEM-01 CAN BE REMOVED THROUGH END PLATES.
4. WELD PANELS TO DRUM WELDED ATTACHMENTS.
5. SEAL WELD PANEL FLANGES.
6. INSTALL ALL THE PIECES OF ITEM-01 INSTALL ANGLE (ITEM-08) AND BOLT IT TIGHTLY IN PLACE CONNECTING ALL PIECES OF ITEM-01. THIS WILL PREVENT BY PASS & ALSO ACT AS ADDITIONAL SUPPORT.
7. THE END PLATE (ITEM-05 & 06) ARE BOLTED IN PLACE TO ASSURE TIGHTNESS OF CORRUGATED SHEET BASKET.
8. ITEM-07 IS TO BE FORCED TIGHTLY AGAINST END SECTIONS (ITEM-01) & BOLTED TO END PLATE.
9. DONOT WELD FLANGES OF ITEM-02 TO 05 OR 02 TO 06. THIS IS FOR REMOVAL OF ITEM-01 THROUGH THE ENDS WHEN REQUIRED.
10. DRAIN HOLES OF 5mm ARE DRILLED ONE AT EACH END OF PANELS & DRY BOX (INDICATED IN CROSS SECTIONAL VIEW)

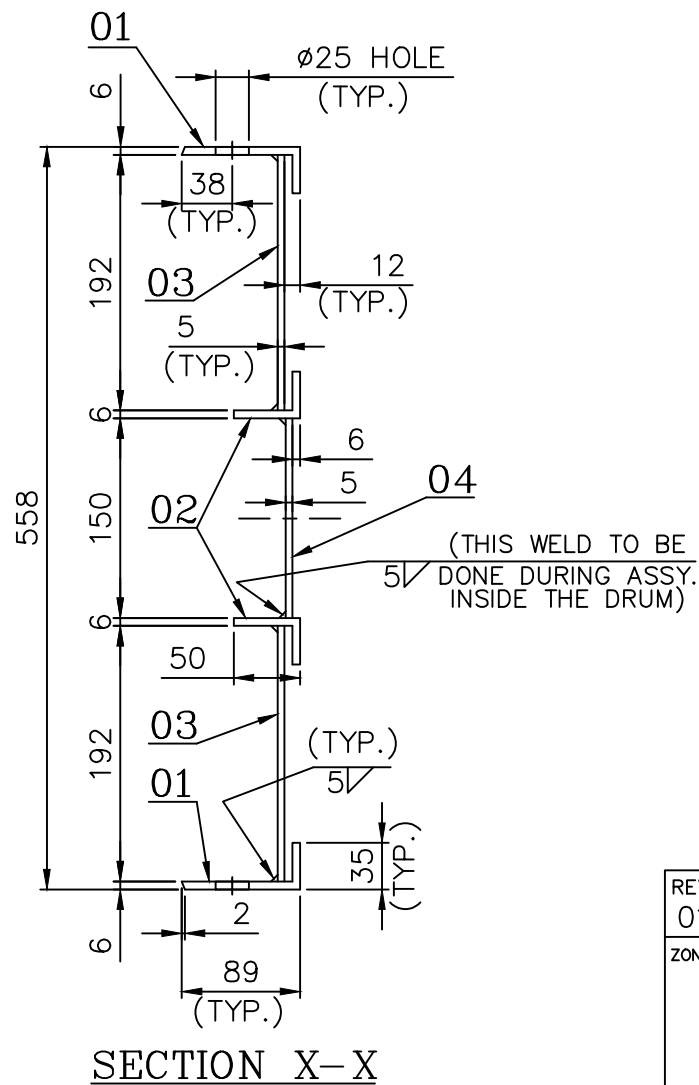
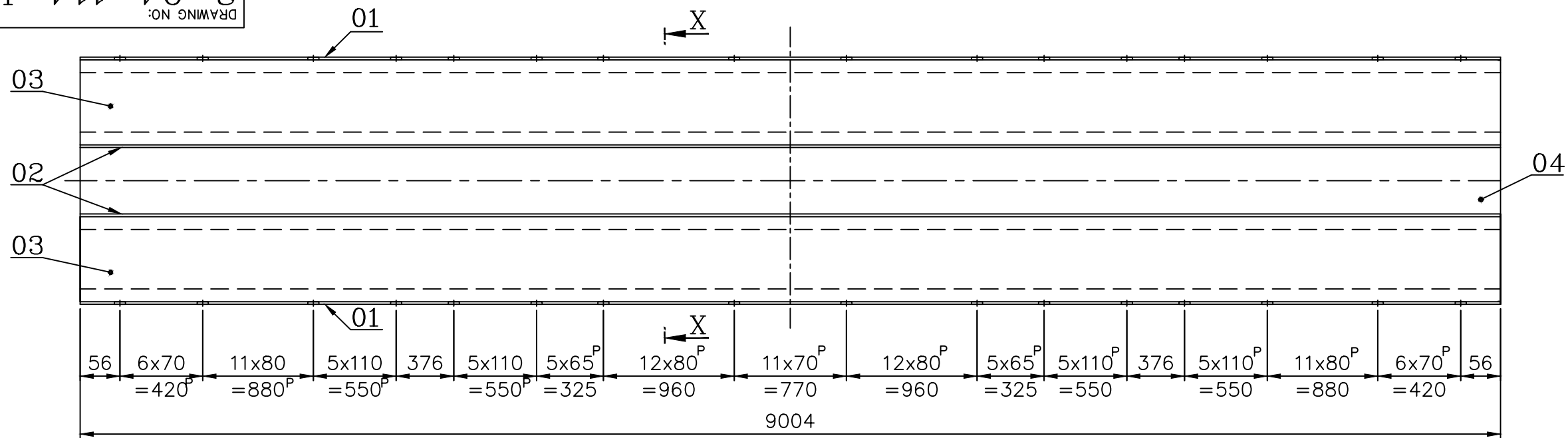
GENERAL NOTES

11. CHECK ASSLY. OF DRUM INTERNALS TO BE DONE AFTER TUBE HOLE DRILLING AND THEN DESPATCHED TO SITE.
12. ALL SITE WELDS SHOWN IN THIS ASSLY. ARE TO BE TACK WELDED IN SHOP.
13. THE ASSLY. IS TO BE REMOVED AT SITE BEFORE TUBE EXPANSION AND THE COMPONENTS ARE TO BE PRESERVED SUITABLY.
14. IN ITEM-10, 11 & 12 HOLES OF 14mm ARE TO BE MARKED IN POSITION & THEN DRILLED.
15. PIPES IN ITEM-34, 36 & 43 HAVE 100mm EXTRA LENGTH IN THE WELDED AND LUGS WELDED TO ABOVE PIPES SHOULD BE MATCHED WITH SUPPORTING LUGS & EXTRA LENGTH TO BE CUT OFF DURING SHOP ASSLY.
16. ITEM NOS. 34, 36 & 43 SHOULD BE TACK WELDED TO FRONT DISHED END NIPPLE AND THEN CHECK ASSEMBLED. THIS WELDING SHOULD BE COMPLETED AT SITE WITH SUITABLE V WELD.

43	CONTINUOUS BLOW DOWN HEADER	3-04-114-U8465					31.650	
42	BLACK HEX. SCREW M12 X 40 LG.	S		WELDMENT			1	
41	HEX. NUT M6	S		IS 1363 P2			0.500	
40	TAPER WASHER M12	S		IS 1363 P3			0.003	
39	U-ROD	4-04-114-U8443		IS 1363 P3			20	
38	U-ROD	4-04-114-U8442		IS 5372			0.013	
37	SUPPORT ANGLE	4-04-114-U8441		IS 2062			20	
36	TUBE	3-04-114-U8464		IS 1504 197			0.060	
35	SUPPORT ANGLE	4-04-114-U8440		IS 2062 E250A			5	
34	TUBE	3-04-114-U8463		IS 1504 197			0.070	
33	WASHER M12	S		IS 2062			5	
32	HEX. NUT M12	S		IS 1504 197			0.027	
31	U-ROD	4-04-114-U8439		IS 2062 E250A			1	
30	FEED SUPPORT	4-04-114-U8438		IS 1504 197			0.070	
29	FEED HEADER	3-04-114-U8462		IS 2062			5	
28	FEED TUBE	4-04-114-U8437		IS 1504 197			0.027	
27	BENT PANEL	3-04-114-U8461		IS 2062 E250A			1	
26	BENT PANEL	3-04-114-U8460		IS 1504 197			21.707	
25	BENT PANEL	3-04-114-U8459		IS 2062			1	
24	BENT PANEL	3-04-114-U8458		IS 1504 197			0.010	
23	BENT PANEL	3-04-114-U8457		IS 2062 E250A			285	
22	BENT PANEL	3-04-114-U8456		IS 1504 197			0.020	
21	BENT PANEL	3-04-114-U8455		IS 1363 P3			285	
20	BENT PANEL	3-04-114-U8454		IS 1504 197			0.550	
19	BENT PANEL	3-04-114-U8453		IS 2062			1	
18	BENT PANEL	3-04-114-U8452		IS 1504 197			0.027	
17	PANEL SHEET	3-04-114-U8451		IS 2062 E250A			1	
16	PANEL SHEET	3-04-114-U8450		IS 1504 197			110.034	
15	PANEL SHEET	3-04-114-U8449		IS 2062			1	
14	SUPPORT BAR	4-04-114-U8436		IS 1504 197			4.000	
13	SUPPORT PLATE	4-04-114-U8435		IS 2062 E250A			6.460	
12	END PLATE	4-04-114-U8434		IS 1504 197			1	
11	END COVER	4-04-114-U8433		IS 2062 E250A			14.020	
10	END COVER	4-04-114-U8432		IS 1504 197			2	
09	DRAIN TUBE 33.8 x 2.9 x 715 LG.			IS 2062 E250A			10.920	
08	ANGLE ISA 50 x 50 x 6THK.	3-04-114-U8448		IS 2062			9.490	
07	STRIP	4-04-114-U8431		IS 1504 197			1	
06	BENT STRIP	3-04-114-U8447		IS 2062 E250A			20.150	
05	BENT STRIP	3-04-114-U8446		IS 1504 197			1	
04	BENT PANEL	3-04-114-U8445		IS 2062 E250A			20.150	
03	BENT PANEL	3-04-114-U8444		IS 1504 197			17.130	
02	END PLATE	3-04-114-U8443		IS 2062 E250A			1	
01	CORRUGATED SHEET BASKET ASSEMBLY	3-04-114-U8442		IS 2062			16.080	
				IS 1504 197			1	
				IS 2062 E250A			23.420	
				IS 1504 197			3	
				IS 2062			24.460	
				IS 1504 197			15.540	
				IS 2062 E250A			1	
				IS 1504 197			23.440	
				IS 2062			3	
				IS 1504 197			24.480	
				IS 2062 E250A			1	
				IS 1504 197			0.600	
				IS 2062 E250A			6	
				IS 1504 197			0.550	
				IS 2062 E250A			20	
				IS 1504 197			10.100	
				IS 2062 E250A			1	
				IS 1504 197			8.790	
				IS 2062 E250A			1	
				IS 1504 197			17.540	
				IS 2062 E250A			1	
				IS 186 023 1001			1.570	
				SA 210 GR.A1			36	
				IS 1504 197			39.285	
				IS 2062 E250A			2	
				IS 1504 197			0.520	
				IS 2062 E250A			4	
				IS 1504 197			1.510	
				IS 2062 E250A			2	
				IS 1504 197			1.510	
				IS 2062 E250A			2	
				IS 1504 197			14.940	
				IS 2062 E250A			2	
				IS 1504 197			36.062	
				IS 2062 E250A			4	
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				IS 2062 E250A			2	
				IS 1504 197			15.628	
				IS 2062 E250A			74	



TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC - TALCHER S.O. NO. : 7936	
Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM - 530012		DRN CHD APPD	NAME G. DEMUDU SMG.NANDU/ANW.KISHORE Y. PRASANNA KUMAR DATE 12.03.2024 12.03.2024 12.03.2024
DEPT HT ENGG CODE 320	ALL DIMENSIONS ARE IN MM	PROJECTION SCALE 1:20 & NTS	WEIGHT (Kg) 2038.935
TITLE INTERNALS FOR UPPER DRUM		DRAWING NO : 1-04-114-U8073	REV 00

3-04-114-U8438
DRAWING NO:



VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	QTY
					VAR NO	MATERIAL SPECN		DI	QUANTITY	
	04	PLATE 5THK.x150x9004			15 011 029				53.000	1
					IS 2062					
	03	PLATE 5THK.x192x9004			15 011 029				67.850	2
					IS 2062					
	02	ANGLE ISA 50x50x6; 9004LG.			15 013 1056				40.500	2
					IS 2062					
	01	PLATE 6THK.x120x9004			15 211 092				50.890	2
					IS 2062					

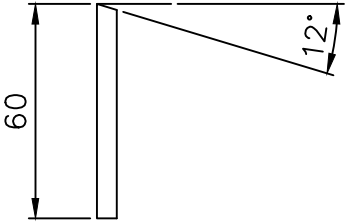
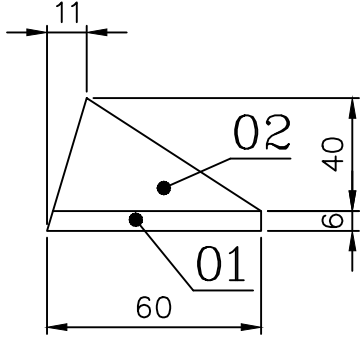
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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT									
		Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012				DRN	NAME G.DEMUDU		DATE 10.03.2024
						CHD	SMG.NAIDU/ANVK.KISHORE		10.03.2024
						APPD	Y.PRASANNA KUMAR		10.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE N.T.S	WEIGHT (Kg) 371.480	REF TO ASSY / OLD DWG				
CODE 320					2-04-114-00139/02				
TITLE DRY BOX ASSEMBLY					DRAWING NO : 3-04-114-U8438				REV 00

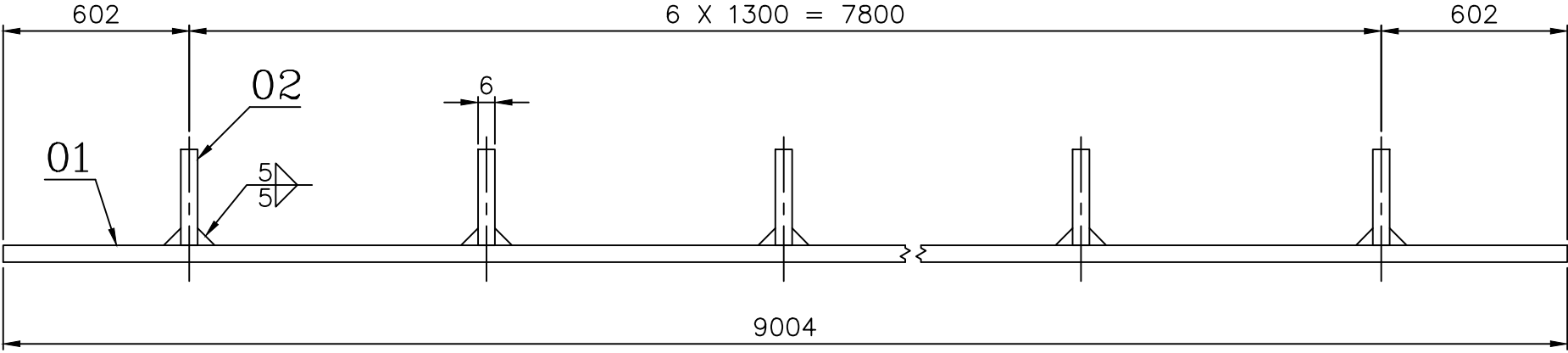
REV 01	DATE	ALTERED : CHD & APPD:
ZONE		

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3-04-114-U8439
DRAWING NO:


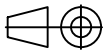


CHAMFERING DETAIL
OF ITEM NO. 01

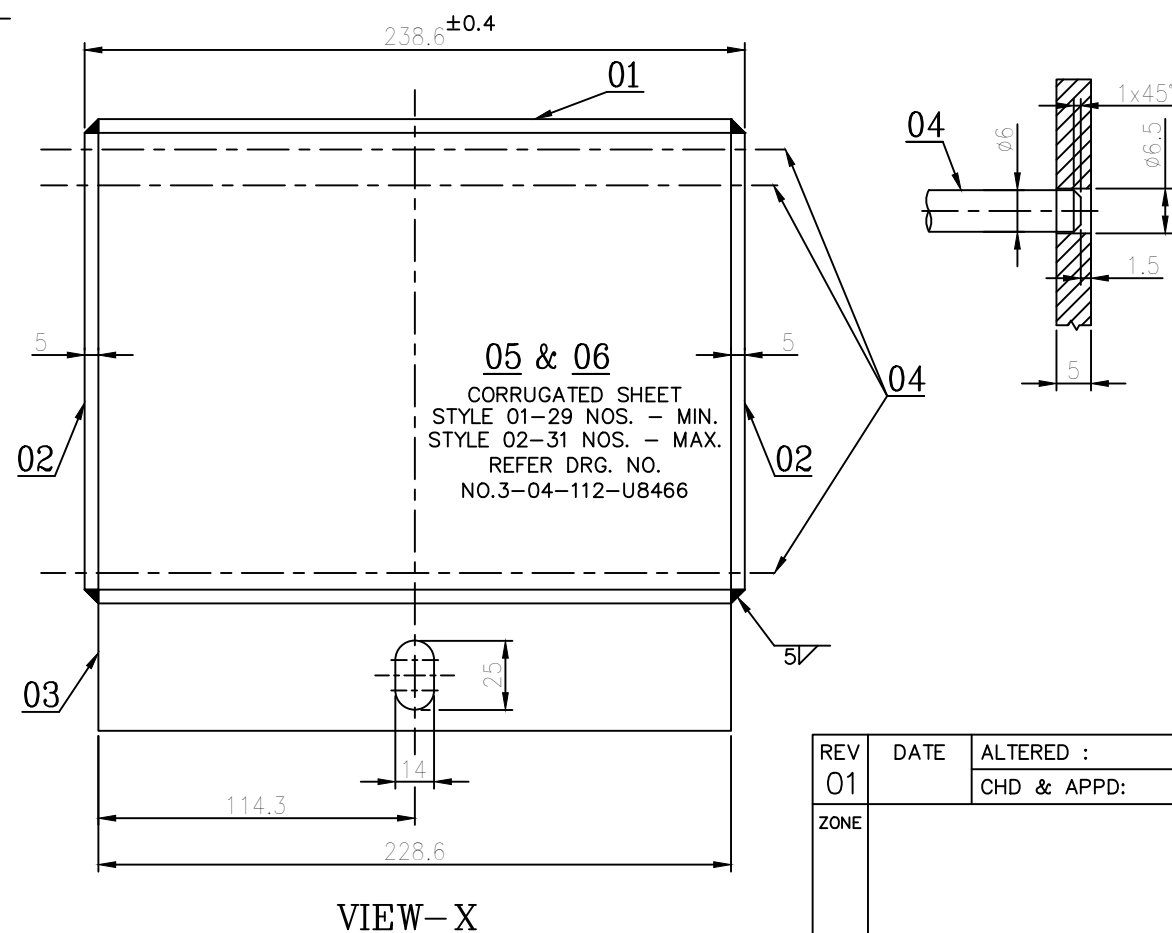
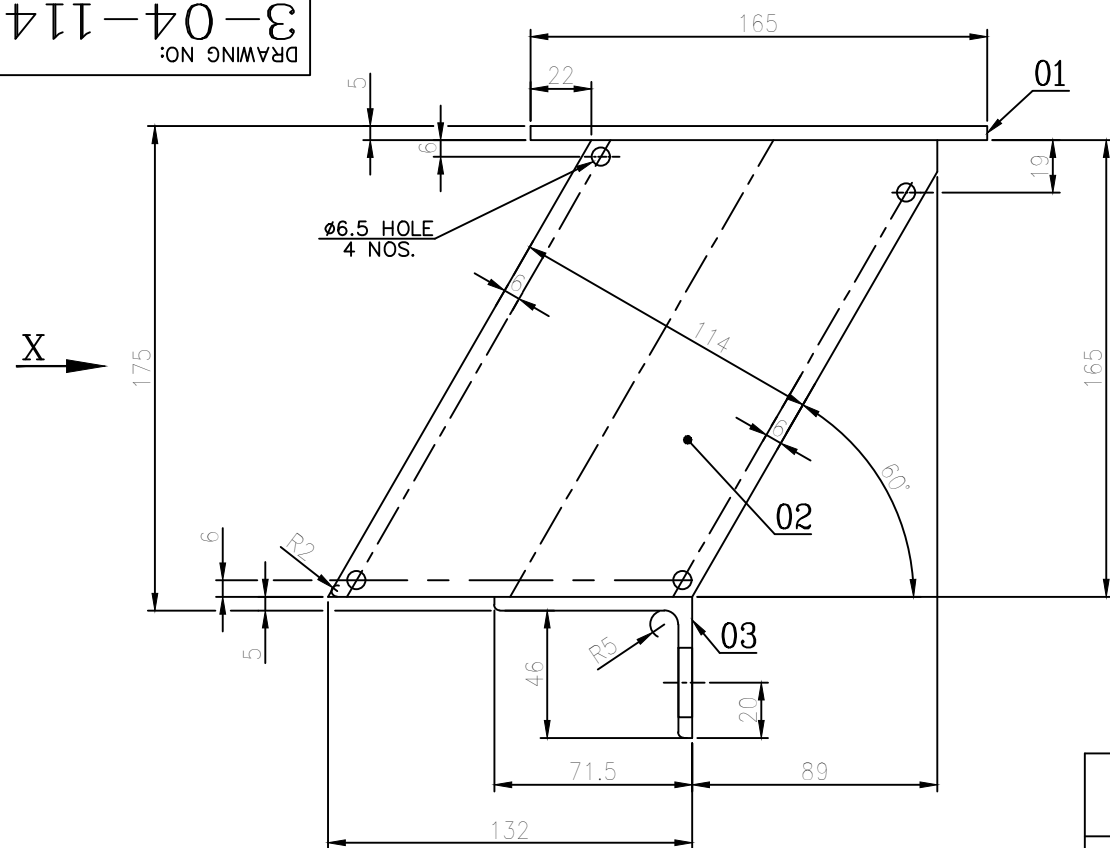


VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	QTY
	02	PL.6; 40 X 60				15 211 092			0.110	
						IS 2062			7	
	01	PL.6; 60 X 9004				15 211 092			25.440	
						IS 2062			1	
					VAR NO	MATERIAL SPECN		DI	QUANTITY	

REV	DATE	ALTERED :
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ZONE		

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	<div> Bharat Heavy Electricals Ltd</div>		DRN	NAME G.DEMUDU
	UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM - 530012		CHD	SMG.NAIDU/ANVK.KISHORE
			APPD	Y.PRASANNA KUMAR
DEPT	HTE	ALL DIMENSIONS ARE IN MM	PROJECTION	SCALE
CODE	320			N.T.S
WEIGHT (Kg)		26.210		
TITLE				REF TO ASSY / OLD DWG
SUPPORT BAR				3-04-114-00360
				DRAWING NO : 3-04-114-U8439
				REV 00

3-04-114-U8442
DRAWING NO.



NOTE:

WHILE MAKING UP CORRUGATED SHEET BASKET CLAMP TOGETHER WITH A FORCE OF 20 KG BEFORE WELDING RODS TO END PLATES. SHOP TO MAINTAIN 238.6 ± 0.4 OVER END PLATES. IT MAY BE NECESSARY TO ADD AN ADDITIONAL CORRUGATED SHEET OR AN END PLATE OF THE REQD. THICKNESS TO MAINTAIN 238 ± 0.4 OVER END PLATES. AFTER BASKET IS COMPLETE WELD TOP AND BOTTOM COVER PLATES AS SHOWN.

ASSY. NOTE:

CHECK ASSEMBLE 15 BOXES THE OVER ALL TOLERANCE SHALL BE WITH IN ± 3 mm.

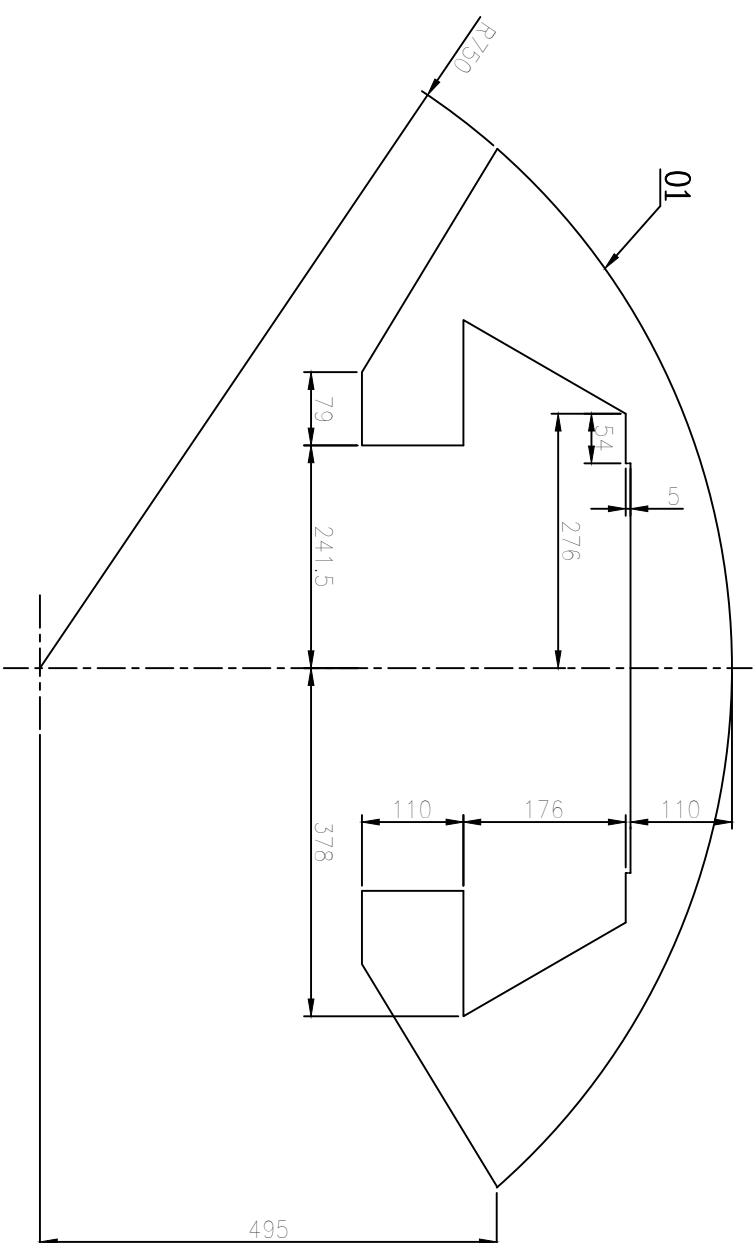
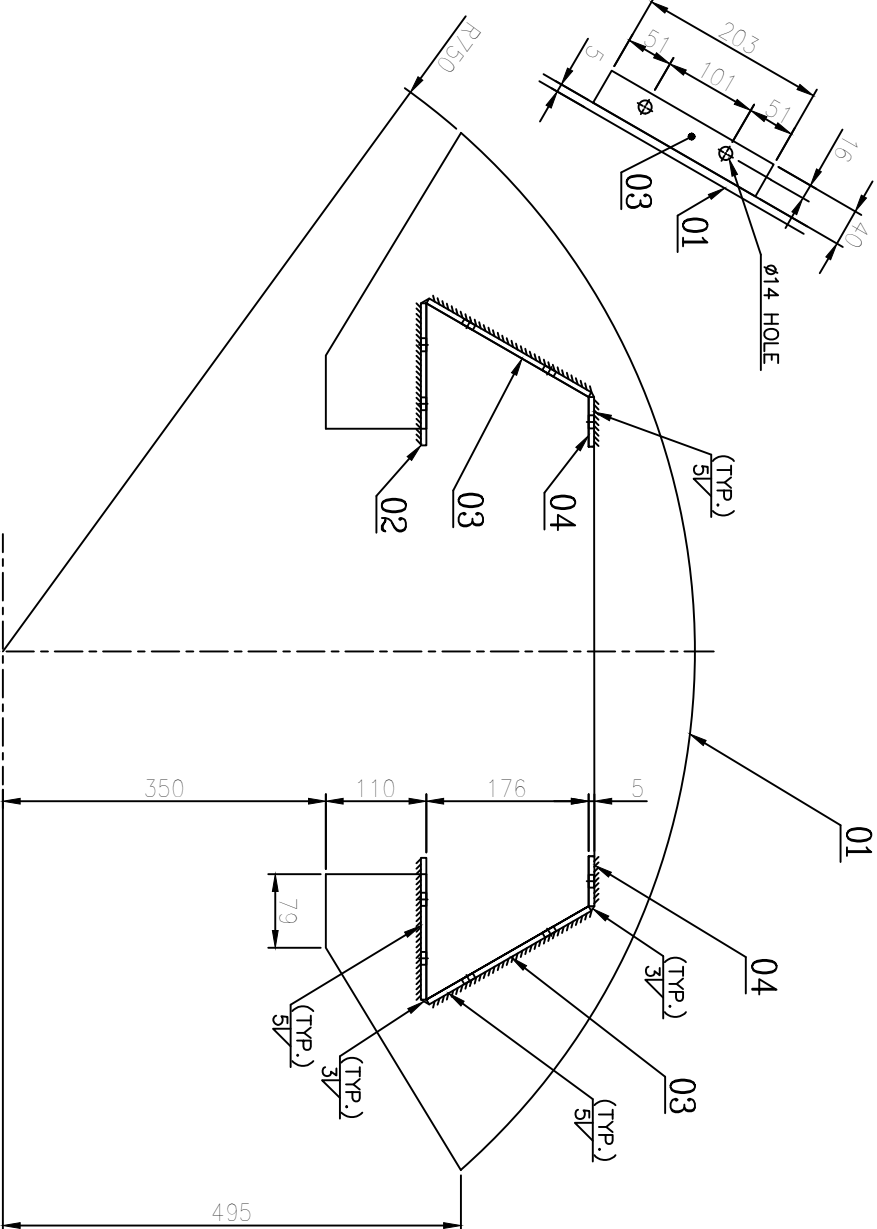
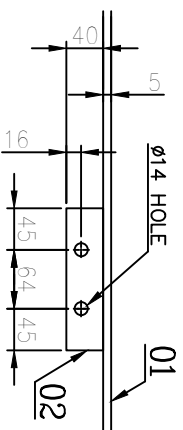
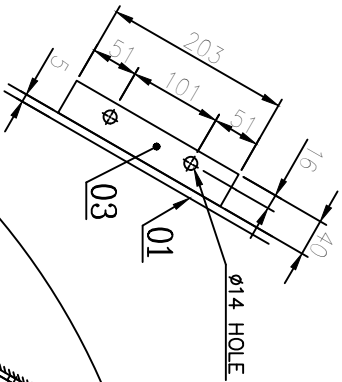
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
	06	CORRUGATED SHEET SH 0.63 X 128 X 256.5		3-04-114-U8466	02	15 011 642 IS 513D			0.162	
									31	
	05	CORRUGATED SHEET SH 0.63 X 128 X 256.5		3-04-114-U8466	01	15 011 642 IS 513D			0.162	
									29	
	04	ROD D6 X 235 LG.				15 004 026 IS 2062			0.520	
									4	
	03	BOT. COVER PLATE 5 X 120 X 228.6				15 011 029 IS 2062 E250A			1.100	
									1	
	02	END PLATE 5 X 165 X 221				15 011 029 IS 2062 E250A			1.500	
									2	
	01	TOP COVER PLATE 5 X 165 X 238.6				15 011 029 IS 2062 E250A			1.600	
									1	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC - TALCHER S.O. NO. : 7936		NAME G.DEMUDU		DATE 16.03.2024	
DEPT HTE CODE 320		ALL DIMENSIONS ARE IN MM		PROJECTION SCALE N.T.S		WEIGHT (Kg) 15.628	
TITLE CORRUGATED SHEET BASKET ASSEMBLY		REF TO ASSY / OLD DWG 2-04-114-00157		DRAWING NO : 3-04-114-U8442		REV 00	

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REV	DATE	ALTERED :
01		CHD & APPD:
ZONE		



DRAWING NO:

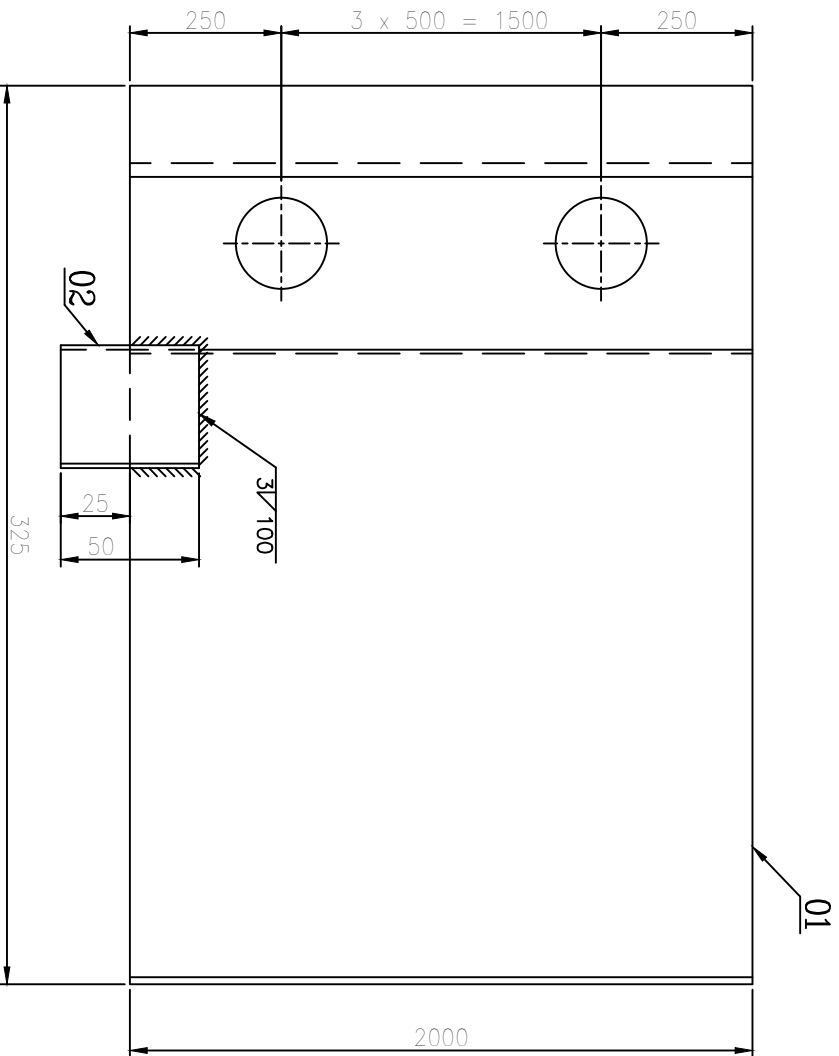
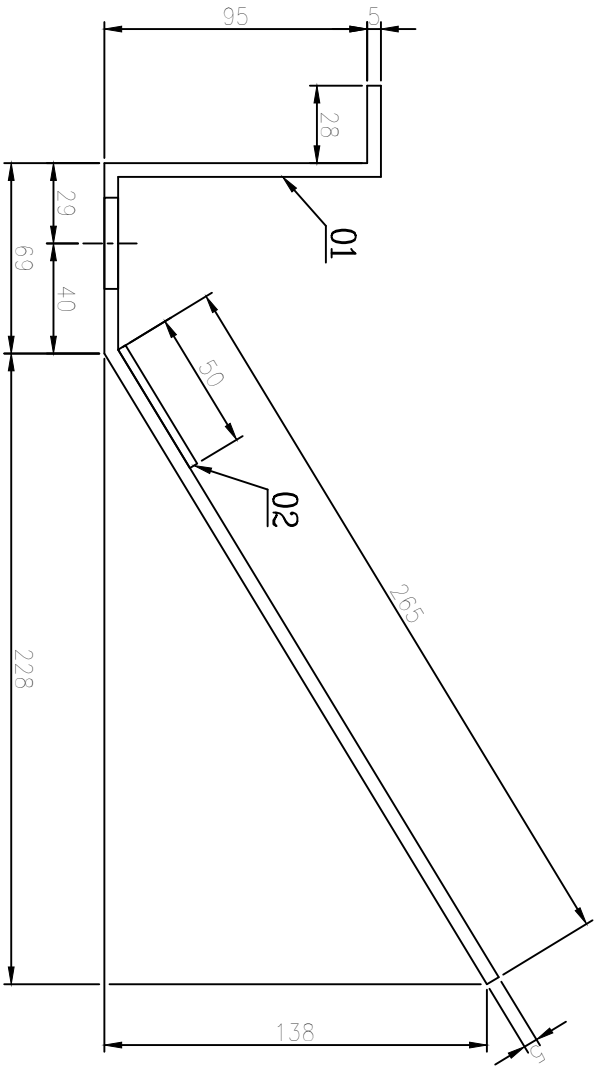


	04	PLATE 5 X 40 X 54				15 011 029	IS 2062			0.080	2	GS
	03	PLATE 5 X 40 X 203				15 011 029	IS 2062			0.320	2	
	02	PLATE 5 X 40 X 154				15 011 029	IS 2062			0.240	2	
	01	PLATE 5 X 401 X 1135				15 011 029	IS 2062			12.290	1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	DI	UNIT WEIGHT	QUANTITY	GS	
					VAR NO	MATERIAL SPECN						

REV	DATE	ALTERED :
01		CHD & APPD:
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC – TALCHER S.O. NO. : 7936			
	Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012			NAME	DATE
	DRN	G.DEMUDU		16.03.2024	
	QND	SMG.NAIDU/ANVK.KISHORE		16.03.2024	
	APPD	Y.PRASANNA KUMAR		16.03.2024	
DEPT HTE	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE N.T.S	WEIGHT (Kg) 13.570	REF TO ASSY / OLD DWG 2-04-114-00141
CODE 320	TITLE				DRAWING NO. : 3-04-114-U8443
					REV



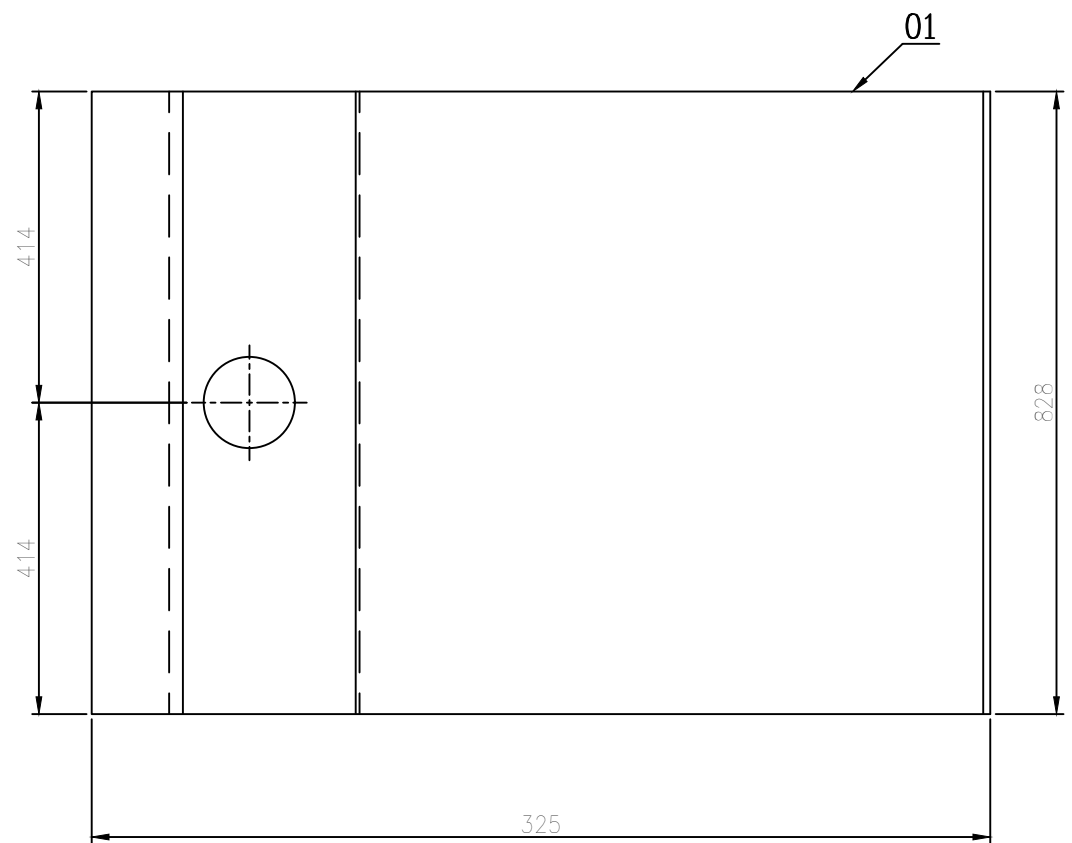
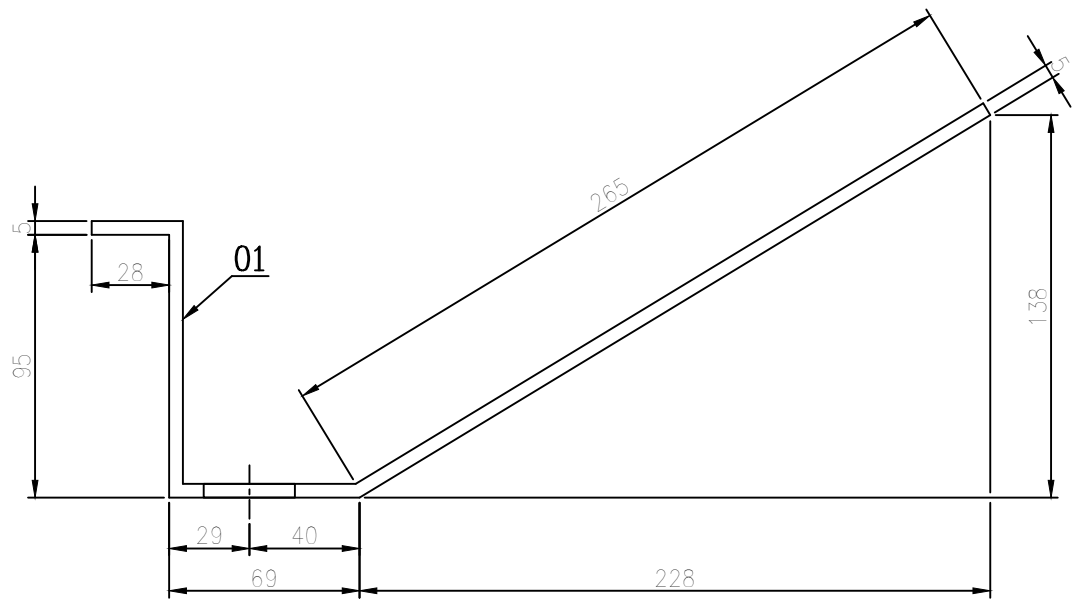
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	IS	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT WEIGHT	QUANTITY	SS
02	SH.3.15 50 X 50					15 011 182		0.062		
01	PLATE 5 X 460 X 2000					15 011 029		36.000		
						IS 2062			1	

REV	DATE	ALTERED :
01		CHD & APPD:
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC – TALCHER S.O. NO. : 7936			
	Bharat Heavy Electricals Ltd		DRN	NAME	DATE
	UNIT: HEAVY PLATES & VESSELS PLANT		CHD	SMG.NAIDU/ANVK.KISHORE	16.03.2024
	VISAKHAPATNAM – 530012		APPD	Y.PRASANNA KUMAR	16.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM	PROJECTION	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG
CODE 320			N.T.S	36.062	2-04-114-00158
TITLE					DRAWING NO. : 3-04-114-U8444
					REV 00

3-04-114-U8445
DRAWING NO:



REV	DATE	ALTERED :
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ZONE		

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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936



Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES & VESSELS PLANT
VISAKHAPATNAM – 530012

DRN	NAME	DATE
	G.DEMUDU	18.03.2024
CHD	SMG.NAIDU/ANVK.KISHORE	18.03.2024
APPD	Y.PRASANNA KUMAR	18.03.2024

DEPT	HTE	ALL DIMENSIONS ARE IN MM		PROJECTION		SCALE	N.T.S	WEIGHT (Kg)	14.940
CODE	320								

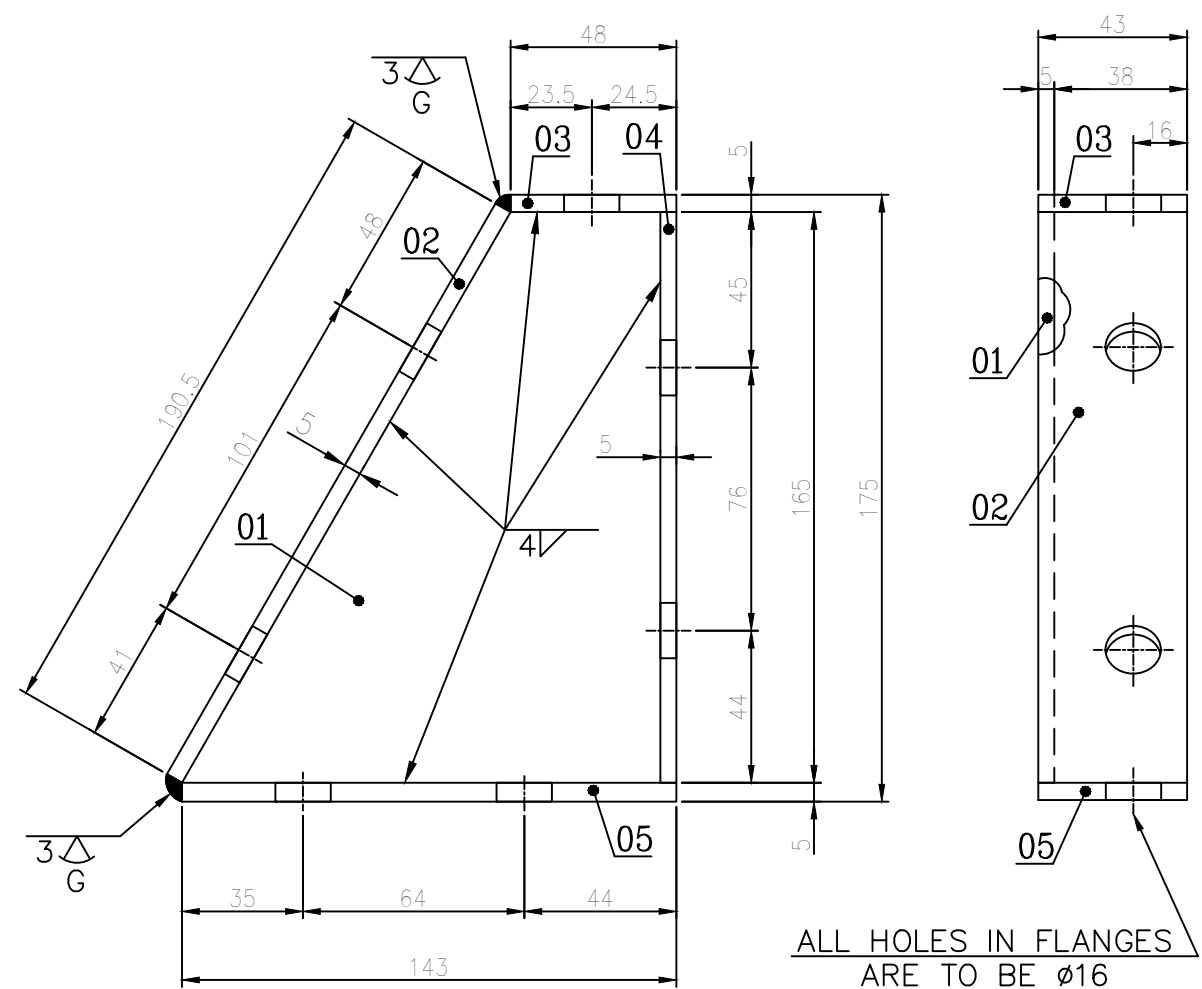
REF TO ASSY / OLD DWG	2-04-114-00159
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TITLE
BENT PANEL

DRAWING NO :	3-04-114-U8445	REV	00
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VARIANT NUMBER		ITEM NUMBER	01	DESCRIPTION	PLATE 5 X 460 X 828	STD		DRAWING NUMBER		ITEM NO		MATERIAL CODE	15 011 029 IS 2062 E250A	A/C/P		UNIT		UNIT WEIGHT	14.940	GS	
										VAR NO		MATERIAL SPECN				DI		QUANTITY	1		

3-04-114-U8446
DRAWING NO:

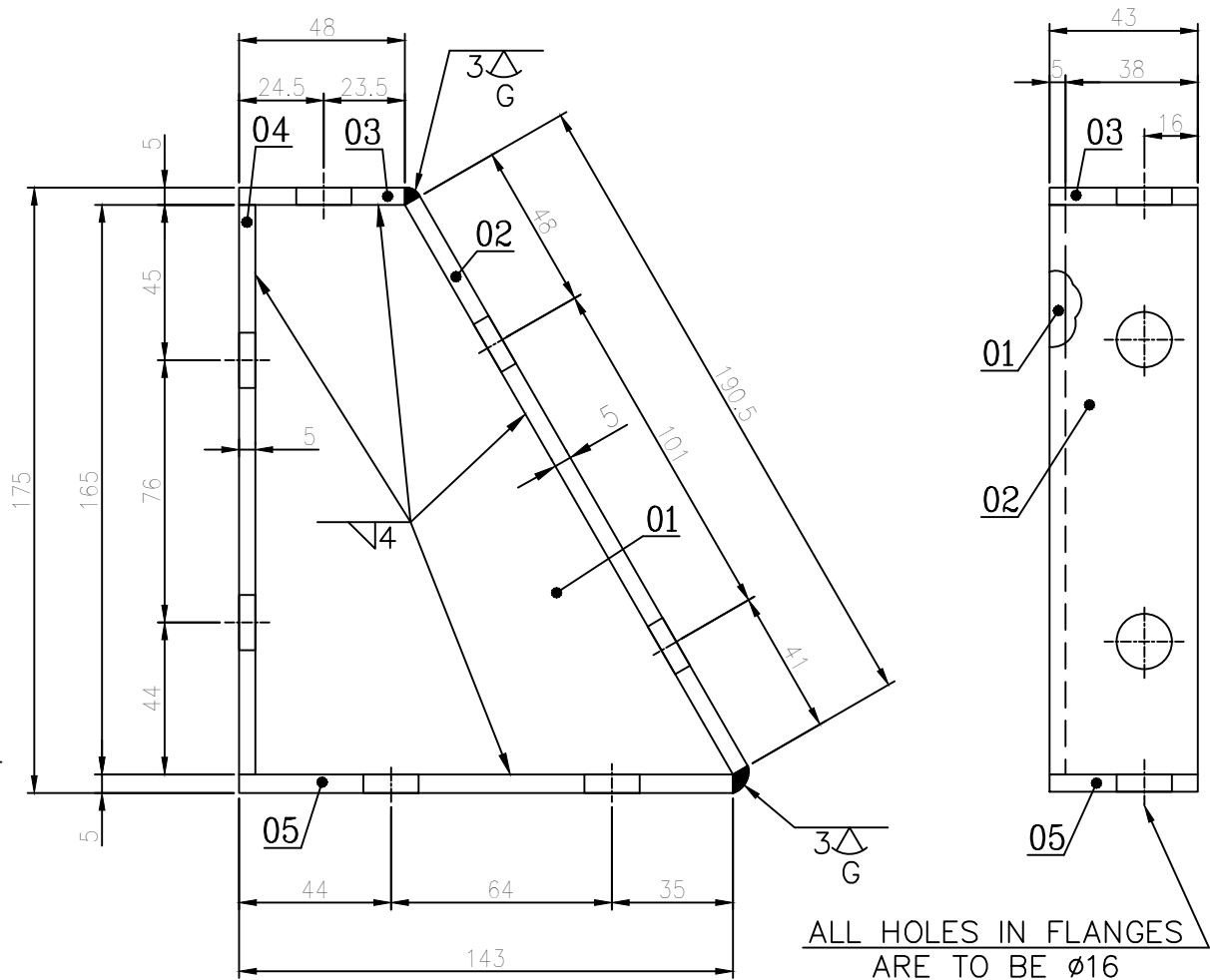


VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
					VAR NO	MATERIAL SPECN		DI	QUANTITY	
	05	PLATE 5 X 43 X 143				15 011 029			0.240	
						IS 2062 E250A			1	
	04	PLATE 5 X 43 X 165				15 011 029			0.280	
						IS 2062 E250A			1	
	03	PLATE 5 X 43 X 48				15 011 029			0.080	
						IS 2062 E250A			1	
	02	PLATE 5 X 43 X 190.5				15 011 029			0.320	
						IS 2062 E250A			1	
	01	PLATE 5 X 138 X 165				15 011 029			0.590	
						IS 2062 E250A			1	

REV	DATE	ALTERED :
01		CHD & APPD:
ZONE		

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3-04-114-U8447
DRAWING NO:




VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
	05	PLATE 5 X 43 X 143				15 011 029 IS 2062 E250A			0.240 1	
	04	PLATE 5 X 43 X 165				15 011 029 IS 2062 E250A			0.280 1	
	03	PLATE 5 X 43 X 48				15 011 029 IS 2062 E250A			0.080 1	
	02	PLATE 5 X 43 X 190.5				15 011 029 IS 2062 E250A			0.320 1	
	01	PLATE 5 X 138 X 165				15 011 029 IS 2062 E250A			0.590 1	
					VAR NO	MATERIAL SPECN	DI		QUANTITY	

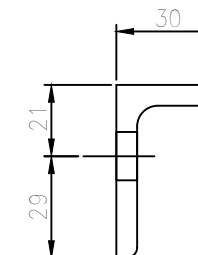
REV	DATE	ALTERED :
01		CHD & APPD:
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC – TALCHER S.O. NO. : 7936				
<div><div><div></div><div>Bharat Heavy Electricals Ltd</div><div>UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012</div></div></div>		DRN	NAME G.DEMUDU		DATE 18.03.2024	
		CHD	SMG.NAIDU/ANVK.KISHORE		18.03.2024	
		APPD	Y.PRASANNA KUMAR		18.03.2024	
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE N.T.S	WEIGHT (Kg) 1.510	REF TO ASSY / OLD DWG	
CODE 320					3-04-114-00376	
TITLE BENT STRIP					DRAWING NO : 3-04-114-U8447	
					REV 00	


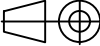
Technical drawing of a shaft with four pulleys. The shaft has a total length of 8730. The distance from the left end to the first pulley is 70. The distance between the first and second pulleys is $36 \times 238.6 = 8590$. The distance between the third and fourth pulleys is 70. The third pulley has a diameter of 25 and a width of 14. The shaft is supported by bearings at the ends of the pulley arrangement.



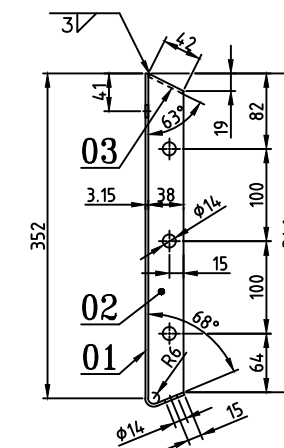
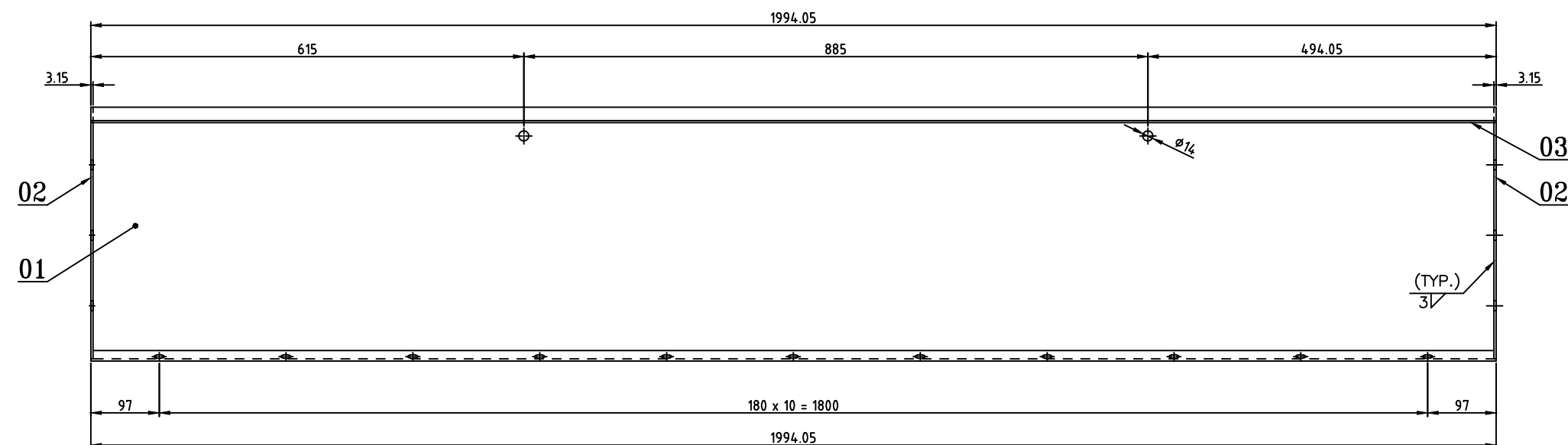
		ISA 50 X 60 X 6 8730 LG.				15 013 156			39.285	
						IS 2062 E250A			1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
					VAR NO	MATERIAL SPECN		DI	QUANTITY	

REV 01	DATE	ALTERED :
		CHD & APPD:
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC – TALCHER S.O. NO. : 7936			
	Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012		DRN	NAME G.DEMUDU	DATE 18.03.2024
			CHD	SMG.NAIDU/ANVK.KISHORE	18.03.2024
			APPD	Y.PRASANNA KUMAR	18.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE N.T.S	WEIGHT (Kg) 39.285	REF TO ASSY / OLD DWG 3-04-114-00381
CODE 320					
TITLE ANGLE				DRAWING NO : 3-04-114-U8448	REV 00


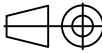
DRAWING NO: 3-04-114-U8449



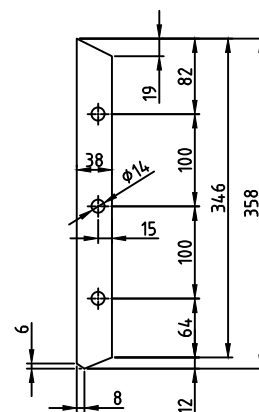
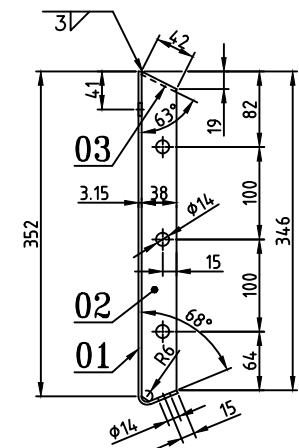
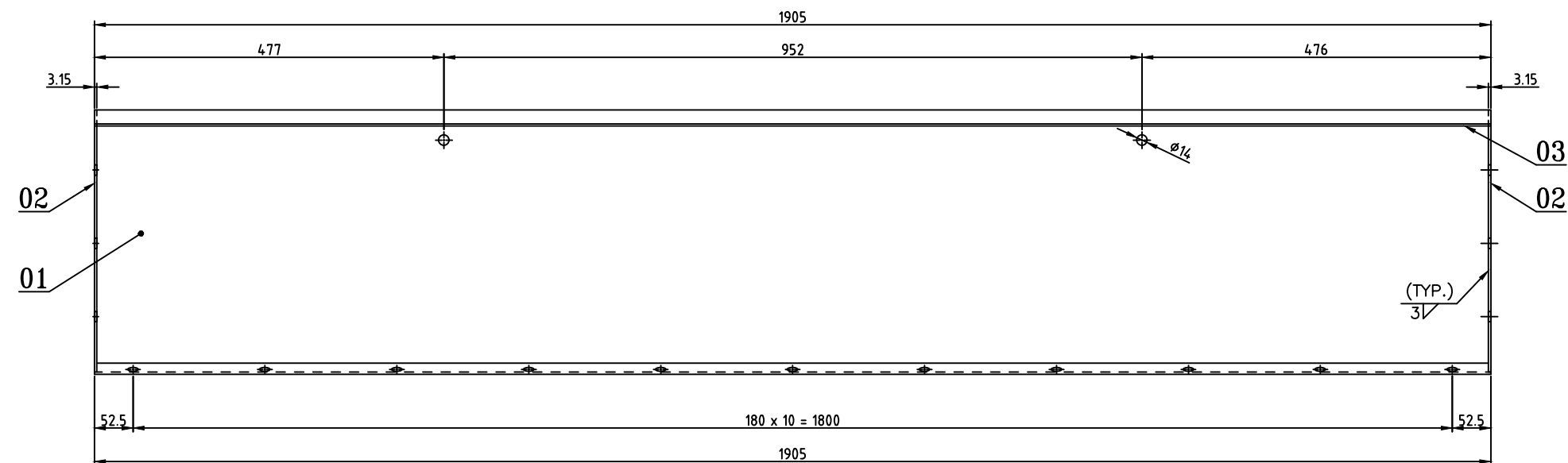
	03	SHEET 3.15 42 X 1987.7				15 011 182			2.060
						IS 1079D			2
	02	SHEET 3.15 38 X 358				15 011 182			0.330
						IS 1079D			2
	01	SHEET 3.15 400 X 1994.05				15 011 182			19.700
						IS 1079D			1
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
					VAR NO	MATERIAL SPECN		D1	QUANTITY

REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			PROJECT : NTPC – TALCHER S.O. NO. : 7936		
 Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012			DRN	NAME G.DEMUDU	DATE 10.04.2024
			CHD	SMG.NAIDU/ANVK.KISHORE	10.04.2024
			APPD	Y.PRASANNA KUMAR	10.04.2024
DEPT HT ENGG	GRADE OF UNTOL. DIM		SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG
CODE 320	C/M/F		1:7.5 & NTS	24.480	3-04-114-00362
TITLE				DRAWING NO :	REV
PANEL SHEET				3-04-114-U8449	00

DRAWING NO: 3-04-114-U8450


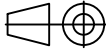


ITEM NO. 02

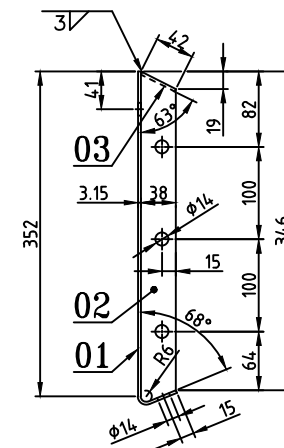
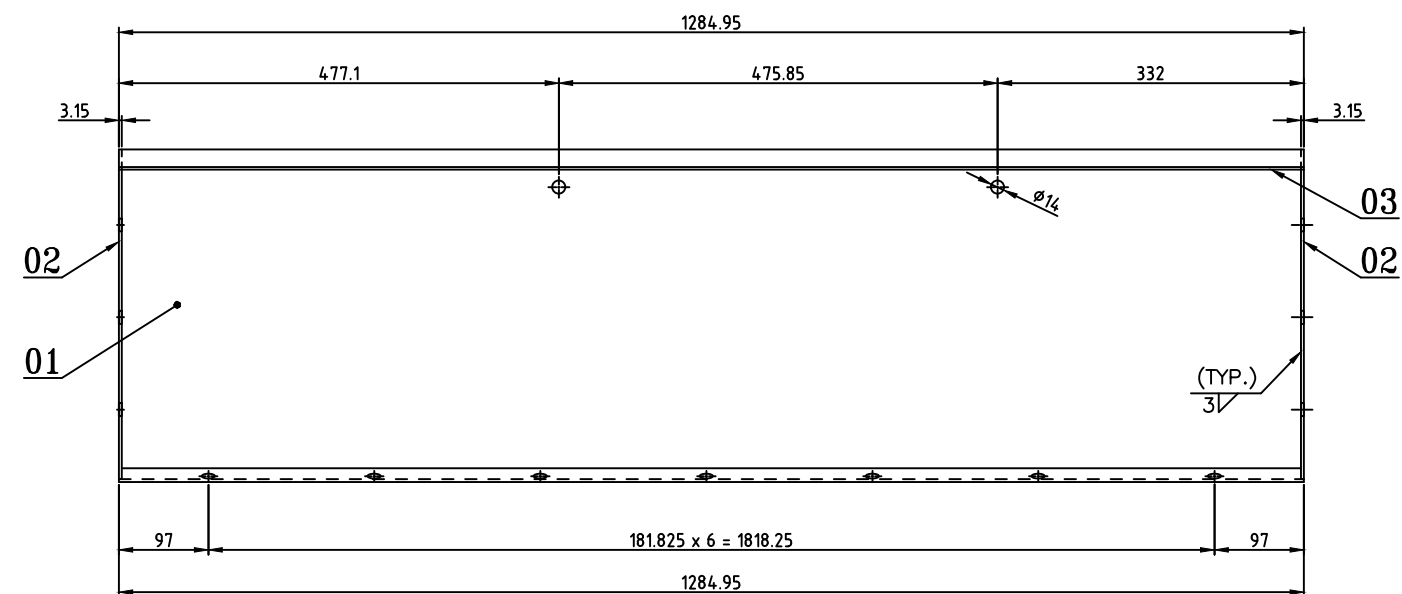
	03	SHEET 3.15 42 X 1898.7				15 011 182			1.970	
						IS 1079D			2	
	02	SHEET 3.15 38 X 358				15 011 182			0.330	
						IS 1079D			2	
	01	SHEET 3.15 400 X 1905				15 011 182			18.840	
						IS 1079D			1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
					VAR NO	MATERIAL SPECN		D1	QUANTITY	

REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			PROJECT : NTPC – TALCHER S.O. NO. : 7936		
 Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012			DRN	NAME G.DEMUDU	DATE 10.04.2024
			CHD	SMG.NAIDU /ANVK.KISHORE	10.04.2024
			APPD	Y.PRASANNA KUMAR	10.04.2024
DEPT HT ENGG	GRADE OF UNTOL. DIM C/M/F		SCALE 1:7.5 & NTS	WEIGHT (Kg) 23.440	REF TO ASSY / OLD DWG 3-04-114-00363
CODE 320					
TITLE PANEL SHEET				DRAWING NO : 3-04-114-U8450	REV 00


DRAWING NO: 3-04-114-U8451



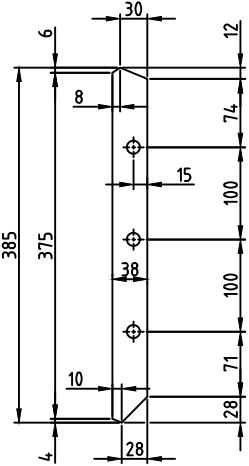
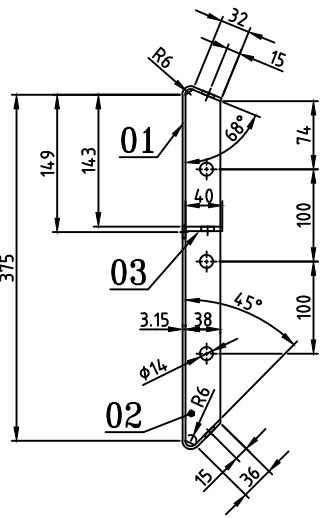
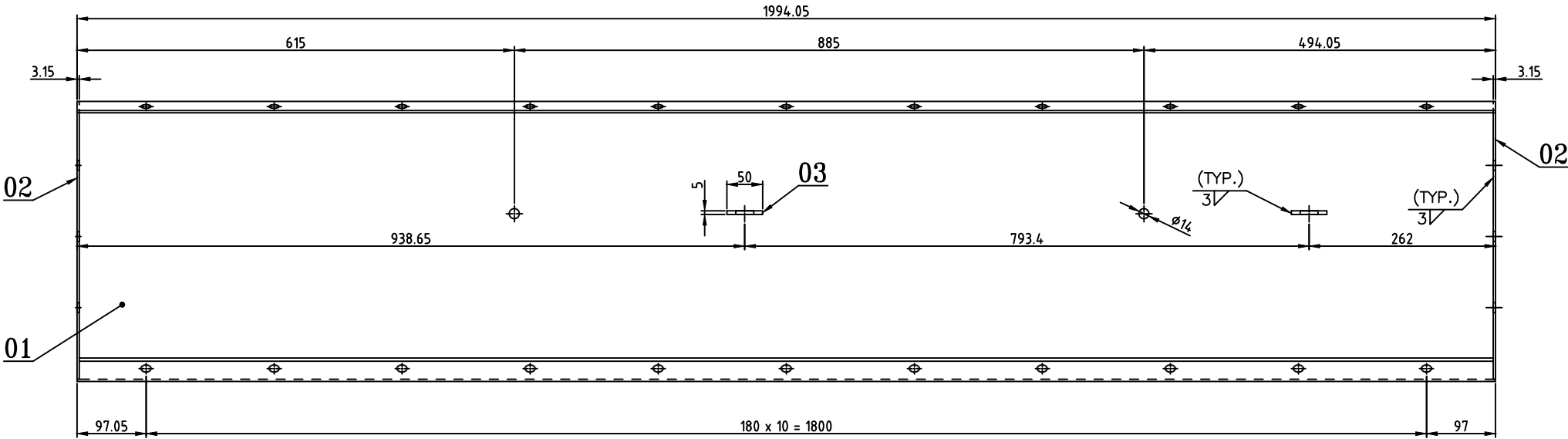
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
					VAR NO	MATERIAL SPECN		D1	QUANTITY	
03		SHEET 3.15 42 X 1279				15 011 182			1.320	
						IS 1079D			2	
02		SHEET 3.15 38 X 358				15 011 182			0.330	
						IS 1079D			2	
01		SHEET 3.15 400 X 1278.65				15 011 182			12.240	
						IS 1079D			1	

REV	DATE	ALTERED :
01		CHECKED :
ZONE		

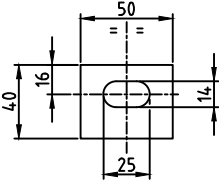
CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC – TALCHER S.O. NO. : 7936		
 361-257		NAME G.DEMUDU		DATE 10.04.2024
		CHD SMG.NAIDU/ANVK.KISHORE		10.04.2024
		APPD Y.PRASANNA KUMAR		10.04.2024
DEPT HT ENGG	GRADE OF UNTOL. DIM C/M/F	SCALE 1:7.5 & NTS	WEIGHT (Kg) 15.540	REF TO ASSY / OLD DWG 3-04-114-00364
CODE 320	TITLE PANEL SHEET			DRAWING NO : 3-04-114-U8451 REV 00

DRAWING NO: 3-04-114-U8452



ITEM NO.02



ITEM NO.03

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
	03	PLATE 5 40 X 50				15 011 029			0.070	
						IS 1079D			2	
	02	SHEET 3.15 38 X 385				15 011 182			0.360	
						IS 1079D			2	
	01	SHEET 3.15 479 X 1994.05				15 011 182			23.600	
						IS 1079D			1	
					VAR NO	MATERIAL SPECN		D1	QUANTITY	

REV	DATE	ALTERED :
01		CHECKED :
ZONE		

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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936



Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES AND VESSELS PLANT
VISAKHAPATNAM – 530012

DRN	NAME	DATE
CHD	G.DEMUDU	15.04.2024
APPD	SMG.NAIDU/ANVK.KISHORE	15.04.2024
	Y.PRASANNA KUMAR	15.04.2024

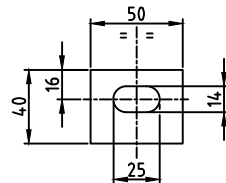
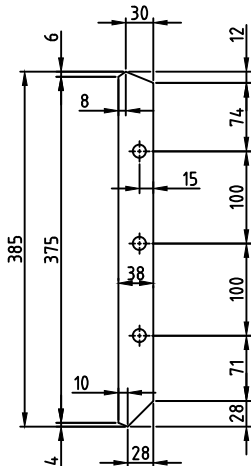
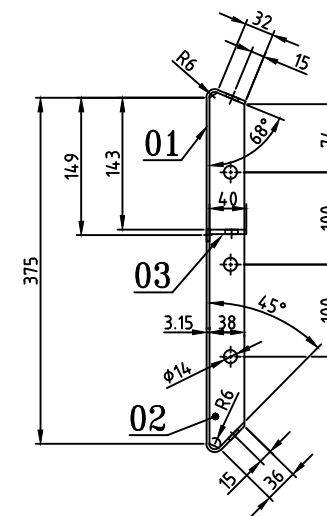
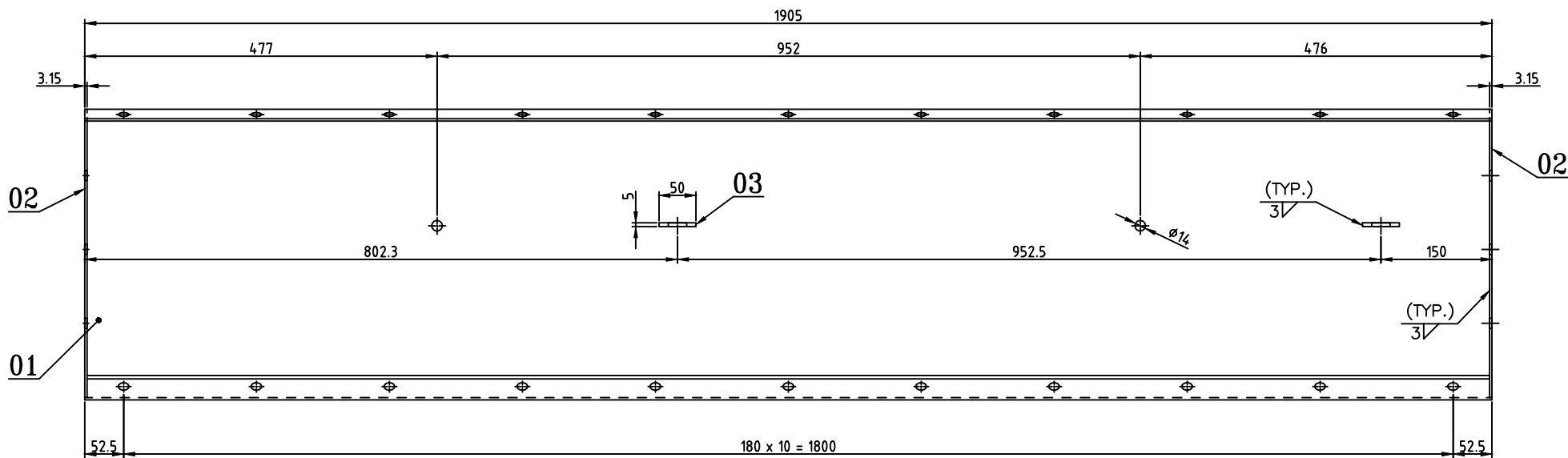
DEPT	HT ENGG	GRADE OF	SCALE	WEIGHT (Kg)
CODE	320	UNTOL. DIM	1:7.5 & NTS	24.460
		C/M/F		



REF TO ASSY / OLD DWG
3-04-114-00365

TITLE	DRAWING NO :	REV
BENT PANEL	3-04-114-U8452	00

DRAWING NO: 3-04-114-U8453



ITEM NO.03

ITEM NO.02

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
	03	SHEET 5 40 X 50				15 011 182			0.070	
						IS 1079D			2	
	02	SHEET 3.15 38 X 385				15 011 182			0.360	
						IS 1079D			2	
	01	SHEET 3.15 479 X 1905				15 011 182			22.560	
						IS 1079D			1	
					VAR NO	MATERIAL SPECN		D1	QUANTITY	

REV	DATE	ALTERED :
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ZONE		

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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936



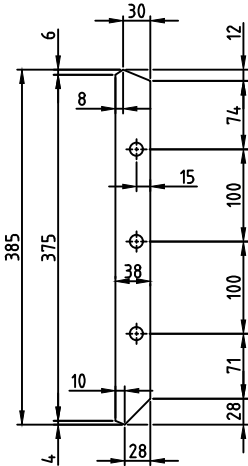
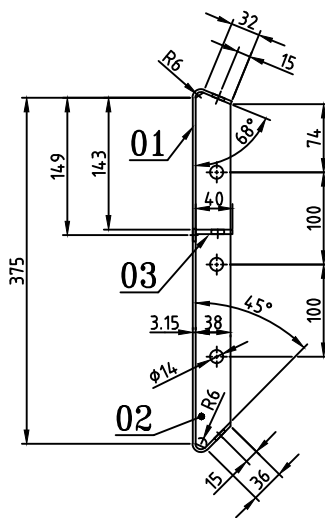
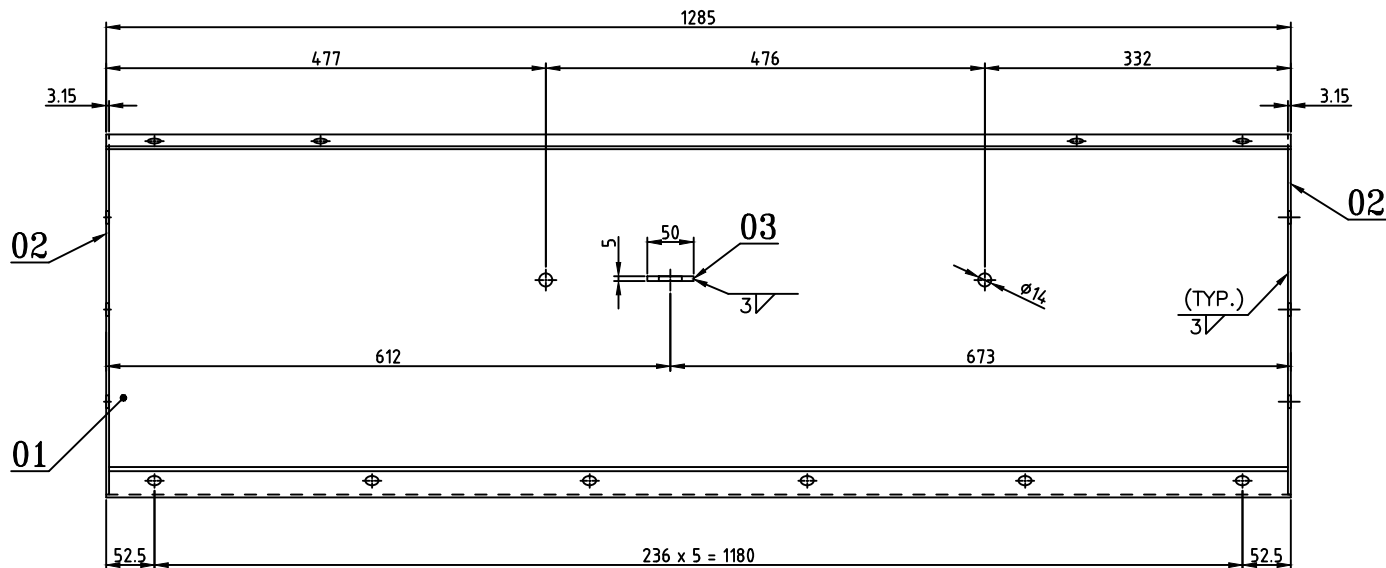
Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES AND VESSELS PLANT
VISAKHAPATNAM – 530012

DRN	NAME	DATE
CHD	G.DEMUDU	16.04.2024
APPD	SMG.NAIDU/ANVK.KISHORE	16.04.2024
	Y.PRASANNA KUMAR	16.04.2024

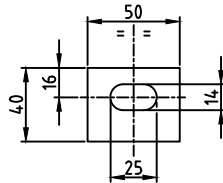
DEPT	HT ENGG	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG
320		C/M/F	1:7.5 & NTS	23.420	3-04-114-00366

TITLE	DRAWING NO :	REV
BENT PANEL	3-04-114-U8453	00

DRAWING NO: 3-04-114-U8454



ITEM NO.02


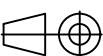


ITEM NO.03

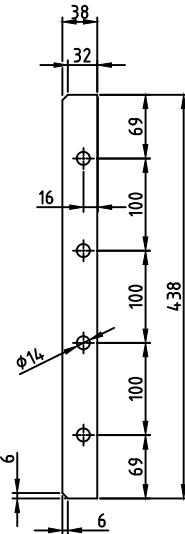
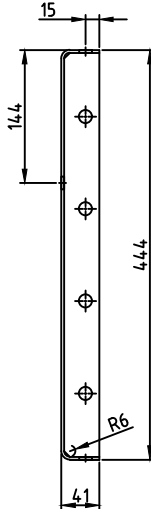
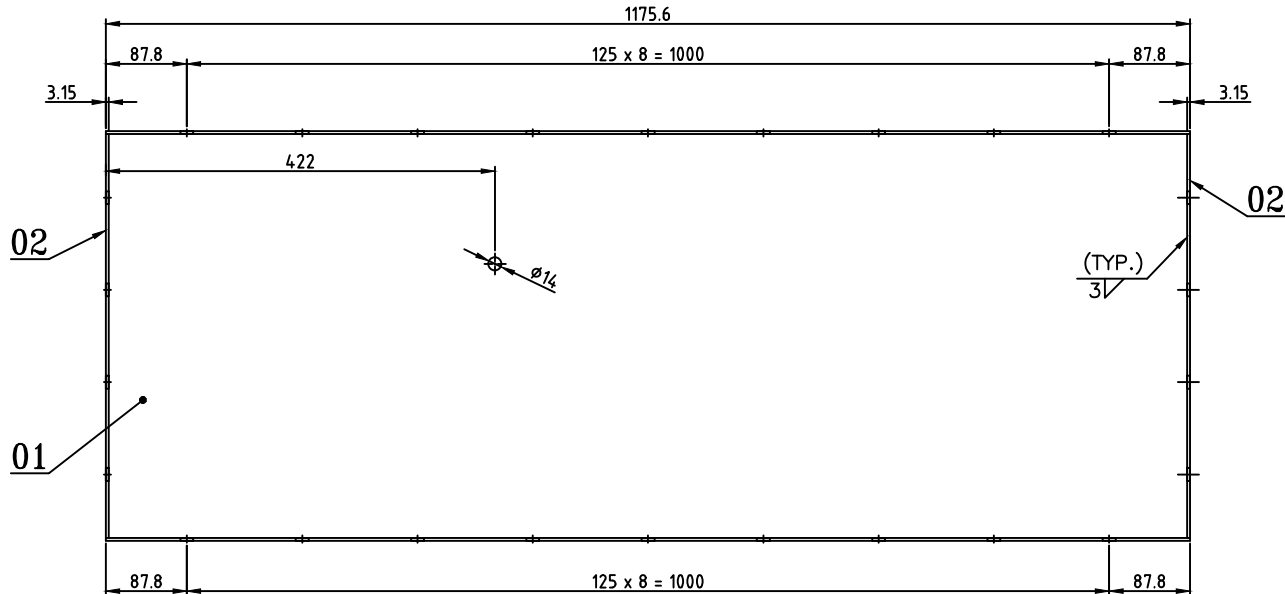
	03	PLATE 5 40 X 50				15 011 029			0.070	
						IS 1079D			2	
	02	SHEET 3.15 38 X 385				15 011 182			0.360	
						IS 1079D			2	
	01	SHEET 3.15 479 X 1285				15 011 182			15.220	
						IS 1079D			1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
					VAR NO	MATERIAL SPECN			QUANTITY	

REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				PROJECT : NTPC – TALCHER S.O. NO. : 7936											
<div> 361-257</div> <div>Bharat Heavy Electricals Ltd</div> <div>UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012</div>				DRN	NAME G.DEMUDU		DATE 26.04.2024								
				CHD	SMG.NAIDU/ANVK.KISHORE		26.04.2024								
				APPD	Y.PRASANNA KUMAR		26.04.2024								
DEPT HT ENGG CODE 320		GRADE OF UNTOL. DIM C/M/F		<div></div>		SCALE 1:7.5 & NTS		WEIGHT (Kg) 16.080		REF TO ASSY / OLD DWG 3-04-114-00367					
TITLE BENT PANEL										DRAWING NO : 3-04-114-U8454				REV 00	

DRAWING NO: 3-04-114-U8455





ITEM NO.02

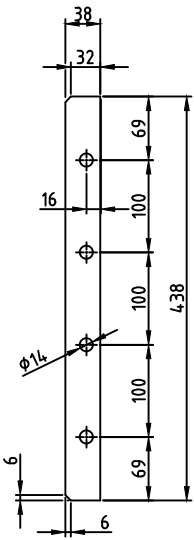
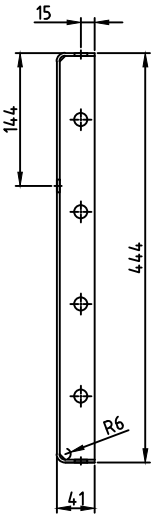
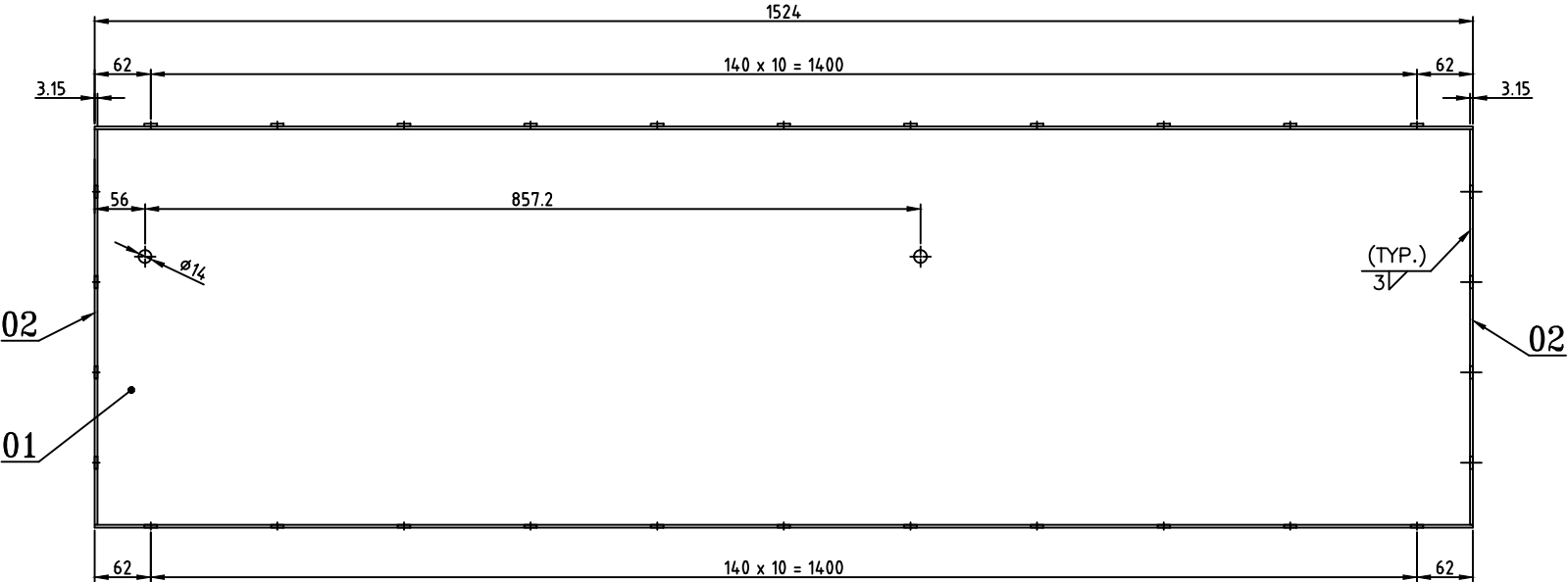
	02	SHEET 3.15 38 X 438				15 011 182			0.400			
						IS 1079D			2			
	01	SHEET 3.15 514 X 1285				15 011 182			16.330			
						IS 1079D			1			
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT			
					VAR NO	MATERIAL SPECN		D1	QUANTITY			GS

REV 01	DATE	ALTERED :
		CHECKED :
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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				PROJECT : NTPC – TALCHER S.O. NO. : 7936			
<div> 361-257</div> <div>Bharat Heavy Electricals Ltd</div> <div>UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012</div>				DRN	G.DEMUDU	DATE 29.04.2024	
				CHD	SMG.NAIDU /ANVK.KISHORE	29.04.2024	
				APPD	Y.PRASANNA KUMAR	29.04.2024	
DEPT HT ENGG	GRADE OF UNTOL. DIM C/M/F		SCALE 1:7.5 & NTS	WEIGHT (Kg) 17.130	REF TO ASSY / OLD DWG 3-04-114-00368		
CODE 320							
TITLE BENT PANEL					DRAWING NO : 3-04-114-U8455		REV 00

DRAWING NO: 3-04-114-U8456



ITEM NO.02


VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
	02	SHEET 3.15 38 X 438				15 011 182			0.400	
						IS 1079D			2	
	01	SHEET 3.15 514 X 1524				15 011 182			19.350	
						IS 1079D			1	
					VAR NO	MATERIAL SPECN		D1	QUANTITY	

REV	DATE	ALTERED :
01		CHECKED :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936



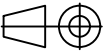
Bharat Heavy Electricals Ltd

UNIT: HEAVY PLATES AND VESSELS PLANT
VISAKHAPATNAM – 530012

DEPT HT ENGG

CODE 320

GRADE OF UNTOL. DIM C/M/F



SCALE

1:7.5 & NTS

WEIGHT (Kg)

20.150

NAME G.DEMUDU

DATE 29.04.2024

CHD SMG.NAIDU/ANVK.KISHORE

29.04.2024

APPD Y.PRASANNA KUMAR

29.04.2024

REF TO ASSY / OLD DWG

3-04-114-00369

TITLE

BENT PANEL

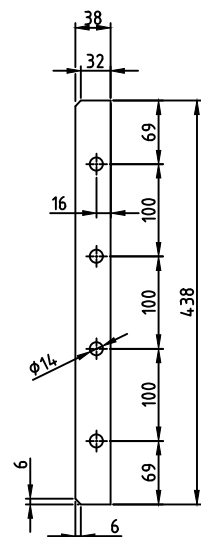
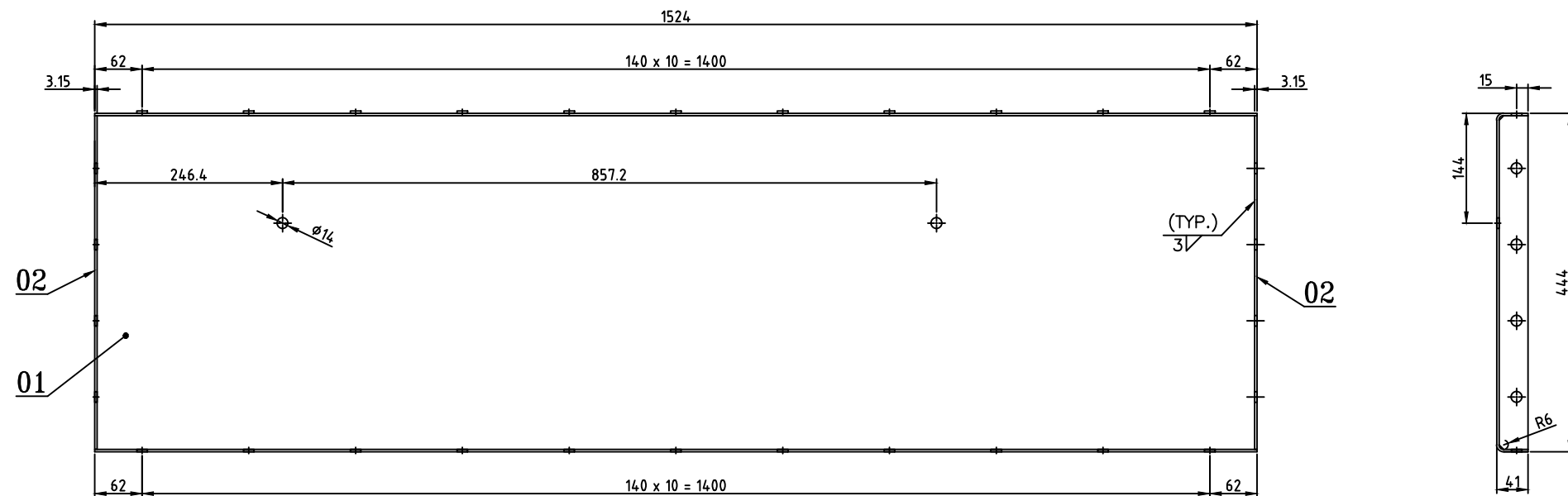
DRAWING NO :

3-04-114-U8456

REV

00

DRAWING NO: 3-04-114-U8457


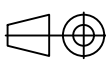


ITEM NO.02

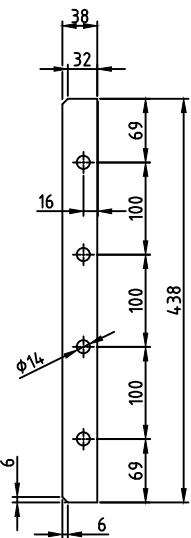
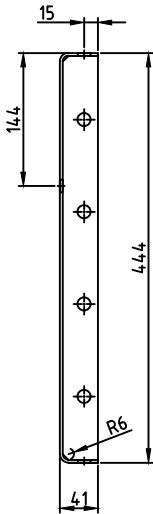
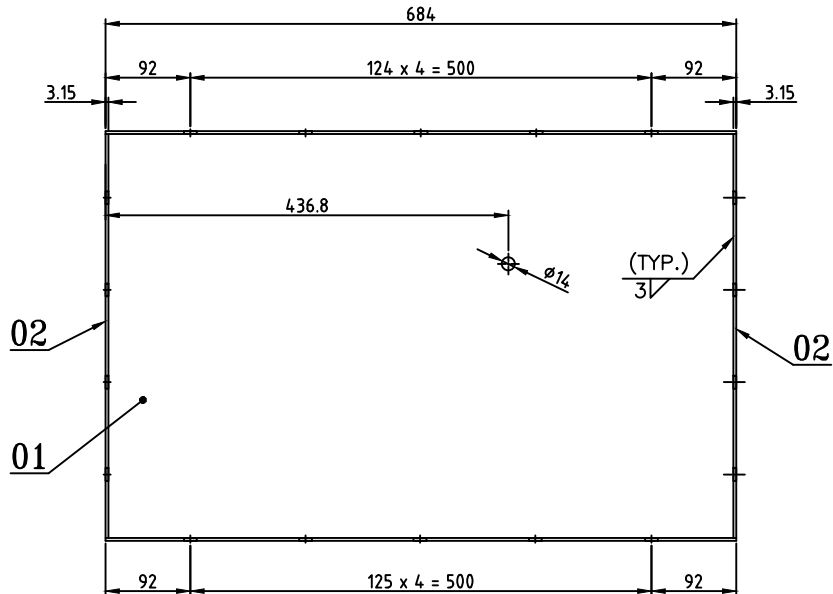
	02	SHEET 3.15 38 X 438				15 011 182		0.400	
						IS 1079D		2	
	01	SHEET 3.15 514 X 1524				15 011 182		19.350	
						IS 1079D		1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
					VAR NO	MATERIAL SPECN	D1	QUANTITY	GS

REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				PROJECT : NTPC – TALCHER S.O. NO. : 7936			
 Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012				DRN		NAME G.DEMUDU	DATE 29.04.2024
				CHD		SMG.NAIDU/ANVK.KISHORE	29.04.2024
				APPD		Y.PRASANNA KUMAR	29.04.2024
DEPT HT ENGG			SCALE	WEIGHT (Kg) 20.150	REF TO ASSY / OLD DWG 3-04-114-00369		
CODE 320	GRADE OF UNTOL. DIM C/M/F		1:7.5 & NTS				
TITLE BENT PANEL					DRAWING NO : 3-04-114-U8457		REV 00

DRAWING NO: 3-04-114-U8458





ITEM NO.02

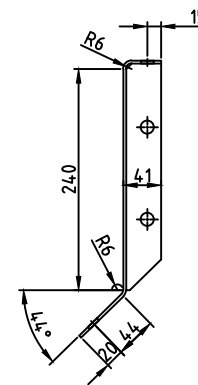
REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

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	02	SHEET 3.15 38 X 438				15 011 182			0.400	
						IS 1079D			2	
	01	SHEET 3.15 514 X 684				15 011 182			8.690	
						IS 1079D			1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
					VAR NO	MATERIAL SPECN			QUANTITY	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			PROJECT : NTPC – TALCHER S.O. NO. : 7936			
<div> 361-257</div> <div>Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012</div>			DRN	NAME G.DEMUDU	DATE 29.04.2024	
			CHD	SMG.NAIDU/ANVK.KISHORE	29.04.2024	
			APPD	Y.PRASANNA KUMAR	29.04.2024	
DEPT HT ENGG	GRADE OF UNTOL. DIM C/M/F		SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG	
CODE 320			1:7.5 & NTS	9.490	3-04-114-00370	
TITLE					DRAWING NO : 3-04-114-U8458	REV 00
BENT PANEL						

DRAWING NO: 3-04-114-U8459



	02	SHEET 3.15 38 X 246				15 011 182			0.230	
						IS 1079D			2	
	01	SHEET 3.15 360 X 1175.6				15 011 182			10.460	
						IS 1079D			1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
					VAR NO	MATERIAL SPECN		D1 <th>QUANTITY</th> <td></td>	QUANTITY	

REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936



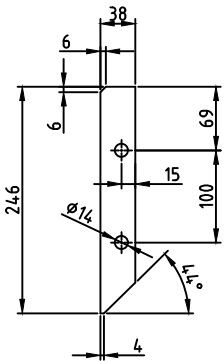
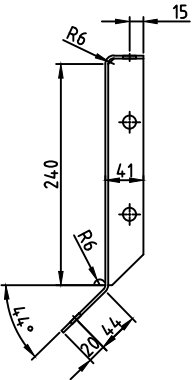
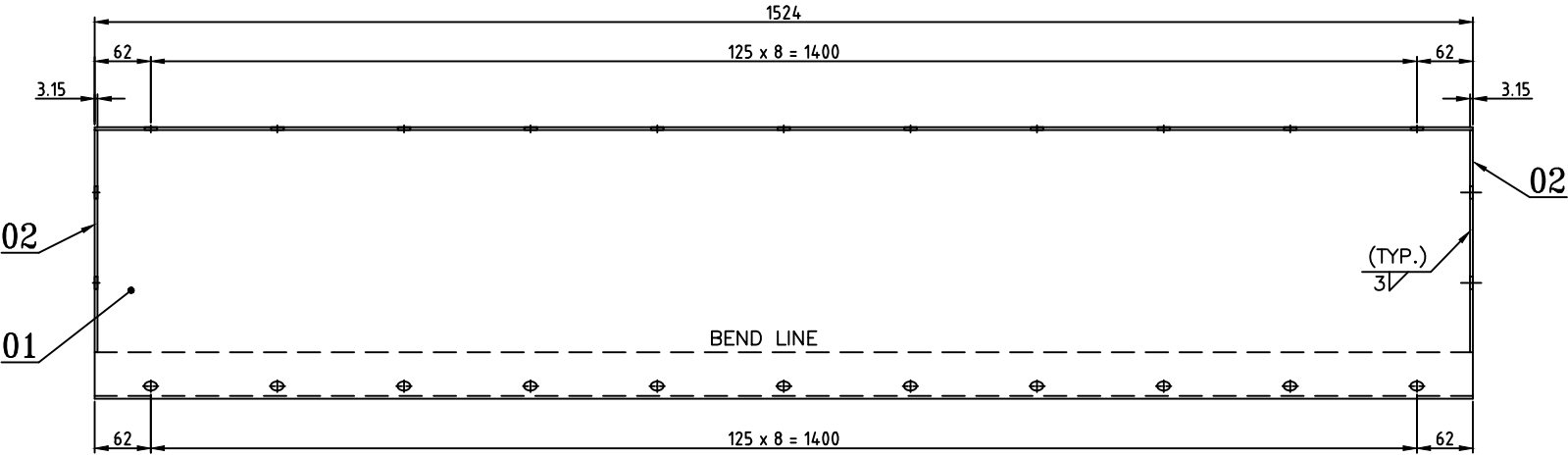
Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES AND VESSELS PLANT
VISAKHAPATNAM – 530012

DRN	NAME G.DEMUDU	DATE 30.04.2024
CHD	SMG.NAIDU /ANVK.KISHORE	30.04.2024
APPD	Y.PRASANNA KUMAR	30.04.2024

DEPT HT ENGG	GRADE OF UNTOL. DIM C/M/F		SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG
CODE 320			1:7.5 & NTS	10.920	3-04-114-00371

TITLE	DRAWING NO :	REV
BENT PANEL	3-04-114-U8459	00

DRAWING NO: 3-04-114-U8460



ITEM NO.02


VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
	02	SHEET 3.15 38 X 246				15 011 182			0.230	
						IS 1079D			2	
	01	SHEET 3.15 360 X 1524				15 011 182			13.560	
						IS 1079D			1	
					VAR NO	MATERIAL SPECN		D1	QUANTITY	

REV	DATE	ALTERED :
01		CHECKED :
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

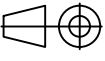
PROJECT : NTPC – TALCHER
S.O. NO. : 7936

361-257

Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES AND VESSELS PLANT
VISAKHAPATNAM – 530012

DEPT
HT ENGG
CODE
320

GRADE OF
UNTOL. DIM
C/M/F



SCALE
1:7.5 & NTS

WEIGHT (Kg)
14.020

NAME
G.DEMUDU
DATE
30.04.2024

CHD
SMG.NAIDU/ANVK.KISHORE
30.04.2024

APPD
Y.PRASANNA KUMAR
30.04.2024

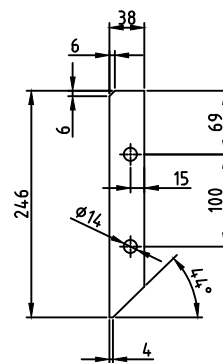
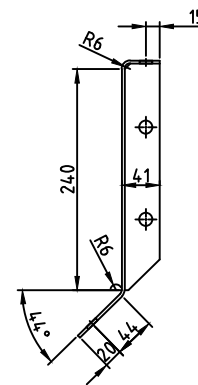
REF TO ASSY / OLD DWG
3-04-114-00372

DRAWING NO :
3-04-114-U8460

REV
00

TITLE
BENT PANEL

Technical drawing of a rectangular plate. The overall width is 684. The overall height is 125 x 4 = 500. The plate is divided into four quadrants by a horizontal centerline and a vertical centerline. The distance from the left edge to the vertical centerline is 92. The distance from the right edge to the vertical centerline is 92. The distance from the top edge to the horizontal centerline is 92. The distance from the bottom edge to the horizontal centerline is 92. The plate is labeled with '01' on the left side and '02' on the right side. A 'BEND LINE' is indicated by a dashed line. A note '(TYP.)' is present near the bottom right corner. The plate is shown with a 3.15 thickness on the left and right edges.


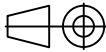


ITEM NO.02

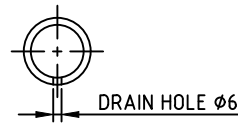
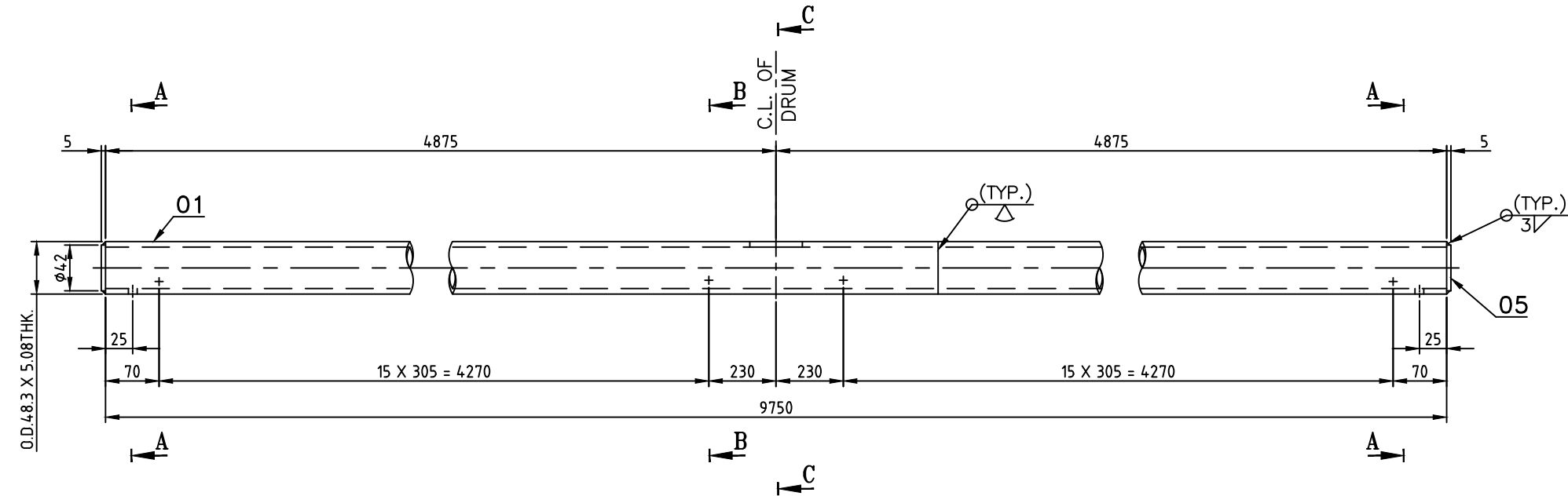
	02	SHEET 3.15 38 X 246				15 011 182			0.230				
						IS 1079D			2				
	01	SHEET 3.15 360 X 684				15 011 182			6.000				
						IS 1079D			1				
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	G/S			
					VAR NO	MATERIAL SPECN		D1	QUANTITY				

REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

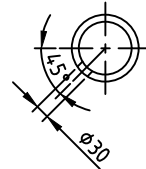
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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			PROJECT : NTPC – TALCHER S.O. NO. : 7936		
 Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012			DRN	NAME G.DEMUDU	DATE 30.04.2024
			CHD	SMG.NAIDU /ANVK.KISHORE	30.04.2024
			APPD	Y.PRASANNA KUMAR	30.04.2024
DEPT HT ENGG	GRADE OF UNTOL. DIM		SCALE 1:7.5 & NTS	WEIGHT (Kg) 6.460	REF TO ASSY / OLD DWG 3-04-114-00373
CODE 320	C/M/F				
TITLE BENT PANEL				DRAWING NO : 3-04-114-U8461	REV 00

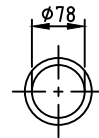
DRAWING NO: 3-04-116-U8462



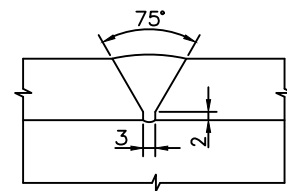
SECTION - AA



SECTION - BB



SECTION - CC



WELD DETAIL OF
PIPE TO PIPE

VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
	02	END PLATE 5 X Ø89				15 011 029			0.017	
						IS 2062 E250A			2	
	01	PIPE D88.9 X 5.49 9750 LG.				15 182 128			110.000	
						SA 106 GR.B			1	
					VAR NO	MATERIAL SPECN		D1	QUANTITY	

REV	DATE	ALTERED :
01		CHECKED :
ZONE		

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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936



Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES AND VESSELS PLANT
VISAKHAPATNAM – 530012

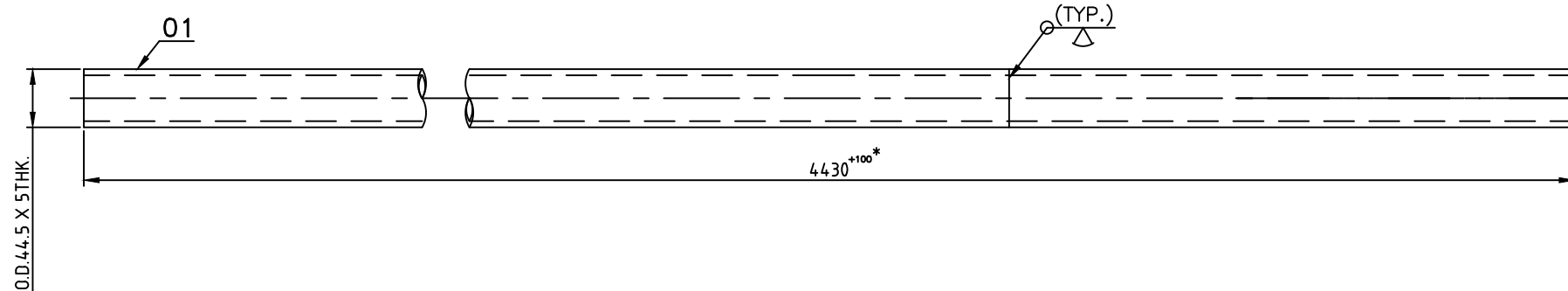
DRN	NAME	DATE
CHD	G.DEMUDU	03.05.2024
APPD	SMG.NAIDU/ANVK.KISHORE	03.05.2024
	Y.PRASANNA KUMAR	03.05.2024

DEPT	HT ENGG	GRADE OF UNTOL. DIM	SCALE	WEIGHT (Kg)
CODE	320	C/M/F	1:5	110.034

REF TO ASSY / OLD DWG
3-04-114-00377

TITLE	DRAWING NO :	REV
FEED HEADER	3-04-114-U8462	00

DRAWING NO: 3-04-116-U8463



* THIS EXTRA LENGTH 100 mm IS TO BE CUT OFF DURING ASSEMBLY AS SHOP.


	01	TUBE 44.5 x 5; 4430 LG. + 100				15 086 071 SA 210 GR.A1		20.707 1	
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD.	DRAWING NUMBER	ITEM NO.	MATERIAL CODE	A/C/P	UNIT WEIGHT	G/S
					VAR NO.	MATERIAL SPECN	D1	QUANTITY	

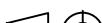
REV 01	DATE	ALTERED :
		CHECKED :
ZONE		

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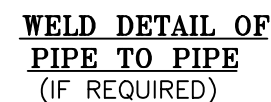
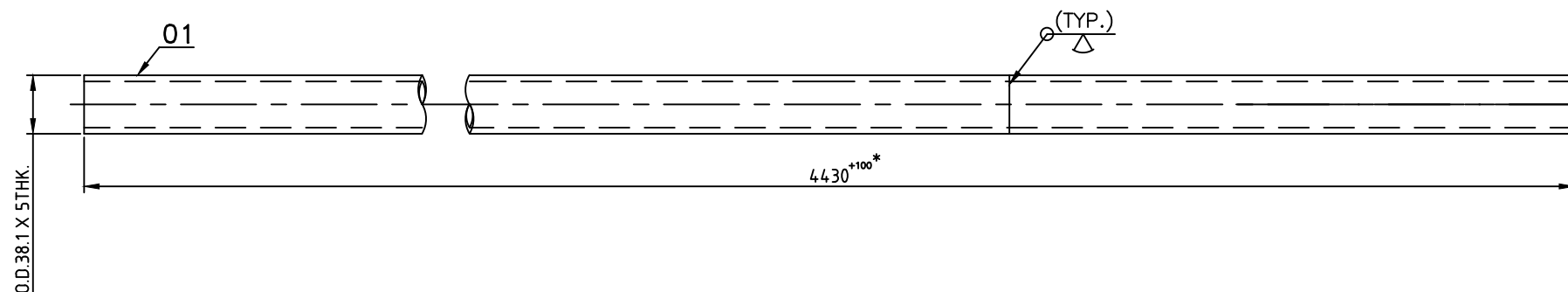
TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936

 361-257	Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM - 530012	DRN	NAME G.DEMUDU	DATE 04.05.2024
		CHD	SMG.NAIDU/ANVK.KISHORE	04.05.2024
		APPD	Y.PRASANNA KUMAR	04.05.2024

DEPT HT ENGG	GRADE OF UNTOL. DIM		SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG	
CODE 320	C/M/F		1:5	24.700	3-04-114-00379	
TITLE					DRAWING NO :	REV
TUBE					3-04-114-U8463	00

DRAWING NO: 3-04-116-U8464



* THIS EXTRA LENGTH 100 mm IS TO BE CUT OFF DURING ASSEMBLY AS SHOP.


	01	TUBE 38.1 x 5; 4430 LG. + 100				15 486 053			17.626
						SA 210 GR.A1			1
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
					VAR NO	MATERIAL SPECN		D1	QUANTITY


REV	DATE	ALTERED :
01		CHECKED :
ZONE		

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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

PROJECT : NTPC – TALCHER
S.O. NO. : 7936

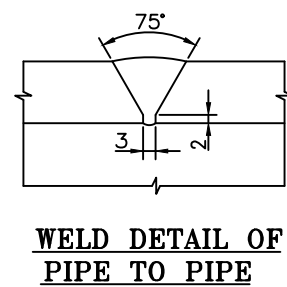
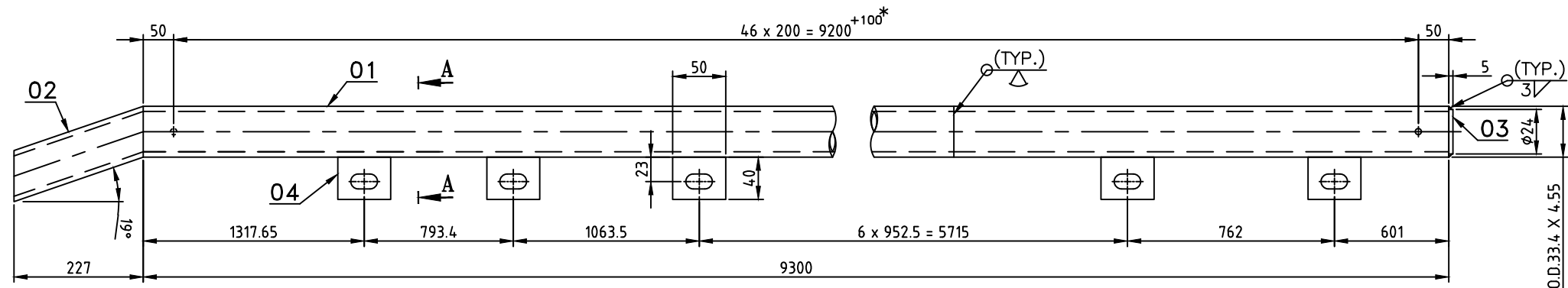
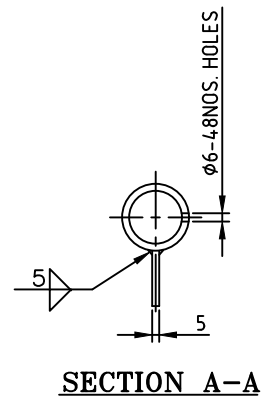
 <p>Bharat Heavy Electricals Ltd</p> <p>UNIT: HEAVY PLATES AND VESSELS PLANT</p> <p>VISAKHAPATNAM — 530012</p> <p>361-257</p>	DRN	NAME G.DEMUDU	DATE 04.05.2024
	CHD	SMG.NAIDU/ANVK.KISHORE	04.05.2024
	APPD	Y.PRASANNA KUMAR	04.05.2024

DEPT HT ENGG	GRADE OF UNTOL. DIM C/M/F		SCALE 1:5	WEIGHT (Kg) 17.626	REF TO ASSY / OLD DWG 3-04-114-00380
CODE 320					

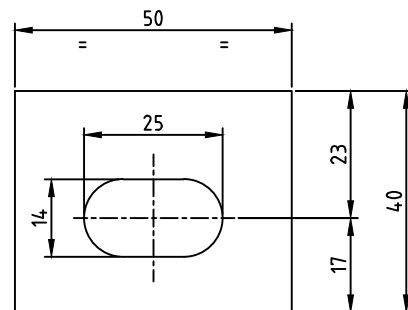
TITLE	DRAWING NO :	REVISION
TUBE	3-04-114-U8464	0

A3 SIZE

DRAWING NO.: 3-04-114-U8465



WELD DETAIL OF
PIPE TO PIPE




DETAIL OF ITEM NO.03

* THIS EXTRA LENGTH OF 100 mm IS TO BE CUT OFF DURING ASSEMBLY AT SHOP.

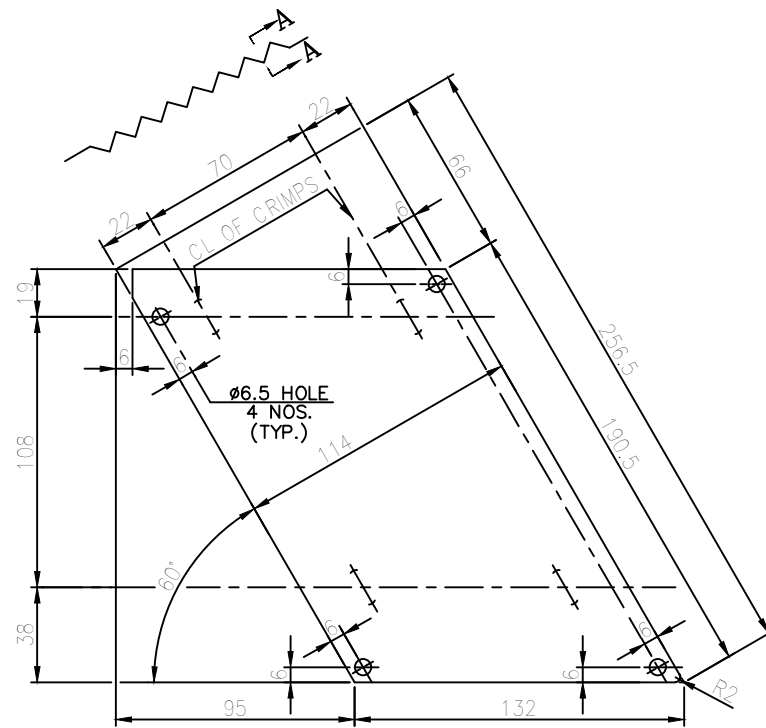
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	CS
	04	PLATE 5 X 40 X 50				15 011 029 IS 2062 E250A			0.080 9	
	03	END PLATE 5 X Ø24				15 011 029 IS 2062 E250A			0.020 1	
	02	PIPE D33.4 X 4.55 252 LG.				15 182 011 SA 106 GR.B			0.810 1	
	01	PIPE D33.4 X 4.55 9300 + 100 LG.				15 182 011 SA 106 GR.B			30.100 1	
					VAR NO	MATERIAL SPECN		D1	QUANTITY	

REV	DATE	ALTERED :
01		CHECKED :
ZONE		

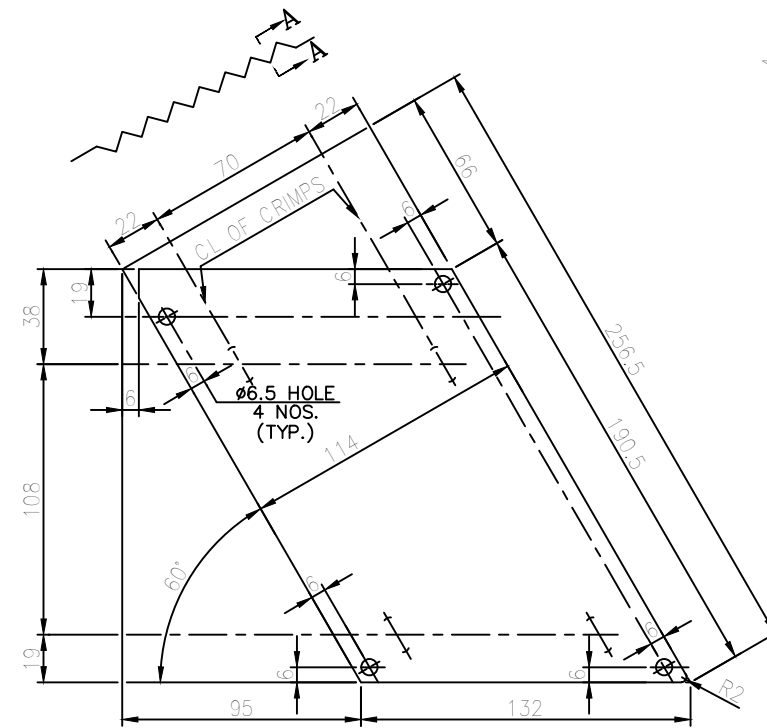
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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		PROJECT : NTPC – TALCHER S.O. NO. : 7936	
 361-257	Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES AND VESSELS PLANT VISAKHAPATNAM – 530012		NAME G.DEMUDU
			DATE 06.05.2024
			CHD SMG.NAIDU/ANVK.KISHORE
DEPT HT ENGG CODE 320	GRADE OF UNTOL. DIM C/M/F	SCALE NTS	WEIGHT (Kg) 31.650
TITLE CONTIUOUS BLOW DOWN HEADER		REF TO ASSY / OLD DWG 3-04-114-00378	
		DRAWING NO : 3-04-114-U8465	
		REV 00	

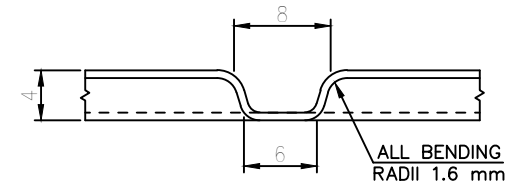
DRAWING NO: 3-04-114-U8466



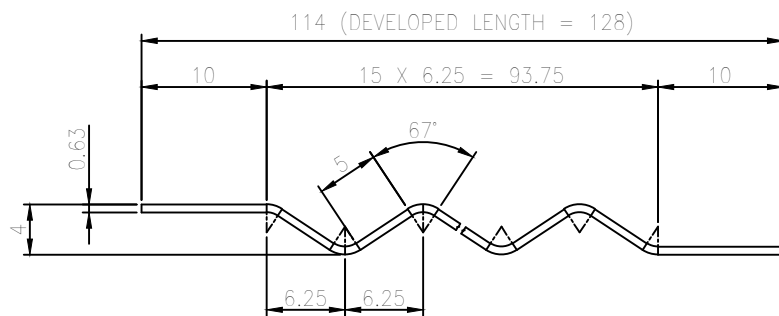
STYLE-01



STYLE-02



CRIMP SECTION A-A





ENLARGED SECTION OF CORRUGATIONS

02		SHEET 0.63 X 128 X 256.5				15 011 642			0.162	
						IS 2062 GR.A				
01		SHEET 0.63 X 128 X 256.5				15 011 642			0.162	
						IS 2062 GR.A				
STYLE NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT	GS
					VAR NO	MATERIAL SPECN	DI		QUANTITY	

REV 01	DATE	ALTERED :
		CHD & APPD:
ZONE		

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TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			PROJECT : NTPC – TALCHER S.O. NO. : 7936		
 Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012			DRN	NAME G.DEMUDU	DATE 16.03.2024
			CHD	SMG.NAIDU/ANVK.KISHORE	16.03.2024
			APPD	Y.PRASANNA KUMAR	16.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE N.T.S	WEIGHT (Kg)	REF TO ASSY / OLD DWG 1–04–112–00083
CODE 320					
TITLE CORRUGATED SHEET				DRAWING NO : 3–04–112–U8466	REV 00

CORRUGATED SHEET

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IN ANY WAY DETRIMENTAL TO THE INTEREST OF BHEL.

REV 01	DATE	ALTERED :
		CHD & APPD :

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

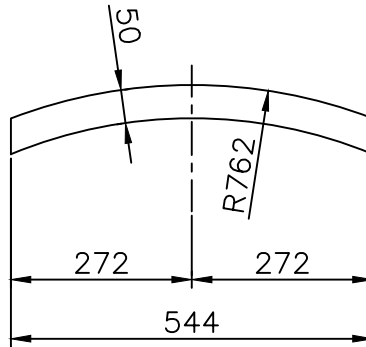




	PLATE 6;50x896		15 211 092	C		2.110
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div> 355-056</div>		Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012		DRN	NAME GDEMUDU	DATE 08.03.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	08.03.2024
				APPD	Y.PRASANNA KUMAR	08.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:10	WEIGHT (Kg) 2.110	REF TO ASSY / OLD DWG 4—04—114—00670	
CODE 320						
TITLE PLATE					DRAWING NO : 4—04—114—U8413	REV 00

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		CHD & APPD :

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

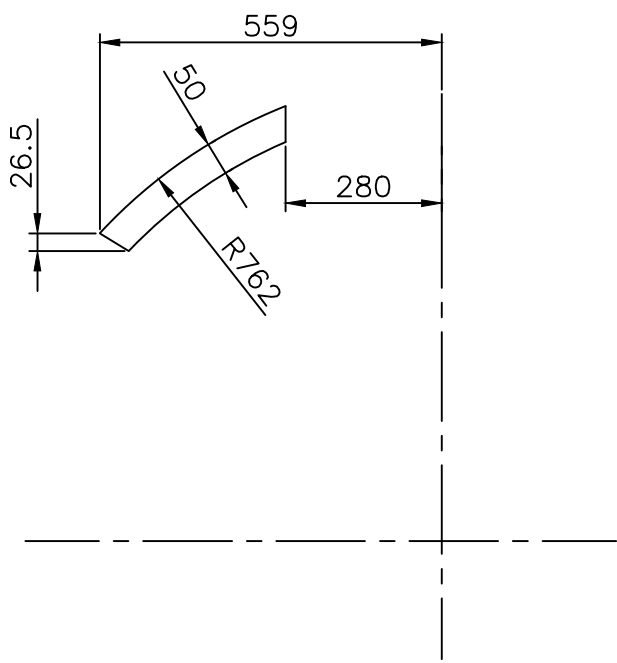




	PLATE 6; 50x330		15 211 092	C		0.770
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div></div> <div>355-056</div>		Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012		DRN	NAME GDEMUDU	DATE 08.03.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	08.03.2024
				APPD	Y.PRASANNA KUMAR	08.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:10	WEIGHT (Kg) 0.770	REF TO ASSY / OLD DWG 4-04-114-00671	
CODE 320						
TITLE PLATE					DRAWING NO : 4-04-114-U8414	REV 00

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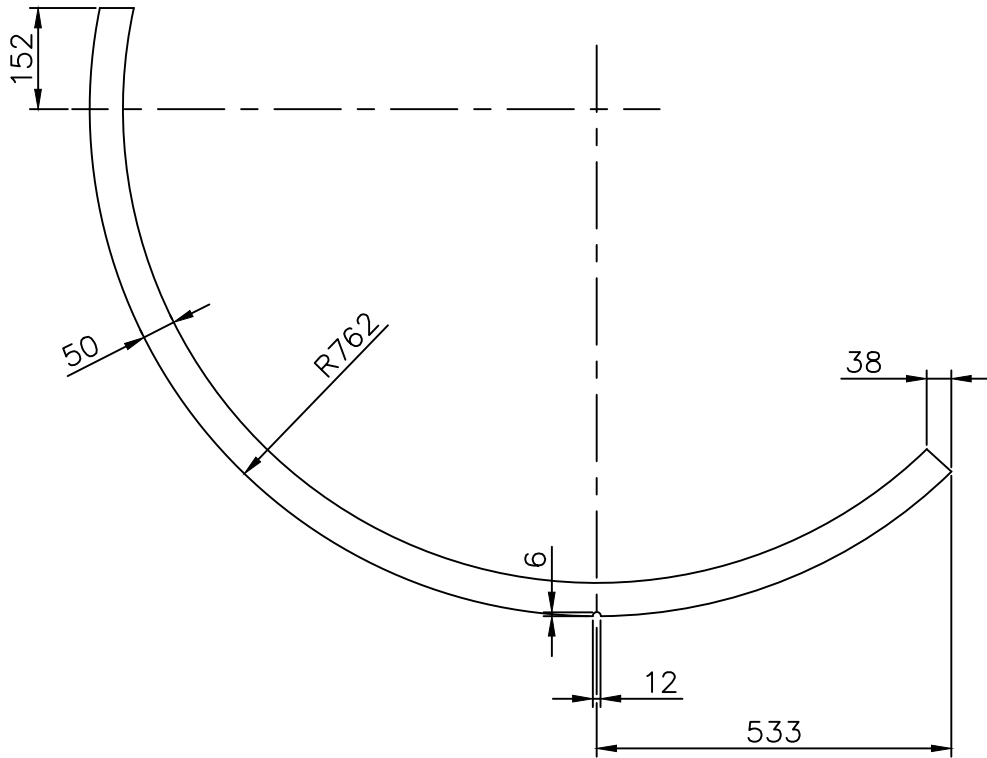




	PLATE 6;50x1930		15 211 092	C		4.540
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div><div>Bharat Heavy Electricals Ltd</div><div>UNIT: HEAVY PLATES & VESSELS PLANT</div><div>VISAKHAPATNAM — 530012</div><div>355-056</div></div>				DRN GDEMUDU		DATE 09.03.2024	
				CHD SMG.NAIDU/ANVK.KISHORE		09.03.2024	
				APPD Y.PRASANNA KUMAR		09.03.2024	
DEPT HTE	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE 1:10	WEIGHT (Kg) 4.540	REF TO ASSY / OLD DWG 4-04-114-00672		
CODE 320							
TITLE PLATE					DRAWING NO : 4-04-114-U8415		REV 00

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		CHD & APPD :

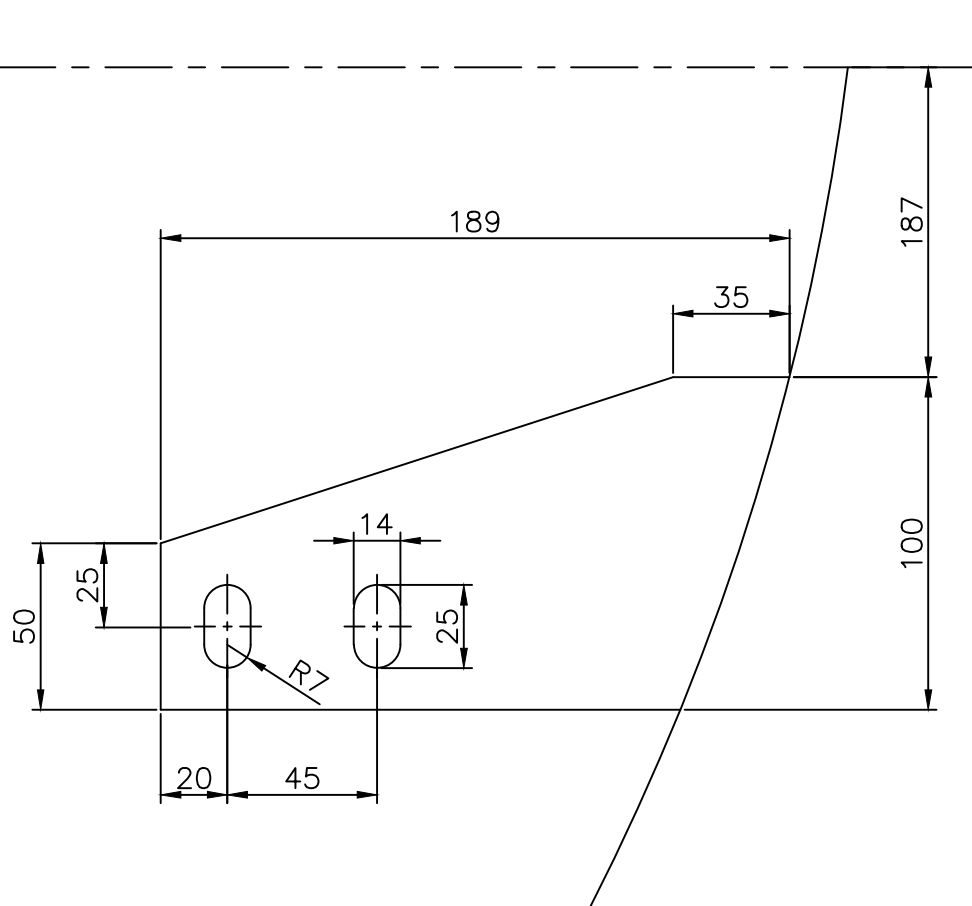


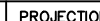
	PLATE 6;100x189		15 211 092	C		0.890
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY



355-056

Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES & VESSELS PLANT
VISA KHAPATNAM - 530012

DRN	NAME GDEMUDU	DATE 09.03.2024
CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024
APPD	Y.PRASANNA KUMAR	09.03.2024

DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE NTS	WEIGHT (Kg) 0.890	REF TO ASSY / OLD DWG 4-04-114-00673	
CODE 320						
TITLE PLATE					DRAWING NO : 4-04-114-U8416	REV 00

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		CHD & APPD :

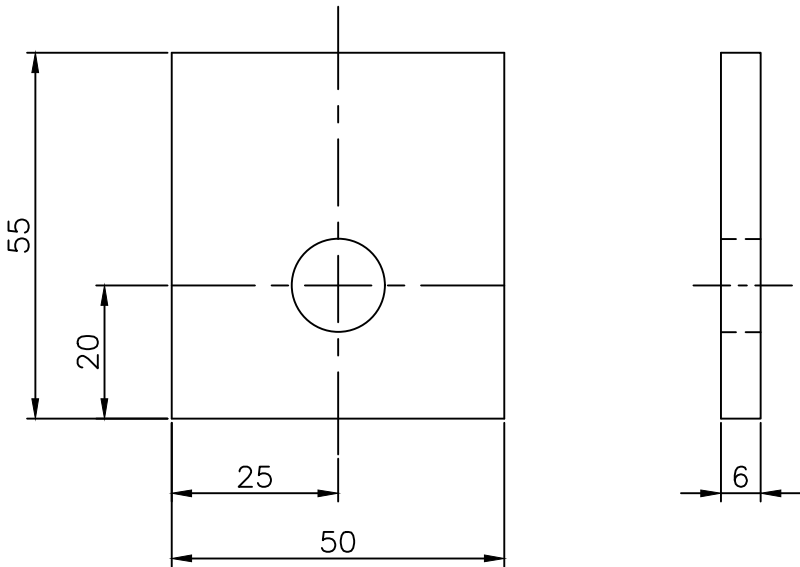




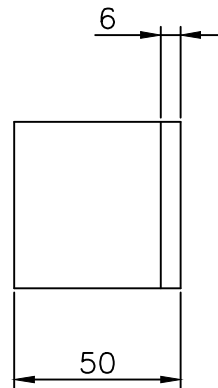
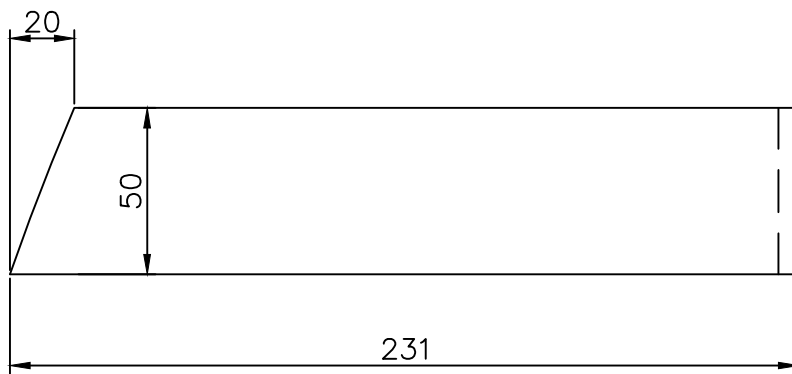
	PLATE 60x50x55		15 211 092	C		0.120
			IS 2062 GR.A			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div></div> <div>355-056</div>		Bharat Heavy Electricals Ltd		NAME		DATE		
		UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012		DRN	GDEMUDU	09.03.2024		
				CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024		
				APPD	Y.PRASANNA KUMAR	09.03.2024		
DEPT	ALL DIMENSIONS ARE IN MM		SCALE	NTS	WEIGHT (Kg)	REF TO ASSY / OLD DWG 4-04-112-00391		
HTE								
CODE	320							
TITLE						DRAWING NO :		REV
FLAT						4-04-114-U8417		00



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		CHD & APPD :



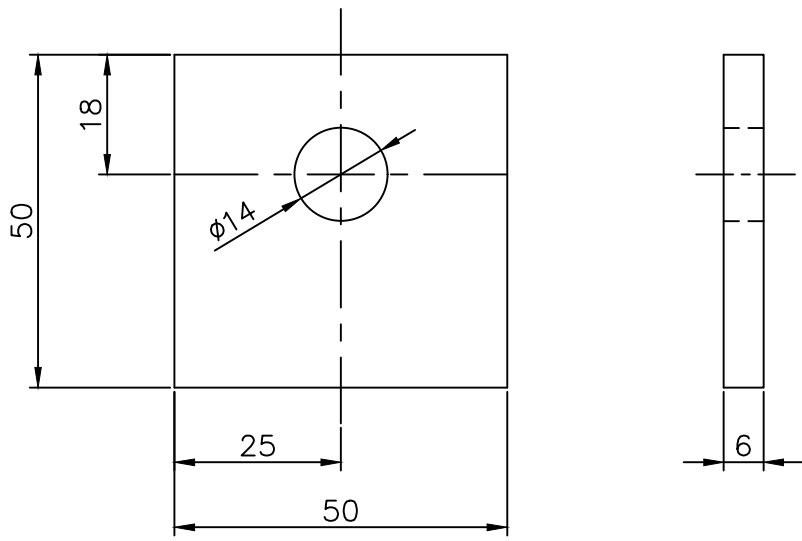
	FLAT 50 X 6; 279LG.		15 008 011	C		0.670
			IS 2062 GR.A			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div></div> <div>355-056</div>			Bharat Heavy Electricals Ltd		NAME		DATE		
					DRN	GDEMUDU	09.03.2024		
					CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024		
		APPD	Y.PRASANNA KUMAR		09.03.2024				
UNIT: HEAVY PLATES & VESSELS PLANT		VISAKHAPATNAM — 530012							
DEPT	HTE	ALL DIMENSIONS ARE IN MM		SCALE	NTS	WEIGHT (Kg)	0.670	REF TO ASSY / OLD DWG 4-04-112-00674	
CODE	320								
TITLE						DRAWING NO :		REV	
PLATE						4-04-114-U8418		00	



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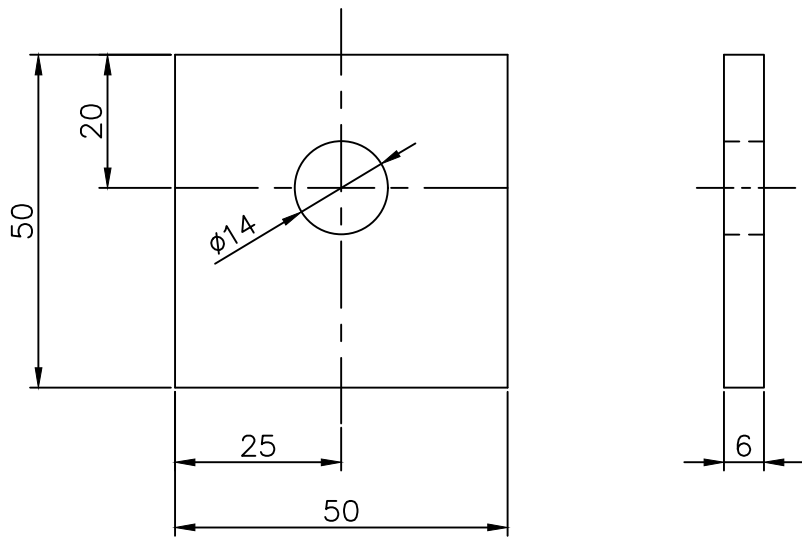
VARIANT NUMBER	DESCRIPTION	STD	15 008 011 IS 2062 GR.A	C	UNIT	0.120
			MATERIAL CODE			UNIT WEIGHT
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL SPECN	A/C/P	UNIT	QUANTITY

<div></div> <div>355-056</div>			Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012			DRN	NAME GDEMUDU	DATE 09.03.2024
						CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024
						APPD	Y.PRASANNA KUMAR	09.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE NTS	WEIGHT (Kg) 0.120	REF TO ASSY / OLD DWG 4-04-112-00675			
CODE 320								
TITLE PLATE					DRAWING NO : 4-04-114-U8419		REV 00	


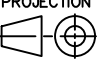
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	FLAT 50 X 6; 50LG.		15 008 011	C		0.120
			IS 2062 GR.A			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div></div> <div>355-056</div>		Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012		DRN	NAME GDEMUDU	DATE 09.03.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024
				APPD	Y.PRASANNA KUMAR	09.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE NTS	WEIGHT (Kg) 0.120	REF TO ASSY / OLD DWG 4-04-112-00388	
CODE 320						
TITLE FLAT					DRAWING NO : 4-04-114-U8420	
					REV 00	

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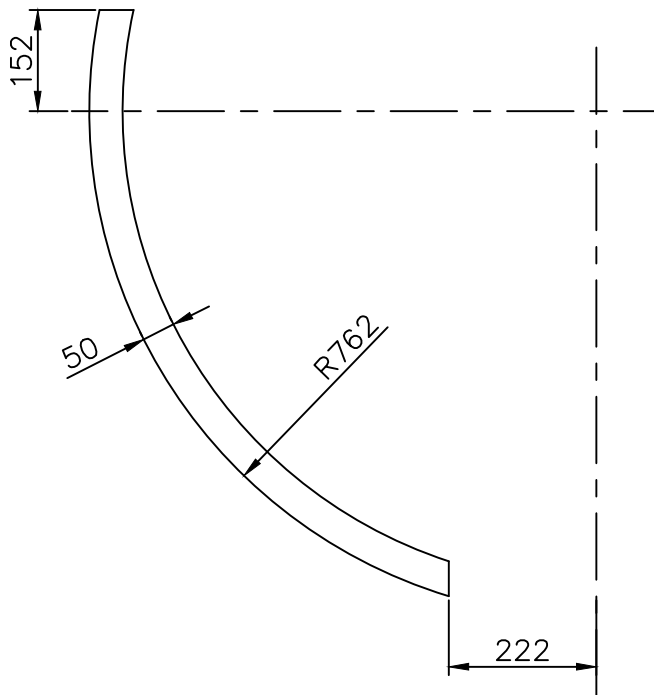




	PLATE 6;50x1098		15 211 092	C		1.400
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div></div> <div>355-056</div>			Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012			DRN	NAME GDEMUDU	DATE 09.03.2024
						CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024
						APPD	Y.PRASANNA KUMAR	09.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:10	WEIGHT (Kg) 1.400	REF TO ASSY / OLD DWG 4-04-114-00676			
CODE 320								
TITLE PLATE					DRAWING NO : 4-04-114-U8421		REV 00	

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		CHD & APPD :

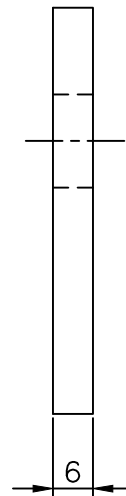
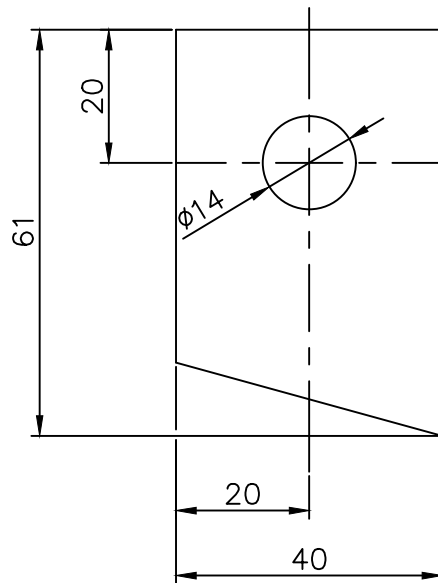


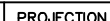
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			IS 2062 GR.A			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY



355-056

Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES & VESSELS PLANT
VISA KHAPATNAM - 530012

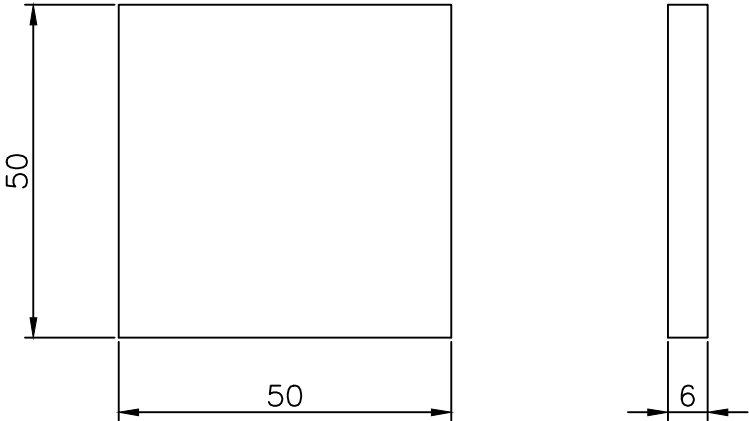
DRN	NAME GDEMUDU	DATE 09.03.2024
CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024
APPD	Y.PRASANNA KUMAR	09.03.2024

DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE NTS	WEIGHT (Kg) 0.120	REF TO ASSY / OLD DWG 4-04-112-00677	
CODE 320						
TITLE PLATE					DRAWING NO : 4-04-114-U8422	REV 00



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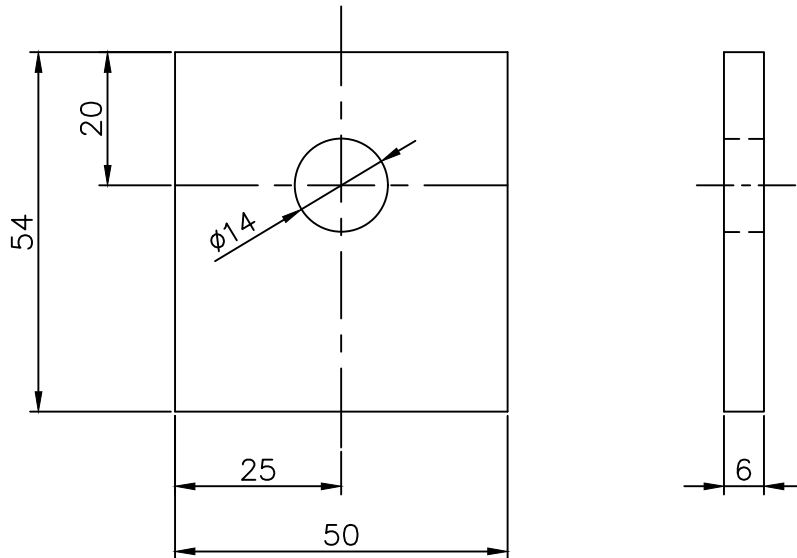


	FLAT 50 X 6; 50LG.		15 008 011	C		0.120
			IS 2062 GR.A			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY



<div></div> <div>355-056</div>		Bharat Heavy Electricals Ltd		NAME		DATE		
		UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012		DRN	GDEMUDU	09.03.2024		
				CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024		
				APPD	Y.PRASANNA KUMAR	09.03.2024		
DEPT	ALL DIMENSIONS ARE IN MM		SCALE	NTS	WEIGHT (Kg)	REF TO ASSY / OLD DWG 4-04-112-00678		
HTE								
CODE	320				0.120			
TITLE						DRAWING NO :		REV
FLAT						4-04-114-U8423		00

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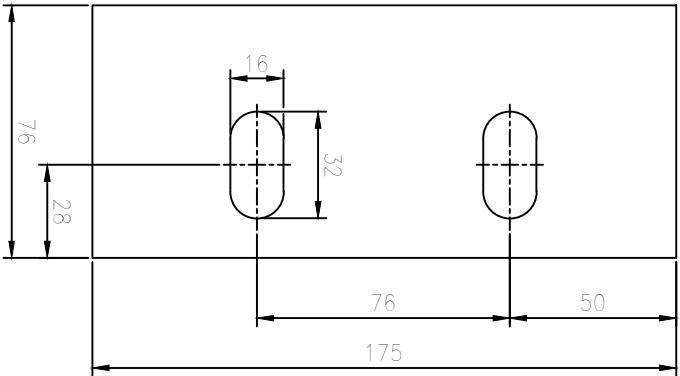


VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	MATERIAL SPECN	C A/C/P UNIT	0.130
						UNIT WEIGHT QUANTITY


<div> 355-056</div> <div>Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012</div>					DRN	NAME GDEMUDU	DATE 09.03.2024
					CHD	SMG.NAIDU/ANVK.KISHORE	09.03.2024
					APPD	Y.PRASANNA KUMAR	09.03.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE NTS	WEIGHT (Kg) 0.130	REF TO ASSY / OLD DWG 4-04-112-00679		
CODE 320							
TITLE FLAT					DRAWING NO : 4-04-114-U8424		REV 00

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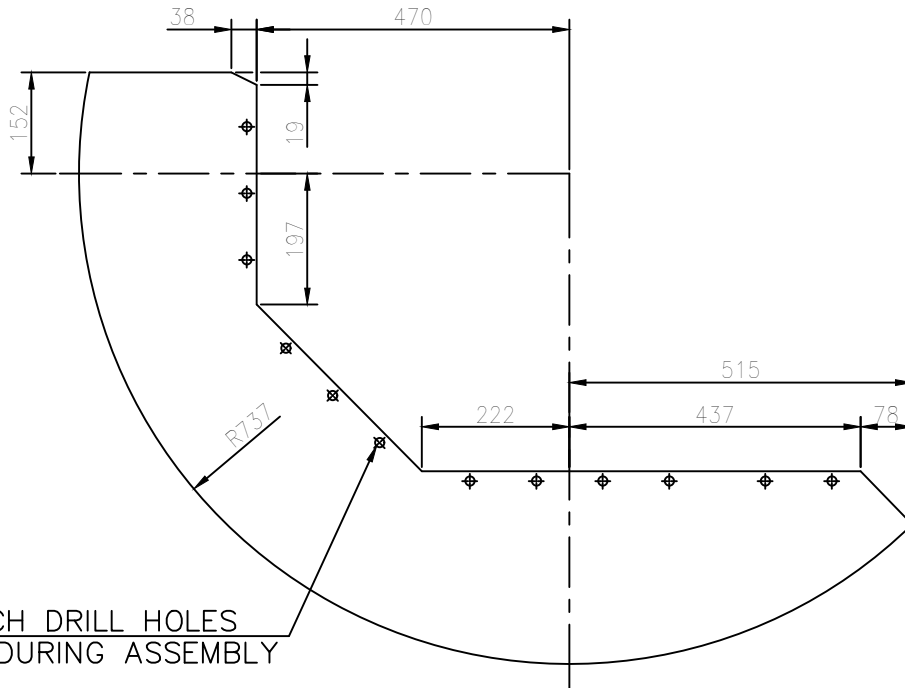


VARIANT NUMBER	PLATE 5 X 76 X 175	15 011 029	C	0.520
DESCRIPTION	STD	IS 2062 E25A		
		MATERIAL CODE		UNIT WEIGHT
	MATERIAL SPECN	A/C/P	UNIT	QUANTITY

		Bharat Heavy Electricals Ltd		NAME		DATE							
UNIT: HEAVY PLATES & VESSELS PLANT		VISAKHAPATNAM – 530012		GDEMUDU		18.03.2024							
355-056		DRN		SMG.NAIDU/ANVK.KISHORE		18.03.2024							
DEPT HTE		ALL DIMENSIONS ARE IN MM		PROJECTION		SCALE		WEIGHT (Kg)		REF TO ASSY / OLD DWG			
CODE 320		NTS		0.520		Y.PRASANNA KUMAR		18.03.2024					
TITLE										DRAWING NO :		REV	
STRIP										4-04-114-U8431		00	



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REV 01	DATE	ALTERED :
		CHD & APPD :



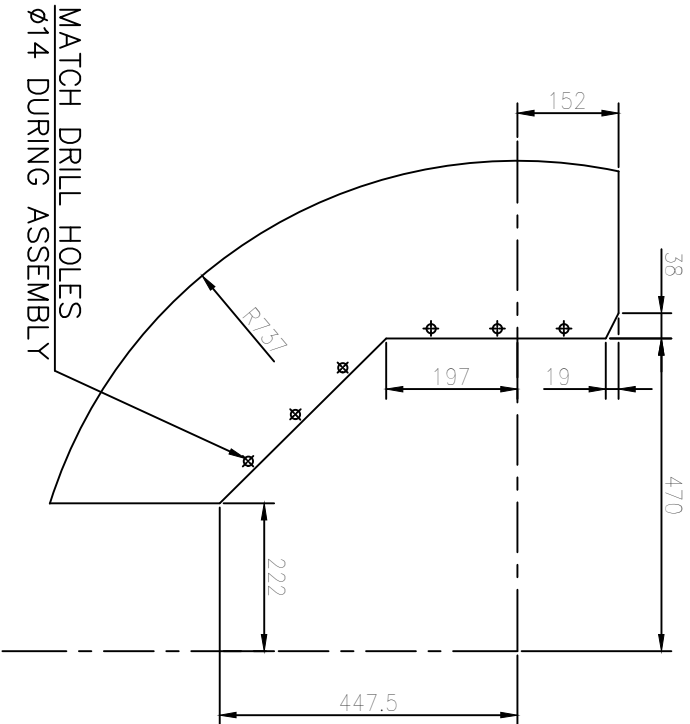
MATCH DRILL HOLES
Ø14 DURING ASSEMBLY

	PLATE 5;889x1252		15 011 029	C		17.540
			IS 2062 E250A			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div></div> <div>355-056</div> <div>Bharat Heavy Electricals Ltd</div> <div>UNIT: HEAVY PLATES & VESSELS PLANT</div> <div>VISAKHAPATNAM — 530012</div>			DRN	NAME GDEMUDU	DATE 06.04.2024
			CHD	SMG.NAIDU/ANVK.KISHORE	06.04.2024
			APPD	Y.PRASANNA KUMAR	06.04.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:10	WEIGHT (Kg) 17.540	REF TO ASSY / OLD DWG 4-04-114-00686
CODE 320					
TITLE END COVER					DRAWING NO : 4-04-114-U8432
					REV 00

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01		CHD & APPD :



VARIANT NUMBER	DESCRIPTION	STD	15 011 029		C	8.790
			IS 2062 E250A			
DESCRIPTION	STD	MATERIAL CODE	MATERIAL SPECN	A/C/P	UNIT	UNIT WEIGHT
						QUANTITY



Bharat Heavy Electricals Ltd
UNIT: HEAVY PLATES & VESSELS PLANT
VISAKHAPATNAM – 530012

NAME	DATE
GDEMUDU	06.04.2024
SMG.NAIDU/ANVK.KISHORE	06.04.2024
Y.PRASANNA KUMAR	06.04.2024

DEPT	HTE	ALL DIMENSIONS ARE IN MM	PROJECTION	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DWG
CODE	320			1:10	8.790	4-04-114-00687

TITLE

DRAWING NO :

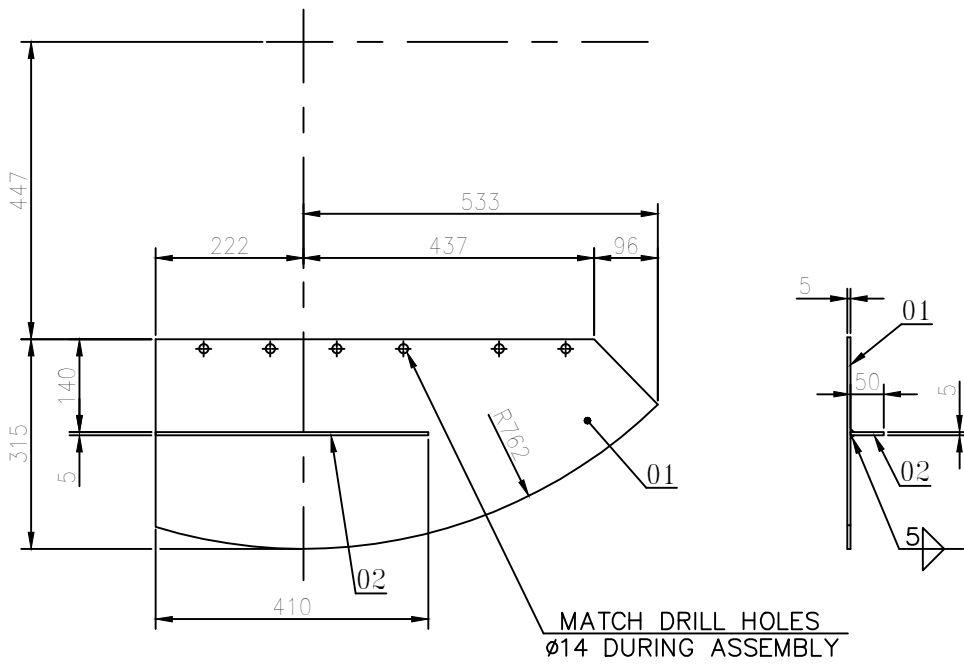
REV

END COVER



4-04-114-U8433 00

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		CHD & APPD :



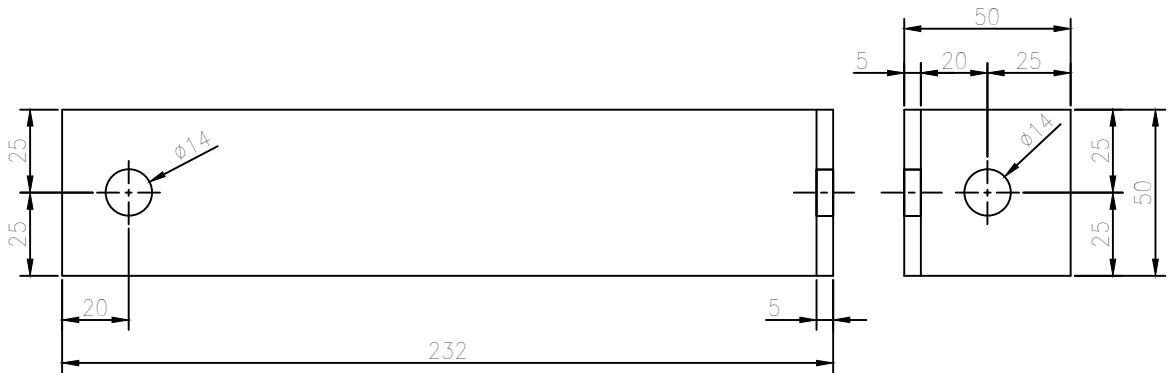
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		IS 2062 E250A			1
01	PLATE 5; 315x755	15 011 029	C		9.300
		IS 2062 E250A			1
VARIANT NUMBER	DESCRIPTION	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
		MATERIAL SPECN			QUANTITY

<div> 355-056</div> <div>Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012</div>					DRN	NAME GDEMUDU	DATE 06.04.2024
					CHD	SMG.NAIDU/ANVK.KISHORE	06.04.2024
					APPD	Y.PRASANNA KUMAR	06.04.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:10	WEIGHT (Kg) 10.100	REF TO ASSY / OLD DWG 4-04-114-00688		
CODE 320							
TITLE END PLATE					DRAWING NO : 4-04-114-U8434		REV 00



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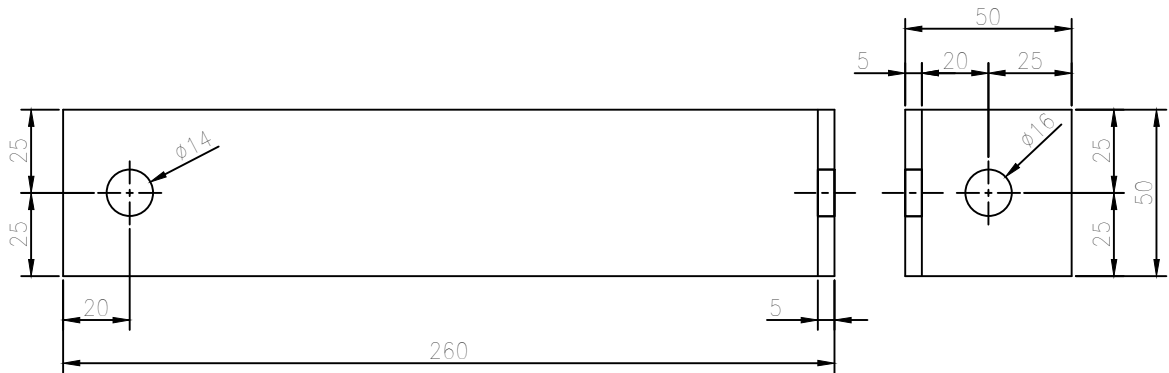
01	PLATE 5; 50x280	15 011 029 IS 2062 E250A	C		0.550
					1
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P UNIT	UNIT WEIGHT
					QUANTITY

<div></div> <div>355-056</div>			Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012		DRN	NAME GDEMUDU	DATE 10.04.2024
					CHD	SMG.NAIDU/ANVK.KISHORE	10.04.2024
					APPD	Y.PRASANNA KUMAR	10.04.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:2	WEIGHT (Kg) 0.550	REF TO ASSY / OLD DWG 4-04-114-00680		
CODE 320							
TITLE SUPPORT PLATE					DRAWING NO : 4-04-114-U8435		REV 00



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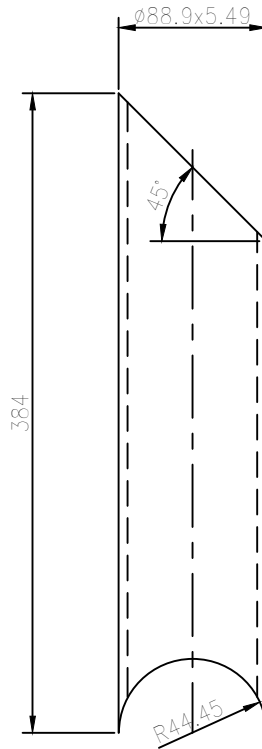


01	PLATE 5; 50x305	15 011 029 IS 2062 E250A	C		0.600
					1
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P UNIT	UNIT WEIGHT
					QUANTITY



<div> 355-056</div> <div>Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012</div>			DRN	NAME GDEMUDU	DATE 10.04.2024	
			CHD	SMG.NAIDU/ANVK.KISHORE	10.04.2024	
			APPD	Y.PRASANNA KUMAR	10.04.2024	
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:2	WEIGHT (Kg) 0.600	REF TO ASSY / OLD DWG 4-04-114-00681	
CODE 320						
TITLE SUPPORT BAR					DRAWING NO : 4-04-114-U8436	REV 00

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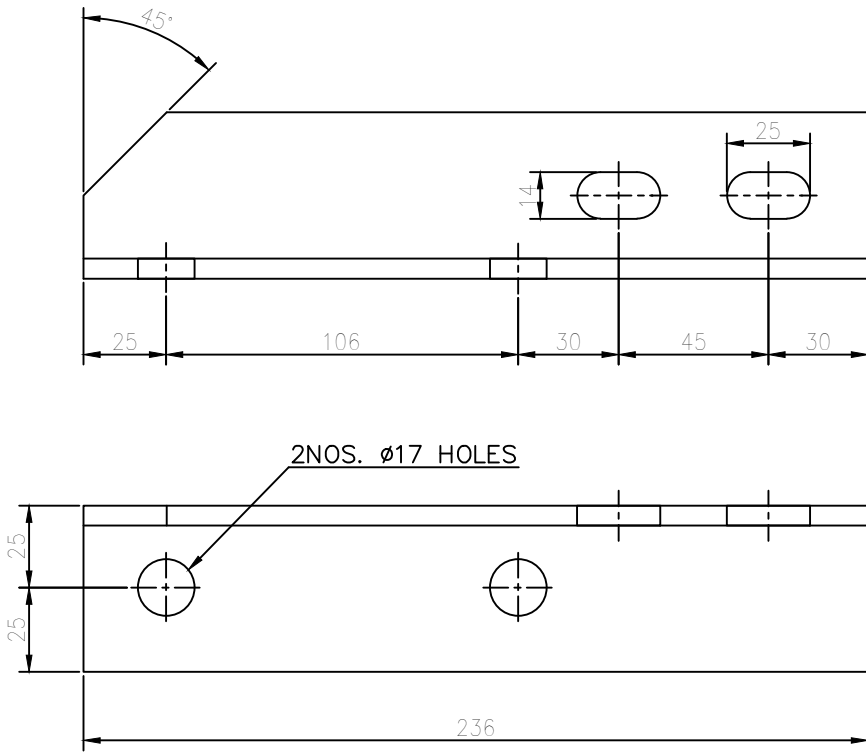


	TUBE ø88.9x5.49 384 LG.		15 182 128	C		4.000
			SA 106 GR.B			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY



<div></div> <div>355-056</div>		Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012		DRN	NAME GDEMUDU	DATE 30.04.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	30.04.2024
				APPD	Y.PRASANNA KUMAR	30.04.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1: 4	WEIGHT (Kg) 4.000	REF TO ASSY / OLD DWG 4-04-114-00685	
CODE 320						
TITLE FEED TUBE					DRAWING NO : 4-04-114-U8437	
					REV 00	

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		CHD & APPD :

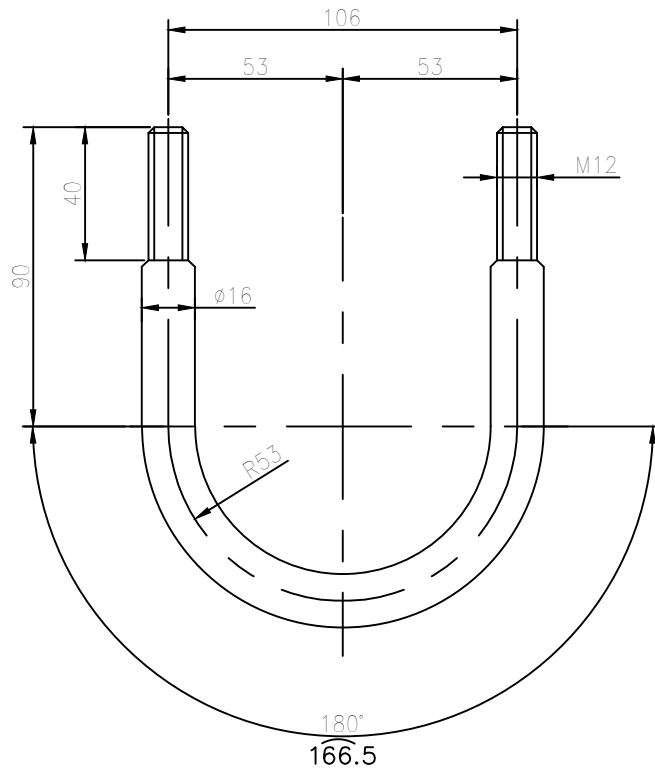


VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE MATERIAL SPECN	C A/C/P UNIT	0.027
					UNIT WEIGHT QUANTITY



<div></div> <div>355-056</div> <div>Bharat Heavy Electricals Ltd</div> <div>UNIT: HEAVY PLATES & VESSELS PLANT</div> <div>VISAKHAPATNAM – 530012</div>			DRN	NAME GDEMUDU	DATE 03.05.2024	
			CHD	SMG.NAIDU/ANVK.KISHORE	03.05.2024	
			APPD	Y.PRASANNA KUMAR	03.05.2024	
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1:2	WEIGHT (Kg) 0.027	REF TO ASSY / OLD DWG 4-04-114-00683	
CODE 320						
TITLE FEED SUPPORT					DRAWING NO : 4-04-114-U8438	
					REV 00	

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		CHD & APPD :

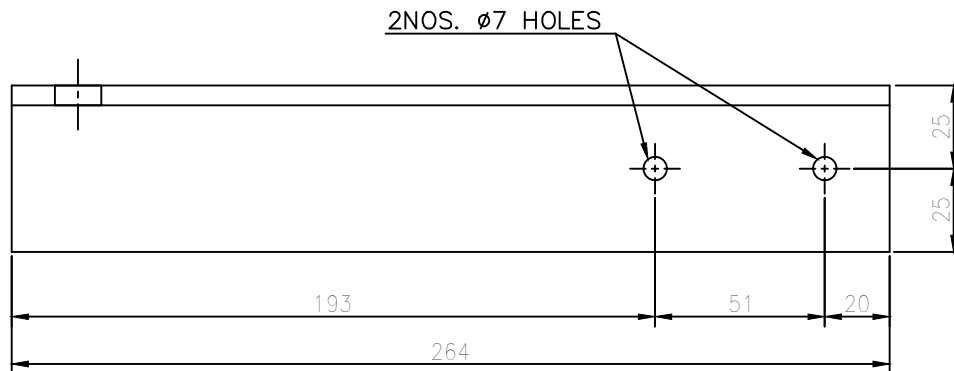
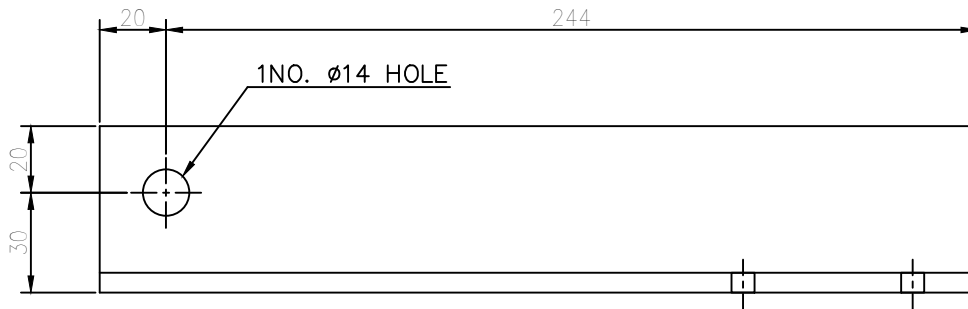


	ROUND Ø16 346.5 LG.		15 004 106	C		0.550
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY



<div> 355-056</div> <div>Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012</div>				DRN	NAME GDEMUDU	DATE 03.05.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	03.05.2024
				APPD	Y.PRASANNA KUMAR	03.05.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM		SCALE 1: 2	WEIGHT (Kg) 0.550	REF TO ASSY / OLD DWG 4—04—114—00691	
CODE 320						
TITLE U—ROD					DRAWING NO : 4—04—114—U8439	REV 00

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REV 01	DATE	ALTERED :
		CHD & APPD :

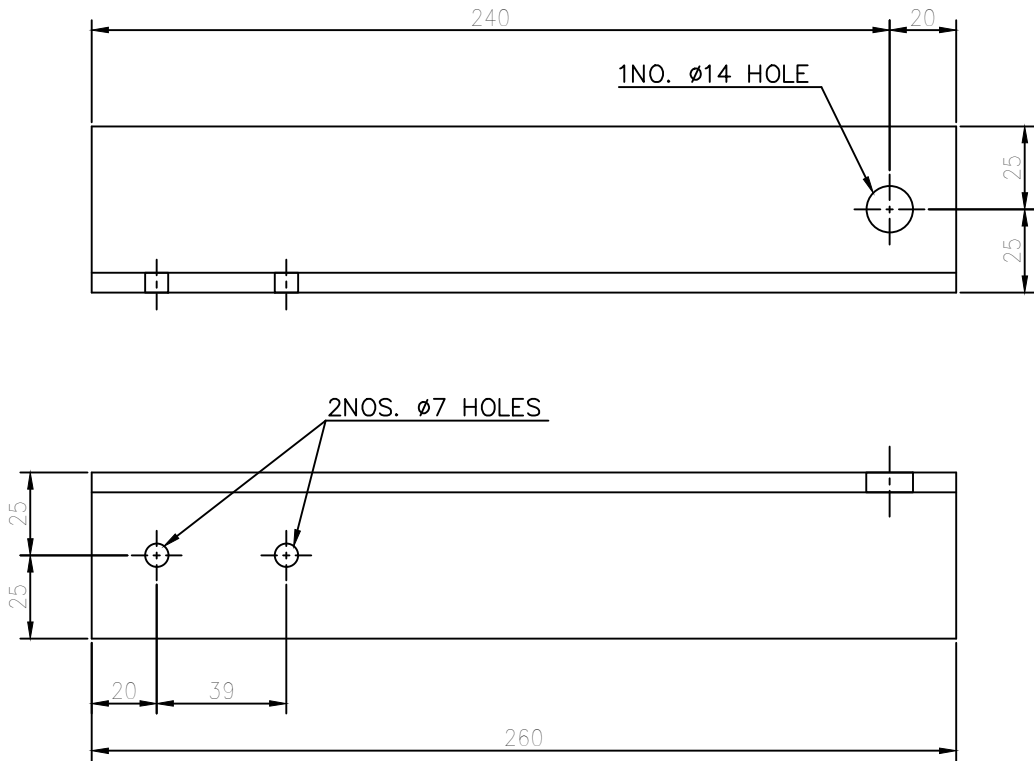


VARIANT NUMBER	ANGLE ISA 50x50x6, 264LG.	STD	15 013 056 IS 2062 E250A	C	UNIT	0.027
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
						QUANTITY


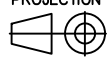
<div></div> <div>355-056</div>		Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012		DRN	NAME GDEMUDU	DATE 04.05.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	04.05.2024
				APPD	Y.PRASANNA KUMAR	04.05.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE 1: 2	WEIGHT (Kg) 0.027	REF TO ASSY / OLD DWG 4-04-114-00684	
CODE 320	TITLE SUPPORT ANGLE				DRAWING NO : 4-04-114-U8440	
					REV 00	

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REV 01	DATE	ALTERED :
		CHD & APPD :



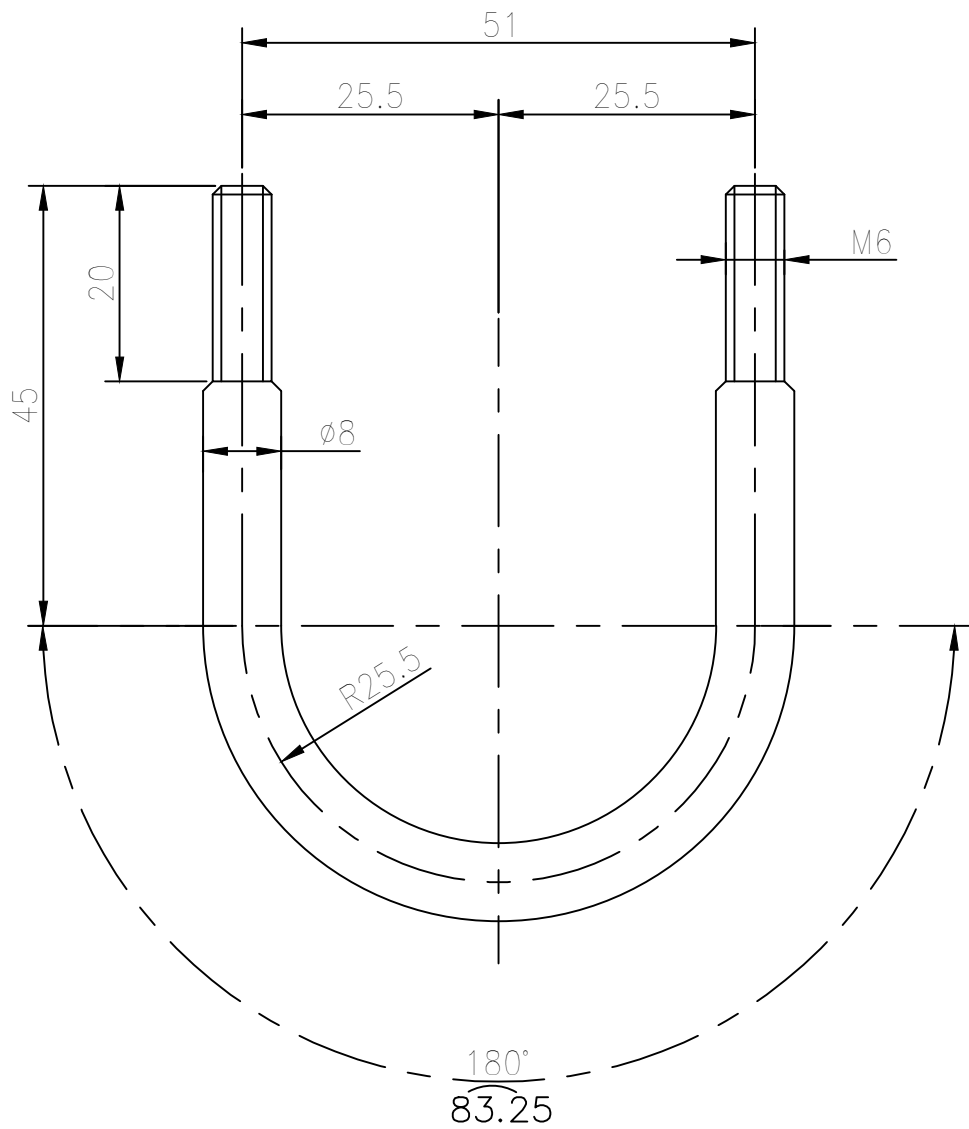
	ANGLE ISA 50x50x6, 260LG.		15 013 156 IS 2062 E250A	C		0.027
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE MATERIAL SPECN	A/C/P UNIT		UNIT WEIGHT QUANTITY

 355-056	Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISA KHAPATNAM - 530012			DRN	NAME GDEMUDU	DATE 04.05.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	04.05.2024
				APPD	Y.PRASANNA KUMAR	04.05.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE 1:2	WEIGHT (Kg) 0.027	REF TO ASSY / OLD DWG 4-04-114-00718	
CODE 320	TITLE SUPPORT ANGLE				DRAWING NO : 4-04-114-U8441	REV 00


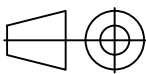
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CAUTION:

REV	DATE	ALTERED :
01		CHD & APPD :



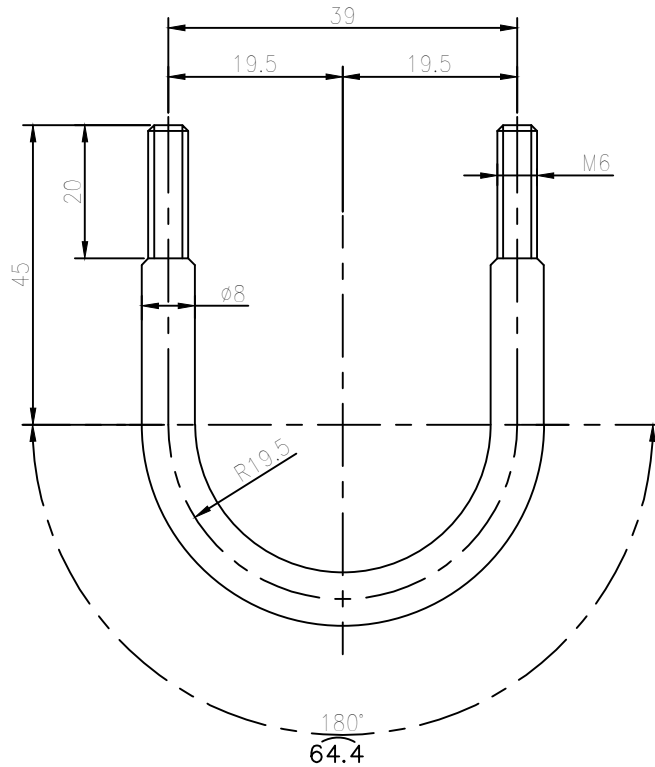
	ROUND ø8 173.2 LG.		15 004 196	C		0.070
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div> 355-056</div> <div>Bharat Heavy Electricals Ltd UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM – 530012</div>				DRN	NAME GDEMUDU	DATE 06.05.2024
				CHD	SMG.NAIDU/ANVK.KISHORE	06.05.2024
				APPD	Y.PRASANNA KUMAR	06.05.2024
DEPT HTE	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE NTS	WEIGHT (Kg) 0.070	REF TO ASSY / OLD DWG 4-04-114-00690	
CODE 320						
TITLE U-ROD					DRAWING NO : 4-04-114-U8442	REV 00



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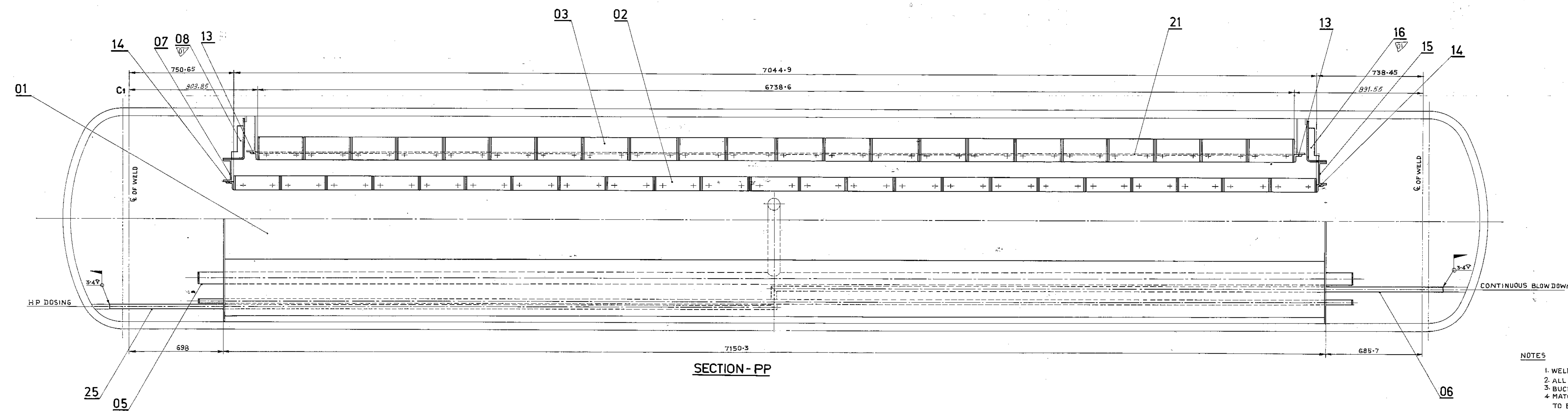
CAUTION:

REV 01	DATE	ALTERED :
		CHD & APPD :



	ROUND ø8 144.4 LG.		15 004 196	C		0.060
			IS 2062			
VARIANT NUMBER	DESCRIPTION	STD	MATERIAL CODE	A/C/P	UNIT	UNIT WEIGHT
			MATERIAL SPECN			QUANTITY

<div></div> <div>355-056</div>			Bharat Heavy Electricals Ltd		NAME		DATE			
			UNIT: HEAVY PLATES & VESSELS PLANT VISAKHAPATNAM — 530012		DRN	GDEMUDU	06.05.2024			
					CHD	SMG.NAIDU/ANVK.KISHORE	06.05.2024			
			APPD	Y.PRASANNA KUMAR	06.05.2024					
DEPT	HTE	ALL DIMENSIONS ARE IN MM		SCALE	NTS	WEIGHT (Kg)	0.600	REF TO ASSY / OLD DWG		
CODE	320							4-04-114-00689		
TITLE								DRAWING NO :		REV
U-ROD								4-04-114-U8443		00



TYPE OF WELD	TYPE OF ELECTRODE	LENGTH / NO OFF
3-4 V (SITE)	RT 1/2 M0	2 NO
5 V (SITE)	RT 1/2 M0	1 NO
3 Δ	E 7018	1-6 M
3-4 V + 3 Δ	E 7018	2 NO
5 1/2 V + 4 Δ	E 7018	1 NO
Δ (SITE)	E 7018	20 M
3 Δ (SITE)	E 7018	2-5 M

DETAIL-E

DETAIL-H

SECTION - PP

SECTION-CC
(CONTINUOUS BLOW DOWN)

SECTION-GG

SECTION-DC
[FEED HEADER]

SECTION -JJ
(H.P DOSING)

NOTES

1. WELDS MUST BE LEAK PROOF IN THE ENTIRE SCREEN DRIER AREA
2. ALL BOLTED CONNECTIONS ARE TO BE DONE TIGHTLY
3. BUCKLED FLANGES BETWEEN BOLTS SHOULD BE HAMMERED TOGETHER
4. MATCH RAILS OF END SHEETS (PART NO 7.8, 15416) TO ADJACENT PARTS TO BE DONE DURING ASSEMBLY
5. USE TWO WELDERS ONE IN BACK OF NUT AND ONE IN FRONT OF BOLT HEAD FOR ALL BOLTED CONNECTIONS
6. COMPLETE INTERNALS ARE TO BE CHECKED AND ASSEMBLED IN SHOP WITH TACK WELDING WHEREVER ERECTION WELDS ARE SHOWN

REFERENCE DRS

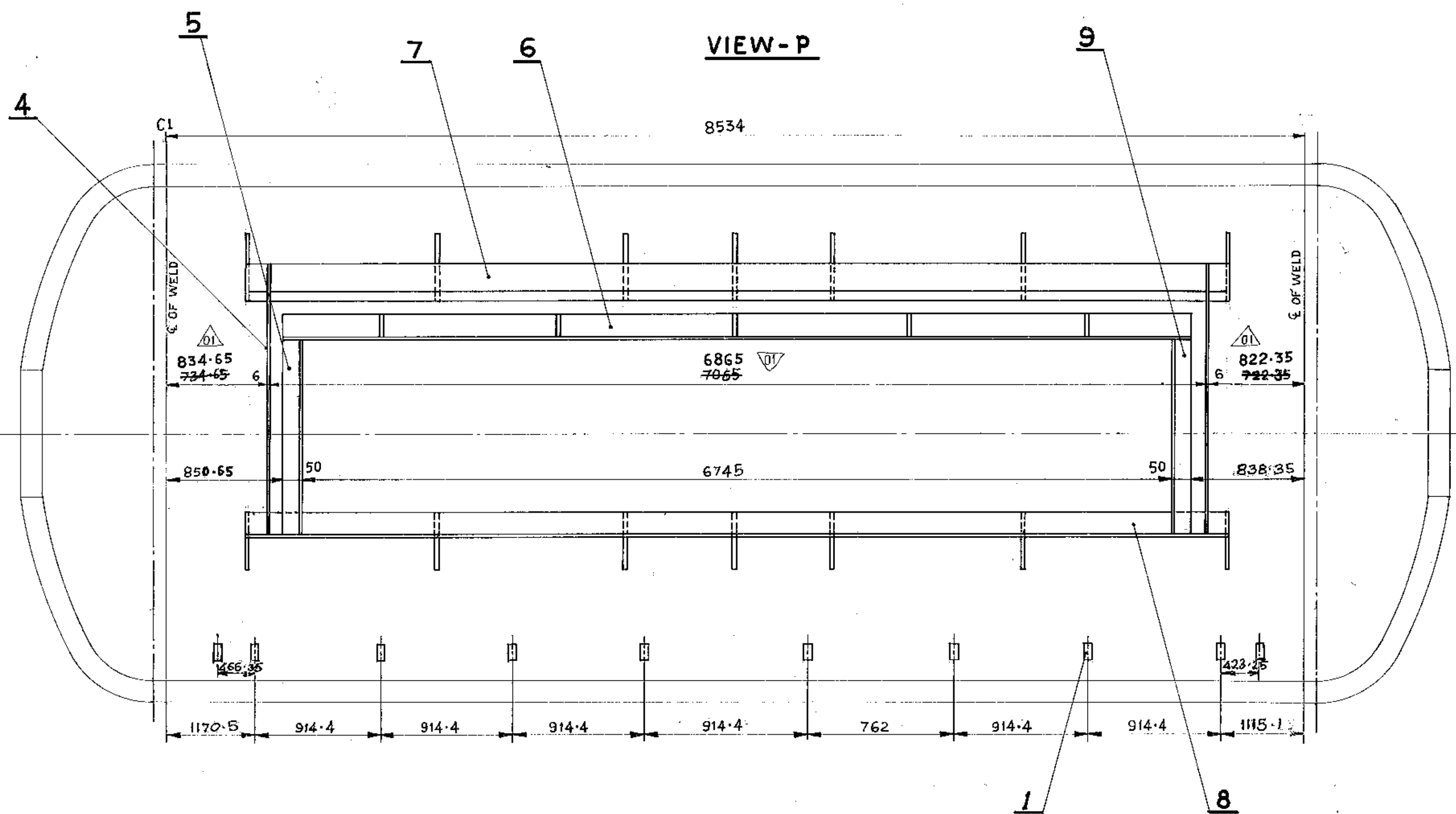
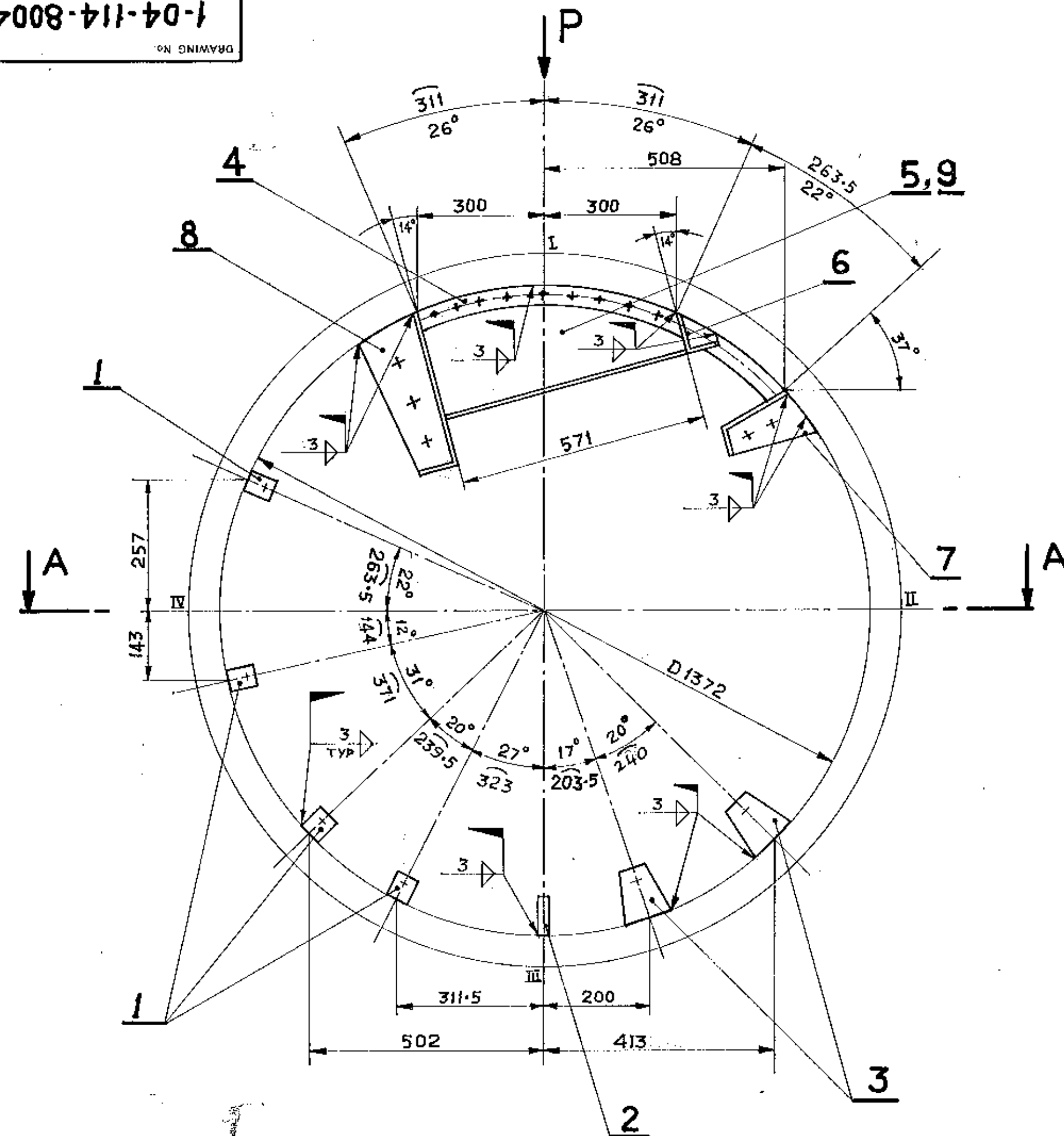
1. WELDED NIPPLES AND DRILLING DETAILS:- 0-04-114-80019
2. UPPER DRUM (UNDRILLED) :- 1-04-114-80037
3. WELDED ATTACHMENTS :- 1-04-114-80041

BOILER NO 0579 & 0580									
ITEM NO	DESCRIPTION	QTY	DRAWING NO	MATL CODE	UNIT	QTY	UNIT	QTY	UNIT
23	PUNCHED WASHER, M2	4	4140812000			3006			
24	NUT M12	5	4130412000	414080012		3017			
25	SCREW M12X30	5	4122212030	4130400012		400			
26	ANGLE 75X75x6	4	4-04-114-80009	4122212030		400			
27	CHEMICAL DOSING HEADER	2	4-04-114-80033	15-013-005		1600			
28	BENT PLATE	3	4-04-114-80012	BMC 20		30303			
29	BENT PLATE	3	4-04-114-80011	WELDMENT		1			
30	BENT PLATE	3	4-04-114-80010	WELDMENT		20841			
31	BENT PLATE	3	4-04-114-80010	WELDMENT		20257			
32	BENT PLATE	3	4-04-114-80010	WELDMENT		20257			
33	ANGLE 50X50x6	3	4-04-114-80014	15-013-056		30780			
34	BENT PLATE	3	4-04-114-80109	BMC 20		11469			
35	BENT PLATE	3	4-04-114-80108	WELDMENT		101828			
36	BENT PLATE	3	4-04-114-80107	WELDMENT		101828			
37	TUBE D4.4x5	5	6101-3003-62	15-086-071		31000			
38	END SHEET	5	6101-3003-62	SAGIO GRAI		4			
39	END SHEET	5	6101-3003-75	WELDMENT		9123			
40	ANGLE 50X50x6	5	6101-3003-75	WELDMENT		6150			
41	ANGLE 50X50x6	5	6101-3003-56	15-013-056		2300			
42	ANGLE 50X50x6	5	6101-3003-57	BMC 20		2500			
43	ANGLE 50X50x6	5	4-04-114-80125	15-013-056		1057			
44	ANGLE 75X75x6	4	4-04-114-80159	BMC 20		8			
45	U ROD	4	4-04-114-80160	15-004-106		424			
46	U ROD	4	4-04-114-80134	BMC 20		8			
47	END SHEET	5	6101-3003-66	15-004-106		300			
48	END SHEET	5	6101-3003-74	BMC 20		15			
49	BLOW DOWN HEADER	2	4-04-114-80032	WELDMENT		9123			
50	FEED HEADER	3	4-04-114-80113	WELDMENT		1			
51	FEED TUBE	4	4-04-114-80158	15-084-113		4696			
52	SECONDARY SCREEN TYPE A	3	2-03-000-00009	SA192		20884			
53	PRIMARY SCREEN TYPE A	3	2-03-000-00008	WELDMENT		11088			
54	SEPARATING TUBE	1	1-04-114-80040	WELDMENT		318			

REV #1	DATE 23-6-87	ALTERED CHECKED	DEPT	DRAWING UNIT	SCALE	WEIGHT (kg)	REF TO ASSY. OLD Dwg
ZONE	NEW Dwg 2-04-114-8005 INTRODUCED FOR ITEM No 08 & 16		CODE	C/W F		1429.392	
TITLE				DRAWING NO.			
DRUM INTERNALS FOR H.P UPPER DRUM				U 01		9-04-114-80015	

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

1-04-114-80041



TYPE OF WELD	TYPE OF ELECTRODE	LENGTH OF WELD
3A	E7018	44 M

NOTE.

- ALL ATTACHMENTS ARE TO BE WELDED TO THE DRUM BEFORE STRESS RELIEVING
- CIRCUMFERENTIAL DIMENSIONS HAVE BEEN CALCULATED FOR THE INTERNAL DIAMETER OF THE DRUM $\phi 1372$

BOILER NO. 0580

ITEM NO.	DESCRIPTION	STD	DRAWING NO.	MATL CODE	UNIT WT	QTY
9	END PLATE SH-3.15	6101-3002-16	15-011-182	BMC 10	4200	1
8	BENT PLATE III	3-04-116-80129 3-04-114-80101	WELDMENT		1328.74	1
7	BENT PLATE II	3-04-114-80100	WELDMENT		815.60	1
6	BENT PLATE I	3-04-114-80099	WELDMENT		455.24	1
5	END PLATE SH-3.15	6101-3002-15	15-011-182	BMC 10	4200	1
4	CURVED BAR PL-6	6101-3002-12	15-011-092	BMC 20	2000	2
3	PL-6	6101-3002-30	15-011-092	BMC 20	500	1
2	PL-6	6101-3002-31	15-011-092	BMC 20	200	1
1	PL-6	6101-3002-32	15-011-092	BMC 20	200	1

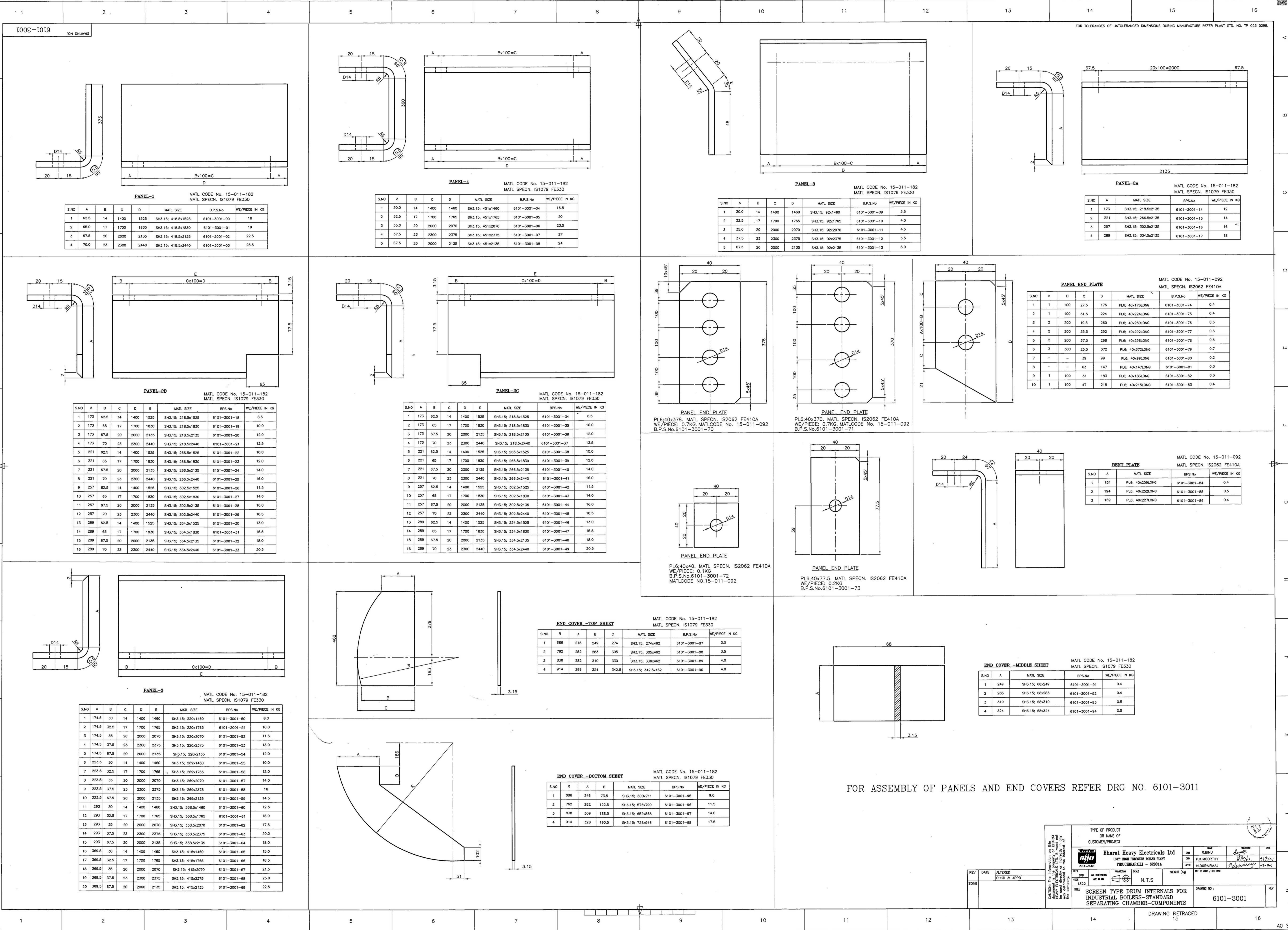
SECTION-AA

O.N.G.C, HAZIRA

Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DATE	ALTERED N.C. 3.15	DATE	ALTERED N.C. 3.15
16-10-97	CHECKED: <i>[Signature]</i>	22-6-87	CHECKED: <i>[Signature]</i>
DRG OF ITEM 06 CHANGED		ITEM NO 4 CURVED BAR HAS BEEN SHIFTED	

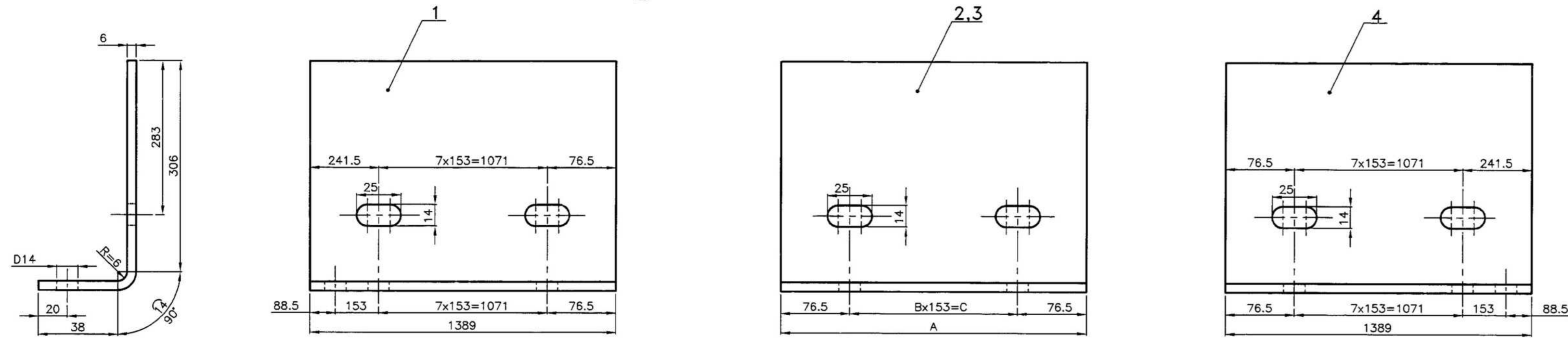
ITEM NO.	DESCRIPTION	STD	DRAWING NO.	MATL CODE	UNIT WT	QTY
02	WELDED ATTACHMENTS FOR DRUM INTERNALS	U 01	1-04-114-80041		282.958	



2008-1019

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER PLANT STD. NO. TP 025 0299.

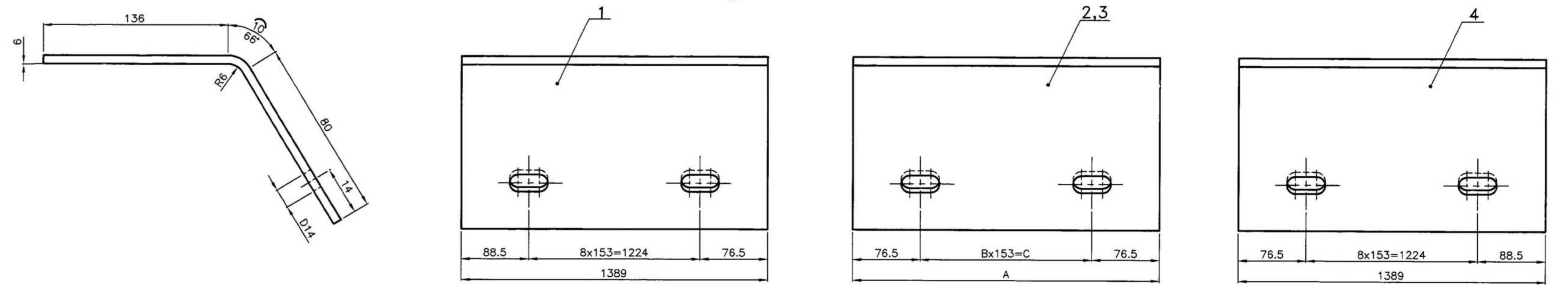
① BENT PLATE



SL No.	SIZE	MATERIAL	BPS No.	WT/PIECE IN KG
1	PL.6; 1389 x 358	IS2062FE410A	6101-3002-00	24.0
2	PL.6; 1224 x 358	IS2062FE410A	6101-3002-01	21.5
3	PL.6; 1836 x 358	IS2062FE410A	6101-3002-02	32.0
4	PL.6; 1389 x 358	IS2062FE410A	6101-3002-03	24.0

SLNO	A	B	C
2	1224	7	1071
3	1836	11	1683

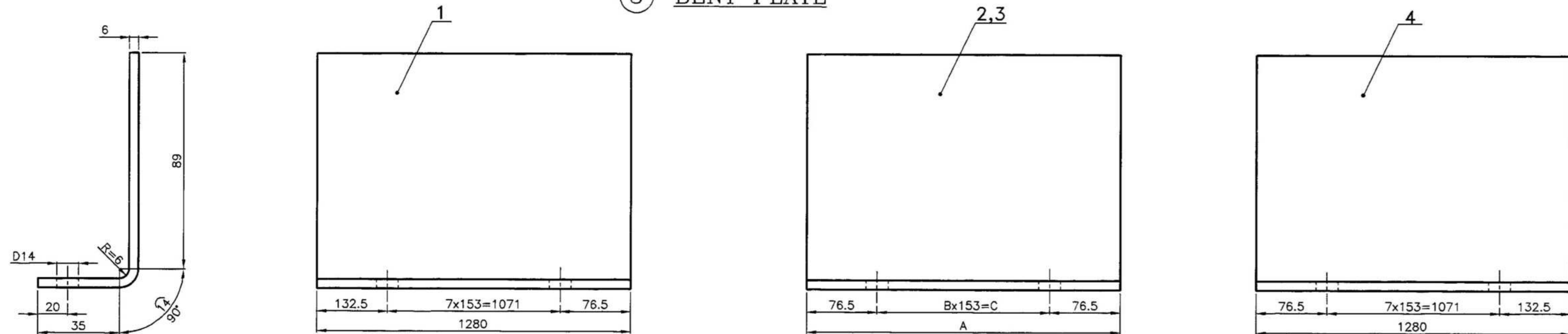
② BENT PLATE



SL No.	SIZE	MATERIAL	BPS No.	WT/PIECE IN KG
1	PL.6; 1389 x 226	IS2062FE410A	6101-3002-04	15.0
2	PL.6; 1224 x 226	IS2062FE410A	6101-3002-05	13.5
3	PL.6; 1836 x 226	IS2062FE410A	6101-3002-06	20.0
4	PL.6; 1389 x 226	IS2062FE410A	6101-3002-07	15.0

SLNO	A	B	C
2	1224	7	1071
3	1836	11	1683

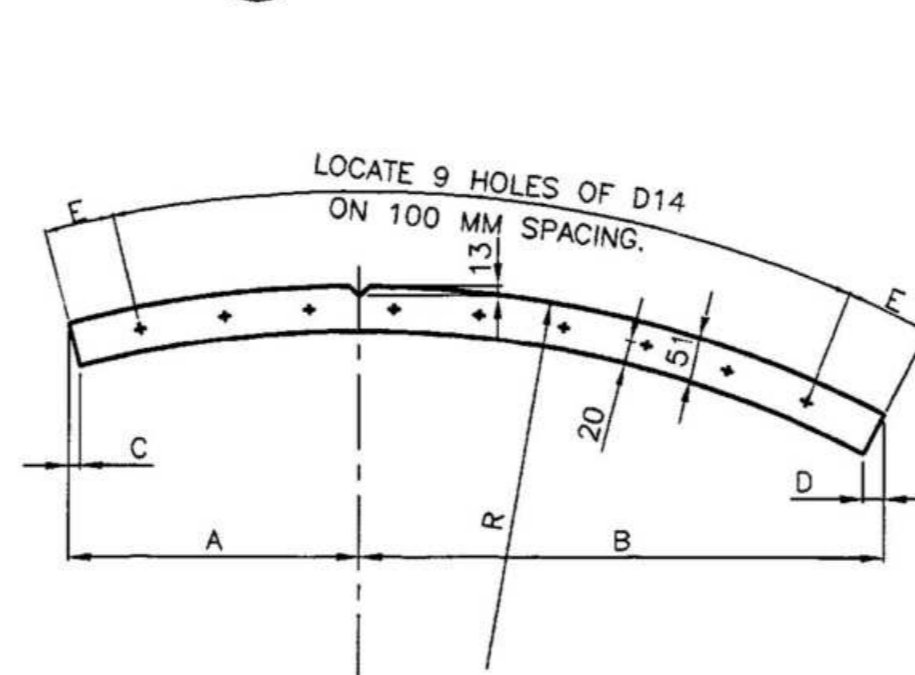
③ BENT PLATE



SL No.	SIZE	MATERIAL	BPS No.	WT/PIECE IN KG
1	PL.6; 1280 x 138	IS2062FE410A	6101-3002-08	8.5
2	PL.6; 1224 x 138	IS2062FE410A	6101-3002-09	8.0
3	PL.6; 1836 x 138	IS2062FE410A	6101-3002-10	12.0
4	PL.6; 1280 x 138	IS2062FE410A	6101-3002-11	8.5

SLNO	A	B	C
2	1224	7	1071
3	1836	11	1683

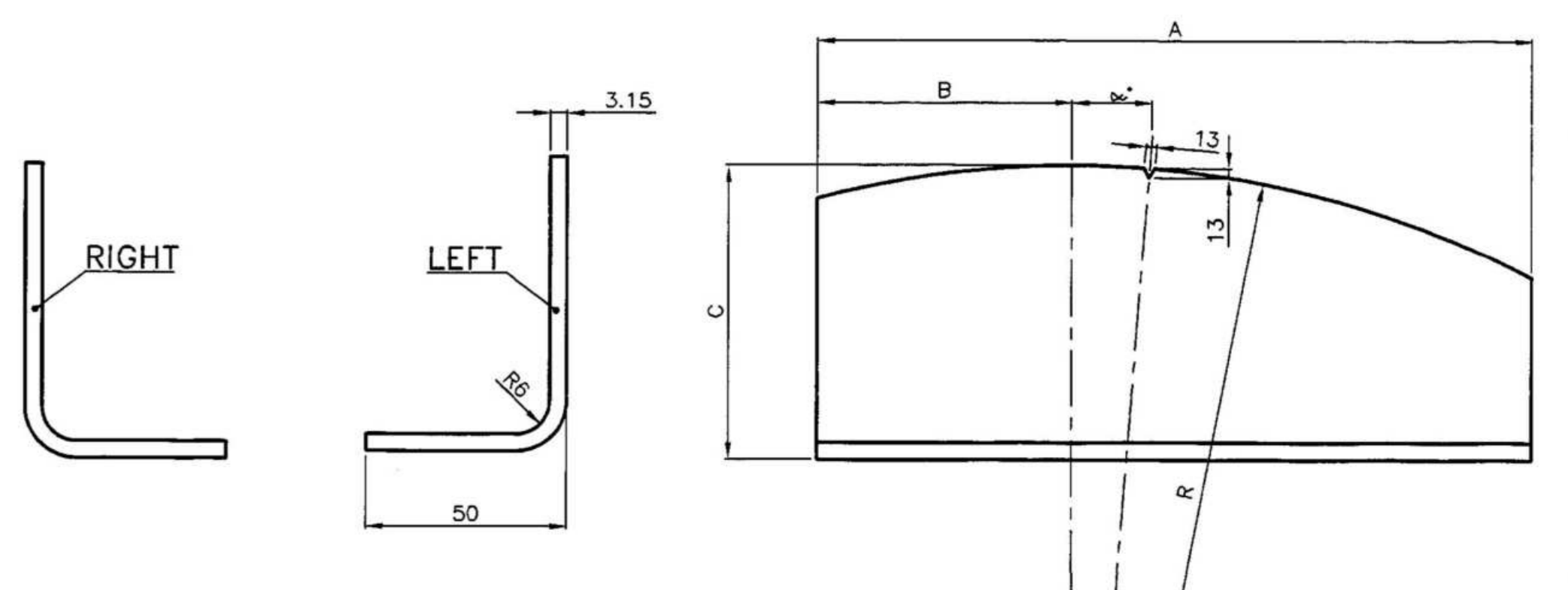
④ CURVED BAR



MATERIAL:-IS 2062 FE410A

SL No.	SIZE	A	B	C	D	E	R	BPS No.	WT/PIECE IN KG
1	PL.6; 51 x 841	295	505	13	40	20.5	685.5	6101-3002-12	2.0
2	PL.6; 51 x 881	320	527	12	40	40.5	762	6101-3002-13	2.1
3	PL.6; 51 x 951	345	565	11	41	75.5	838	6101-3002-14	2.3

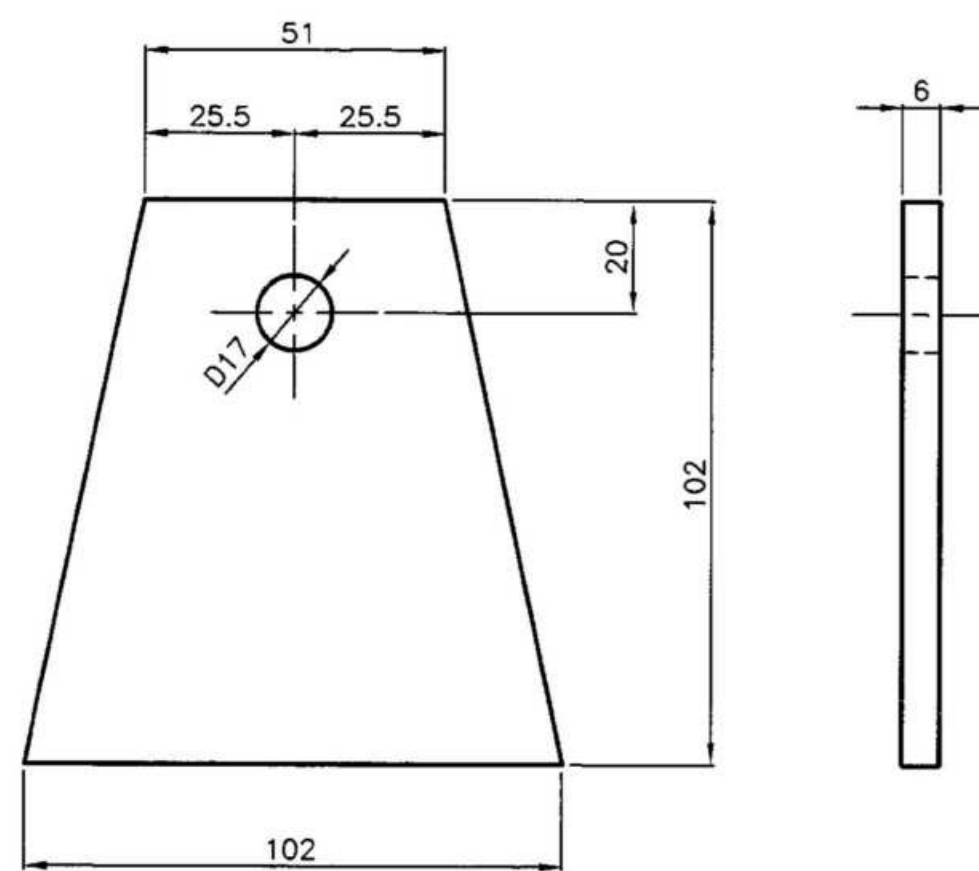
⑤ END PLATE



MATERIAL:-IS 1079 FE330

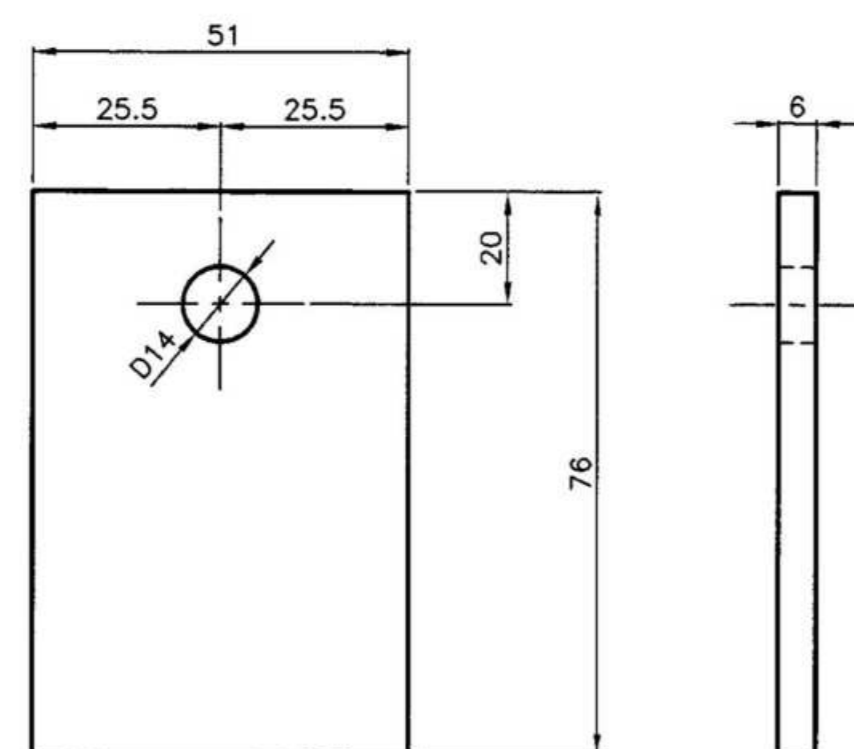
SL No.	SIZE	A	B	C	R	WT/PIECE IN KG	BPS No.
1	SH.3.15; 570 X 313	570	135	263	685.5	14'	4.2
2	SH.3.15; 621 X 314	621	155	264	762	13'	4.6
3	SH.3.15; 672 X 316	672	179	266	838	12'	5.0

⑨ PLATE



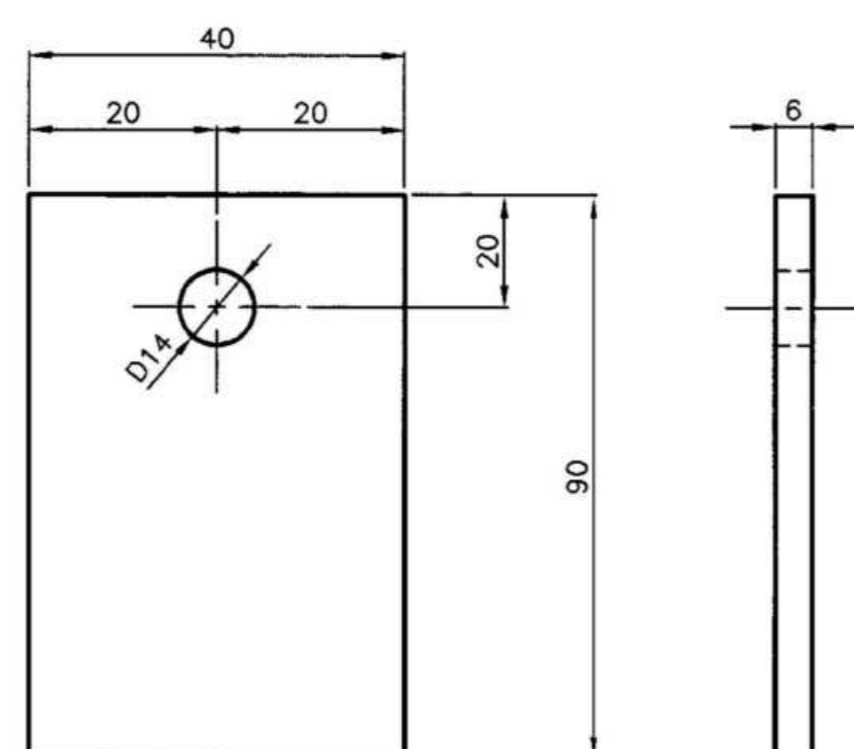
SIZE : PL.6; 102 x 102
MATERIAL : IS 2062 FE410A
BPS No. : 6101-3002-30
WT/PIECE IN KG : 0.5

⑩ PLATE



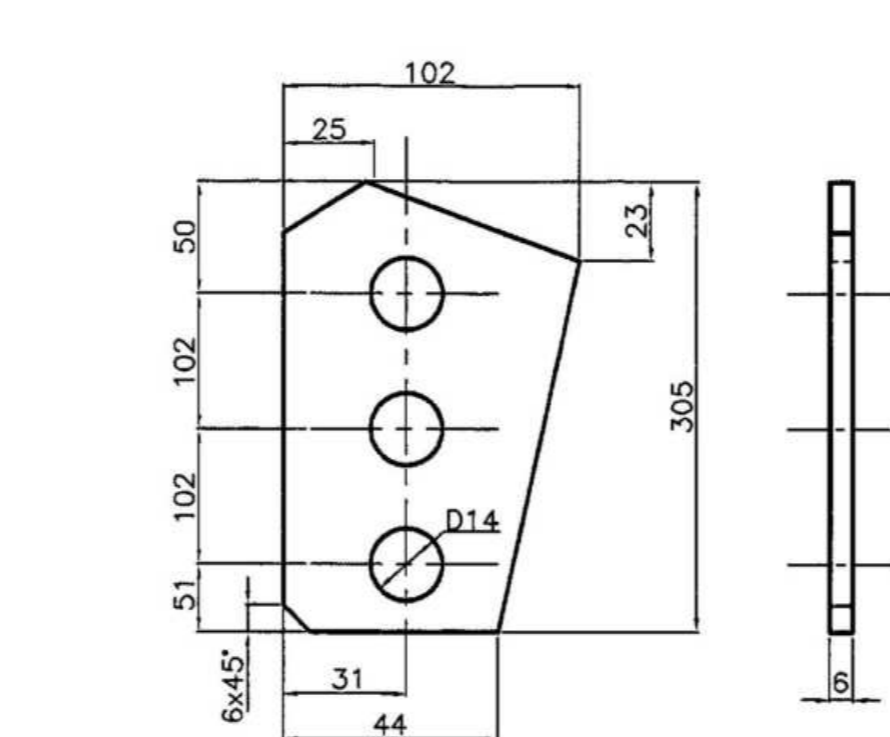
SIZE : PL.6; 51 x 76
MATERIAL : IS 2062 FE410A
BPS No. : 6101-3002-31
WT/PIECE IN KG : 0.2

⑪ PLATE



SIZE : PL.6; 40 x 90
MATERIAL : IS 2062 FE410A
BPS No. : 6101-3002-32
WT/PIECE IN KG : 0.2

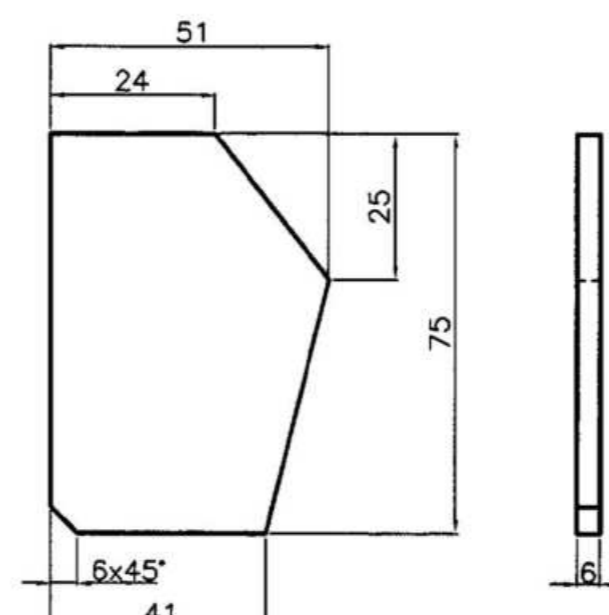
⑥ STIFFNER



MATERIAL:-IS 2062 FE410A

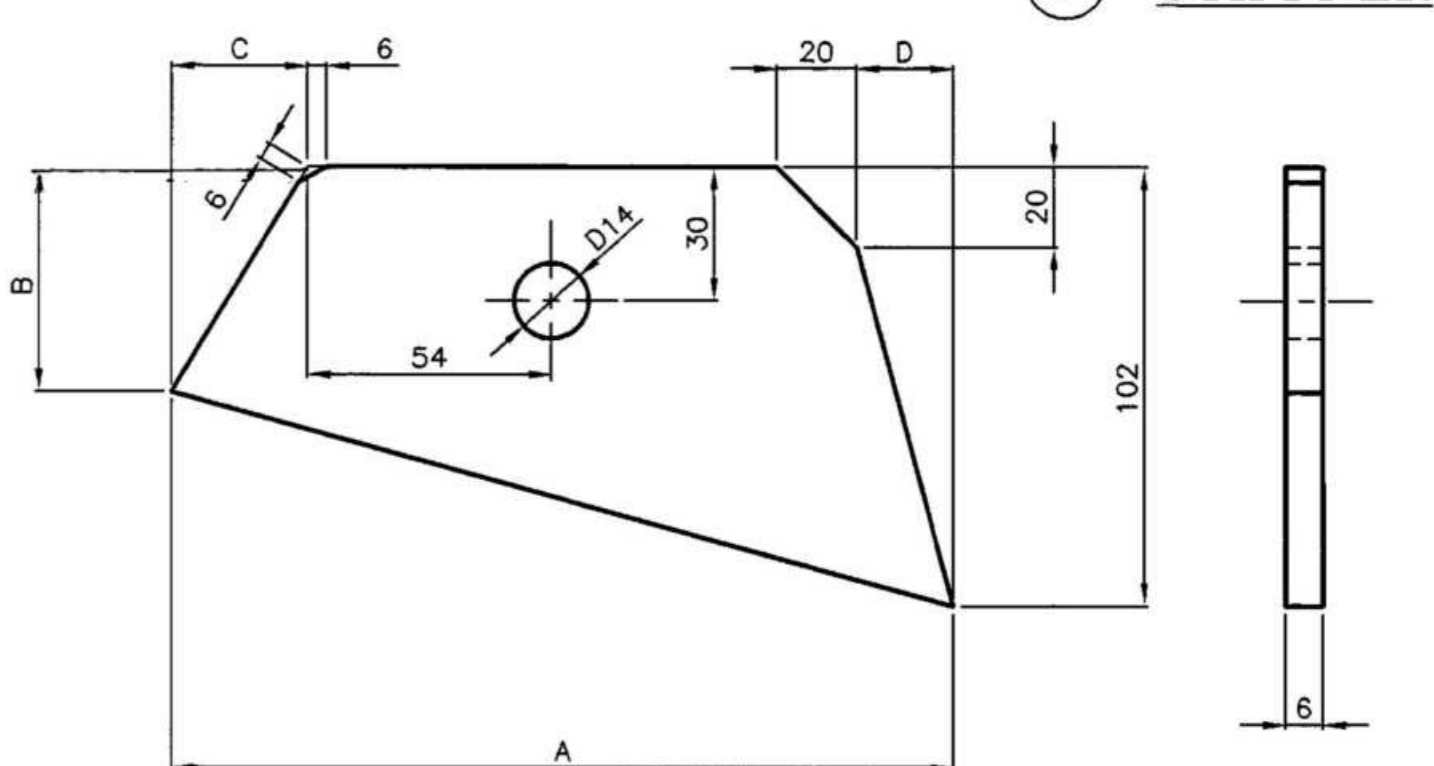
TYPE	BPS No.	SIZE	WT/PIECE IN KG
WITH HOLES	6101-3002-21	PL.6; 102x305	1.0
WITH OUT HOLES	6101-3001-22		

⑧ STIFFNER



SIZE : PL.6; 51 x 75
MATERIAL : IS 2062 FE410A
BPS No. : 6101-3002-29
WT/PIECE IN KG : 0.15

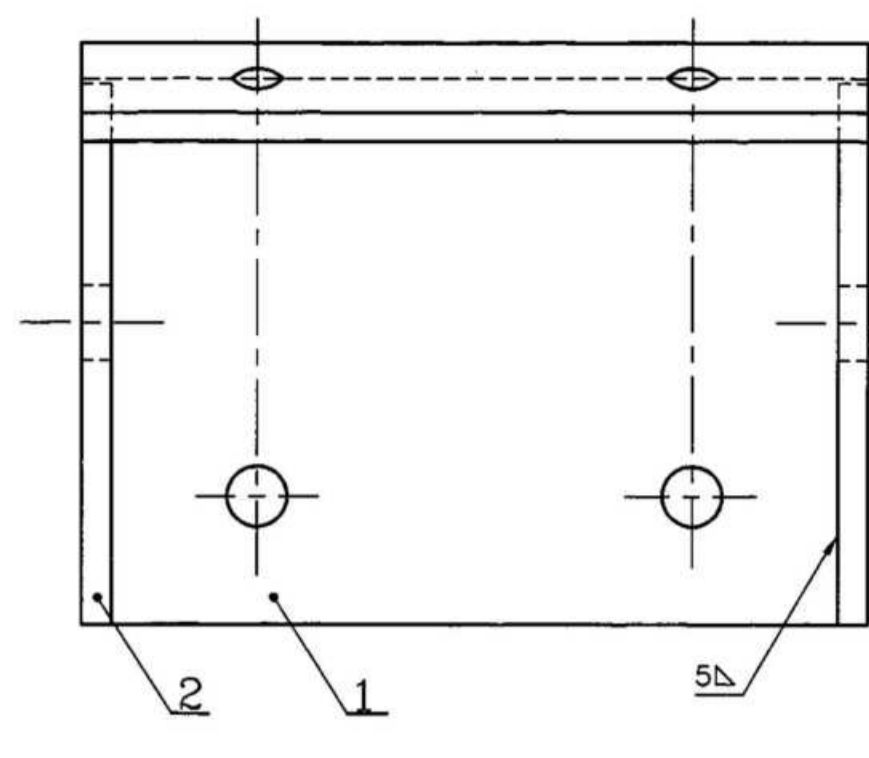
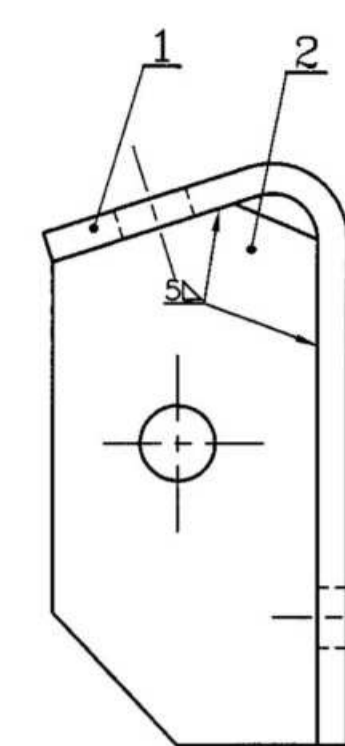
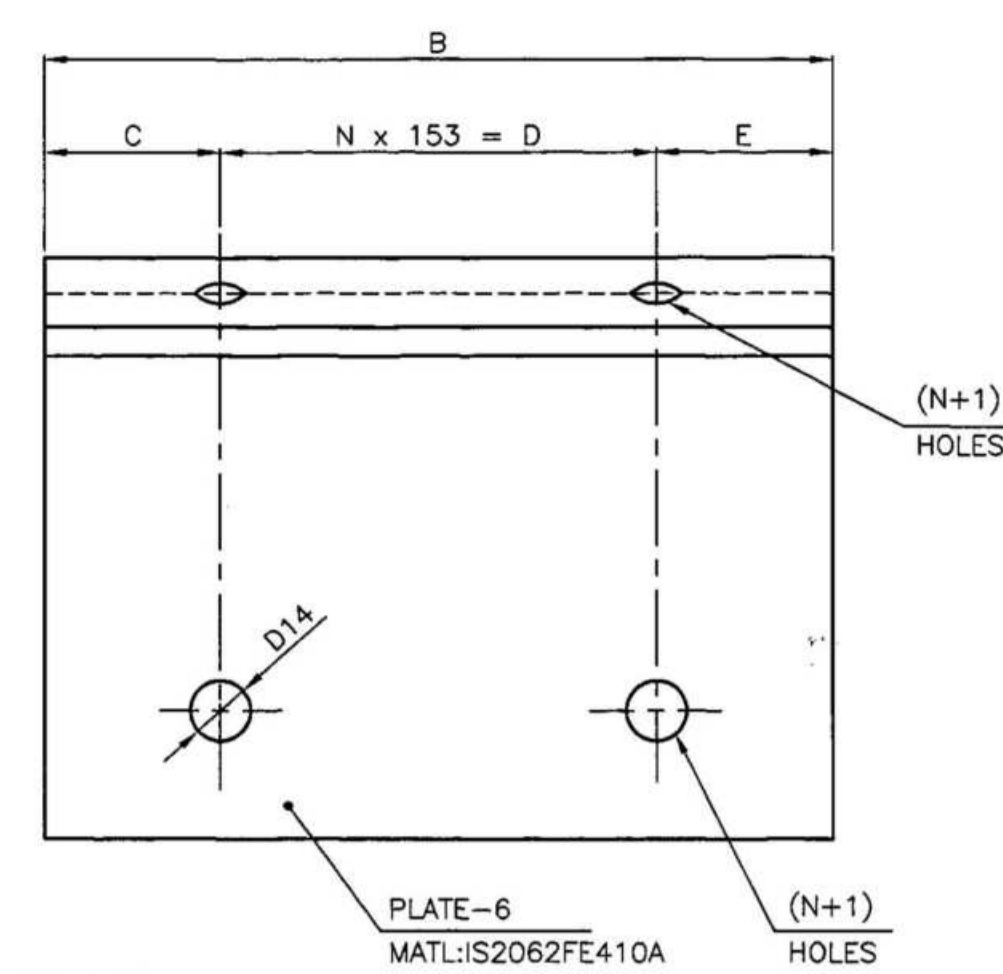
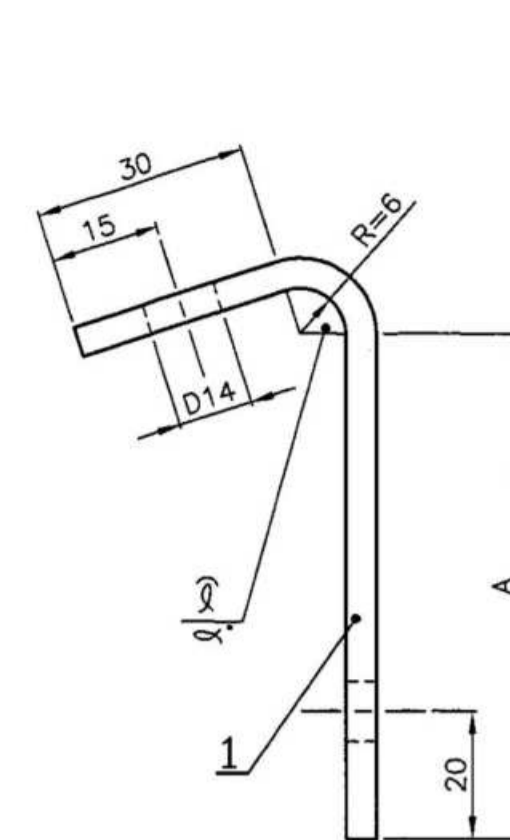
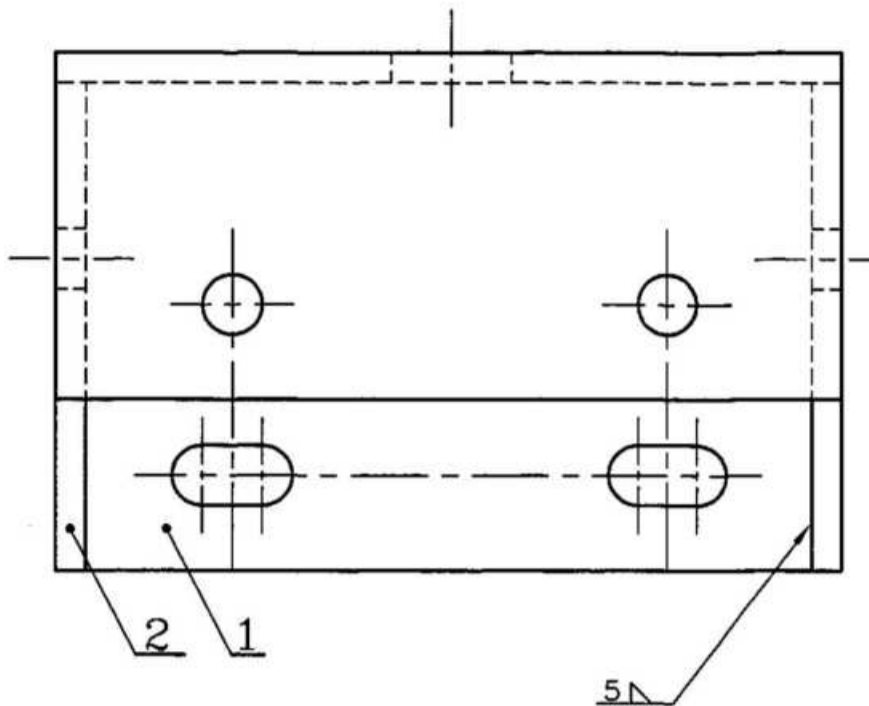
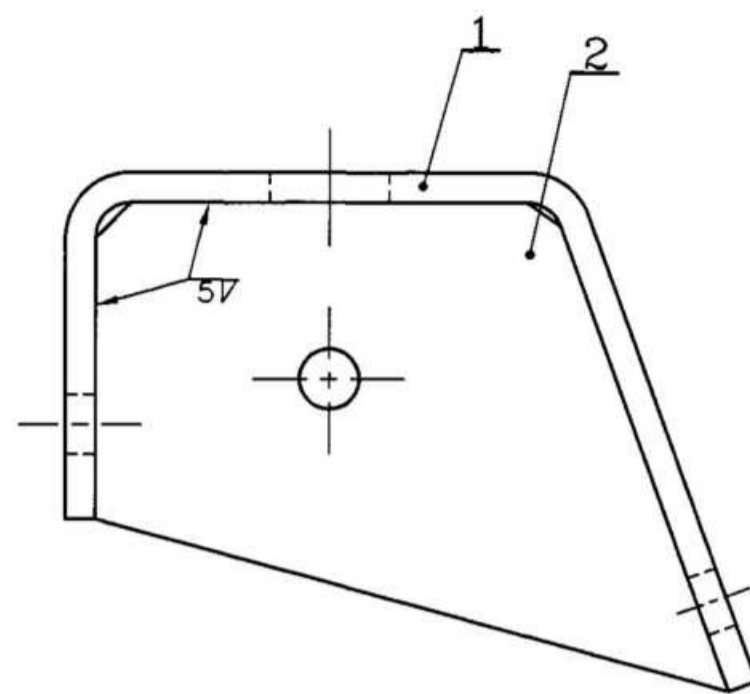
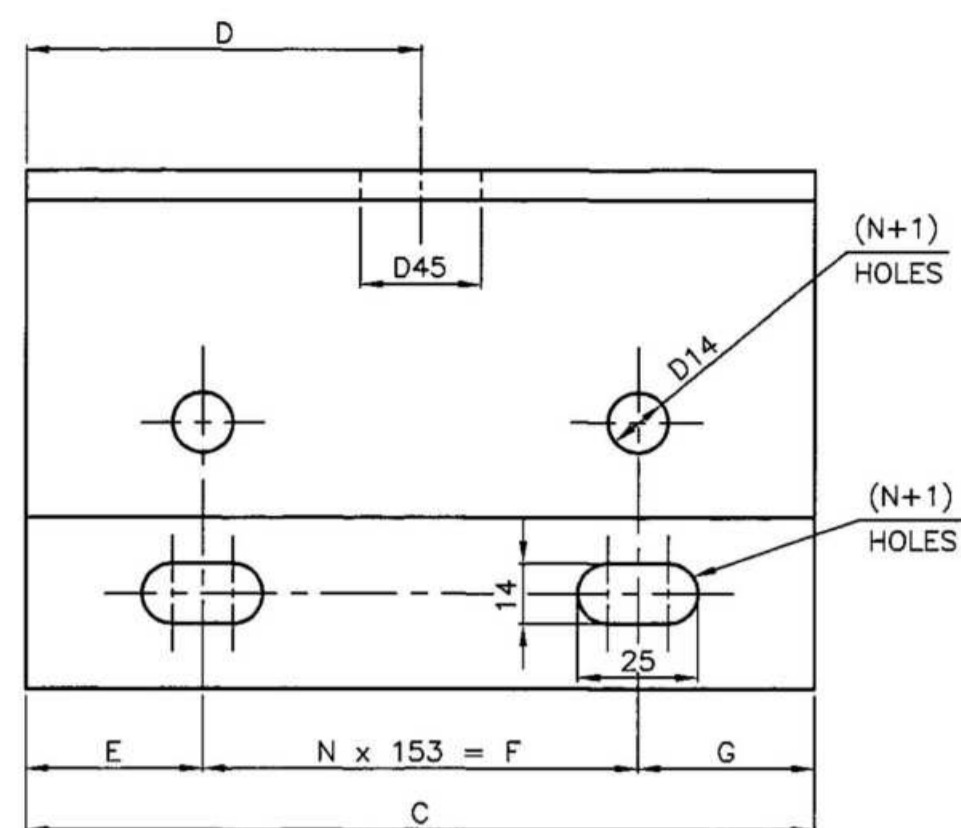
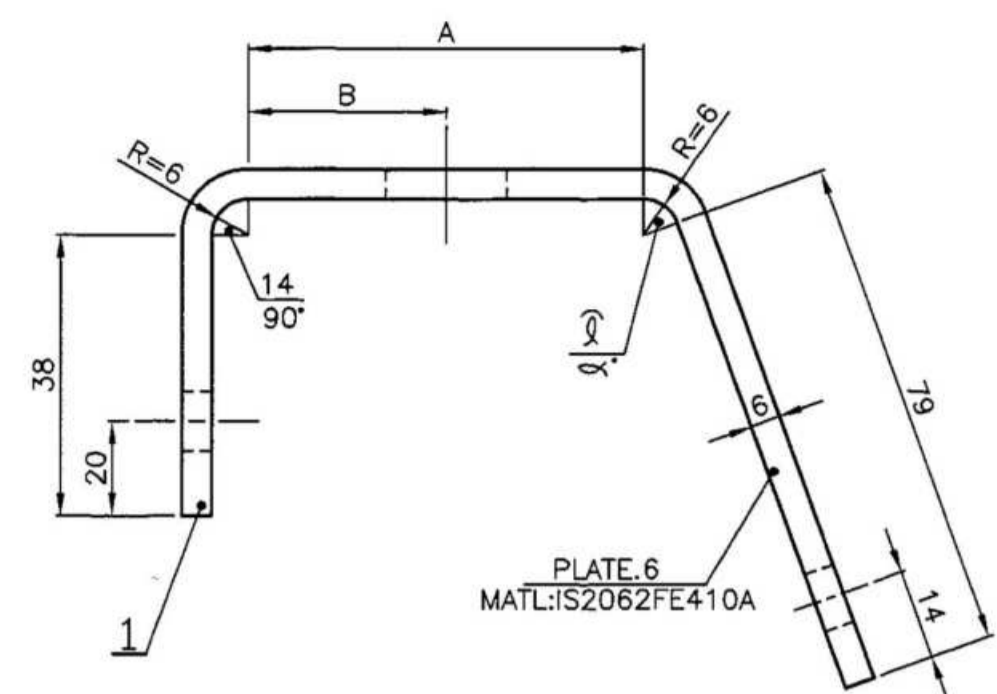
⑦ STIFFNER



MATERIAL:-IS 2062 FE410A

SL No.	SIZE	A	B	C	D	WT/PIECE IN KG	BPS No.
1	PL.6; 102 x 174	174	76	33	0	0.76	6101-3002-23
2	PL.6; 102 x 182	182	76	37	6	0.78	6101-3002-25
3	PL.6; 102 x 185	185	76	35.5	12	0.80	6101-3002-27

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		Bharat Heavy Electricals Ltd		UNIT: HIGH PRESSURE BOILER PLANT		TIRUCHIRAPPALLI - 620014	
REV	DATE	ALTERED	CHKD & APPD	PROJECTION	SCALE	WEIGHT (kg)	REV
1	13/02			N.T.S			
INTERNAL DETAIL FOR WELDED ATTACHMENTS							DRAWING NO : 6101-3002



MATL CODE: 15-011-092

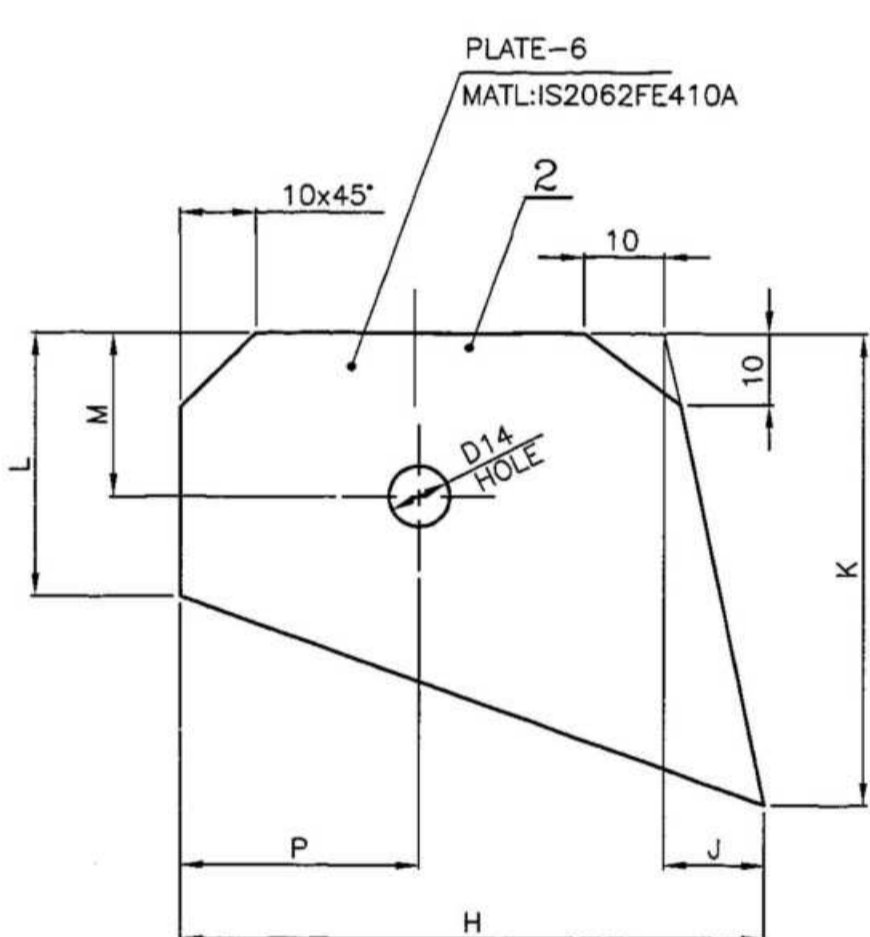
BPS No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	WT/PIECE IN KG
6101-3003-00	91	45.5	76	12	1389	700	88.5	8	1224	76.5	PL 6; 234 x 1389	15.5															
6101-3003-01	91	45.5	76	12	1389	689	76.5	8	1224	88.5	PL 6; 234 x 1389	15.5															
6101-3003-02	91	45.5	76	12	1224	612	76.5	7	1071	76.5	PL 6; 234 x 1224	13.8															
6101-3003-03	91	45.5	76	12	1836	918	76.5	11	1683	76.5	PL 6; 234 x 1836	20.5															
6101-3003-04	98	49	77	12	1389	700	88.5	8	1224	76.5	PL 6; 241 x 1389	16															
6101-3003-05	98	49	77	12	1389	689	76.5	8	1224	88.5	PL 6; 241 x 1389	16															
6101-3003-06	98	49	77	12	1224	612	76.5	7	1071	76.5	PL 6; 241 x 1224	14															
6101-3003-07	98	49	77	12	1836	918	76.5	11	1683	76.5	PL 6; 241 x 1836	21															
6101-3003-08	111	55.5	78	12	1389	700	88.5	8	1224	76.5	PL 6; 254 x 1389	17															
6101-3003-09	111	55.5	78	12	1389	689	76.5	8	1224	88.5	PL 6; 254 x 1389	17															
6101-3003-10	111	55.5	78	12	1224	612	76.5	7	1071	76.5	PL 6; 254 x 1224	15															
6101-3003-11	111	55.5	78	12	1836	918	76.5	11	1683	76.5	PL 6; 254 x 1836	22.5															

BPSNO	1NO.OF.PART1	2NOS.OF.PART2	WT/ASSY IN KG
6101-3003-20	6101-3003-00	6101-3003-16	16.5
6101-3003-21	6101-3003-01	6101-3003-16	16.5
6101-3003-22	6101-3003-02	6101-3003-16	14.8
6101-3003-23	6101-3003-03	6101-3003-16	21.5
6101-3003-24	6101-3003-04	6101-3003-17	17
6101-3003-25	6101-3003-05	6101-3003-17	17
6101-3003-26	6101-3003-06	6101-3003-17	15
6101-3003-27	6101-3003-07	6101-3003-17	22
6101-3003-28	6101-3003-08	6101-3003-18	18
6101-3003-29	6101-3003-09	6101-3003-18	18
6101-3003-30	6101-3003-10	6101-3003-18	16
6101-3003-31	6101-3003-11	6101-3003-18	23.5

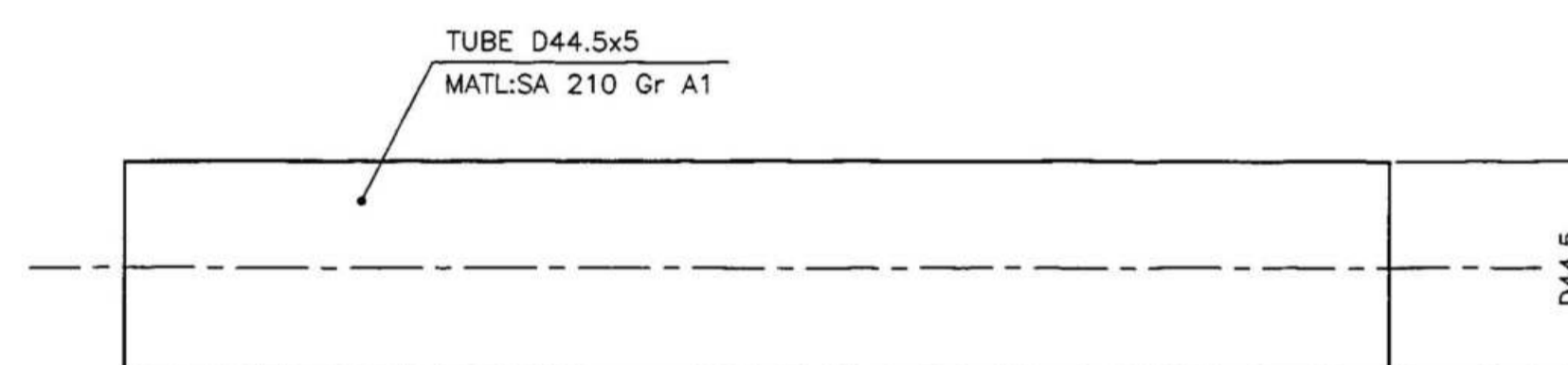
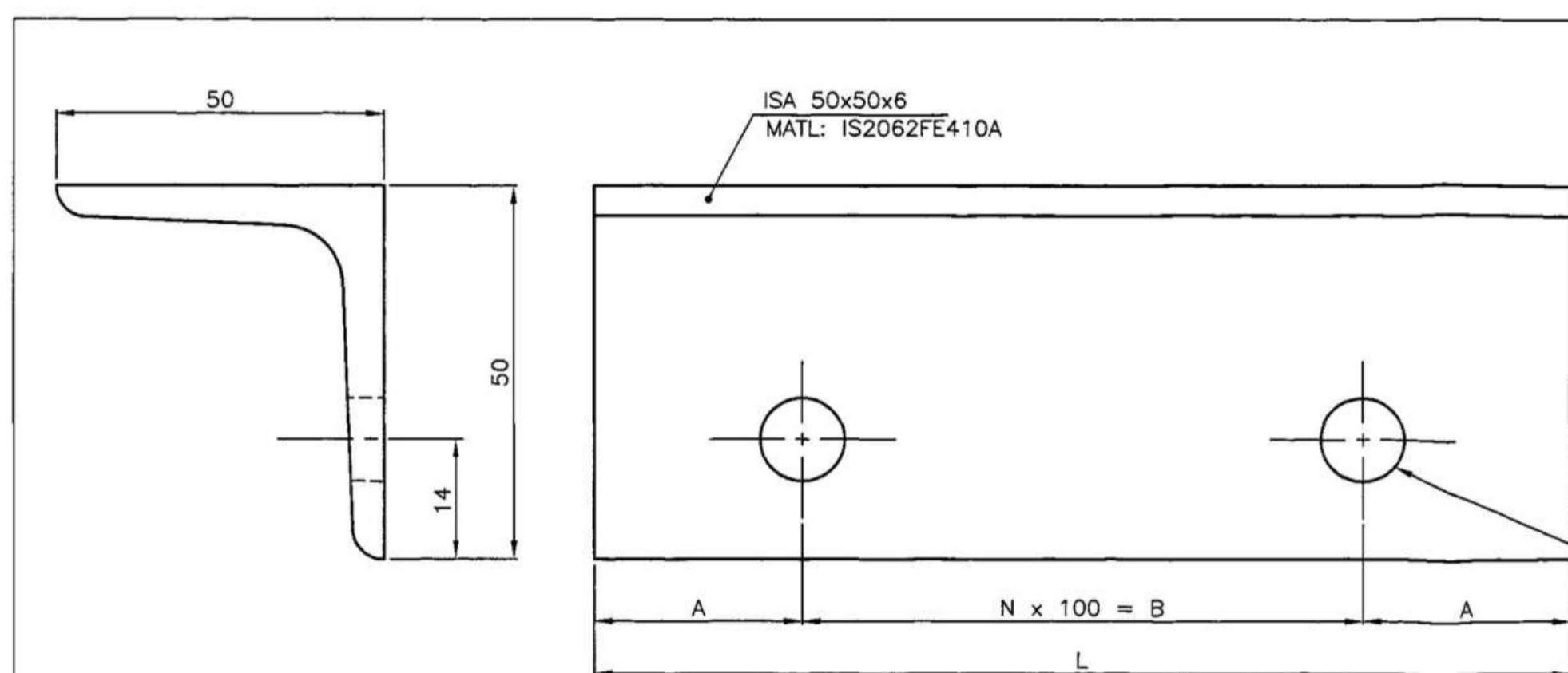
MATL CODE: 15-011-092

BPS No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	WT/PIECE IN KG
6101-3003-36	93	104	16	1389	88.5	8	1224	76.5	PL 6; 139 x 1389	9.5																	
6101-3003-37	93	104	16	1389	76.5	8	1224	88.5	PL 6; 139 x 1389	9.5																	
6101-3003-38	93	104	16	1224	76.5	7	1071	76.5	PL 6; 139 x 1224	8																	
6101-3003-39	93	104	16	1836	76.5	11	1683	76.5	PL 6; 139 x 1836	12.3																	
6101-3003-40	82	103	16	1389	88.5	8	1224	76.5	PL 6; 128 x 1389	8.5																	
6101-3003-41	82	103	16	1389	76.5	8	1224	88.5	PL 6; 128 x 1389	8.5																	
6101-3003-42	82	103	16	1224	76.5	7	1071	76.5	PL 6; 128 x 1224	7.5																	
6101-3003-43	82	103	16	1836	76.5	11	1683	76.5	PL 6; 128 x 1836	11.3																	

BPSNO	1NO.OF.PART1	2NOS.OF.PART2	WT/ASSY IN KG
6101-3003-48	6101-3003-36	6101-3003-44	9.9
6101-3003-49	6101-3003-37	6101-3003-44	9.9
6101-3003-50	6101-3003-38	6101-3003-44	8.4
6101-3003-51	6101-3003-39	6101-3003-44	12.7
6101-3003-52	6101-3003-40	6101-3003-45	8.9
6101-3003-53	6101-3003-41	6101-3003-45	8.9
6101-3003-54	6101-3003-42	6101-3003-45	7.9
6101-3003-55	6101-3003-43	6101-3003-45	11.7



BPS No.	H	J	K	L	M	P	Q	R	S	T	U	V	W	X	Y	Z	WT/PIECE IN KG
6101-3003-16	122	20	82	44	30	60	PL 6; 82 x 122	0.5									
6101-3003-17	127	19	80	44	30	65	PL 6; 80 x 127	0.5									
6101-3003-18	139	18	80	44	30	70	PL 6; 80 x 139	0.5									

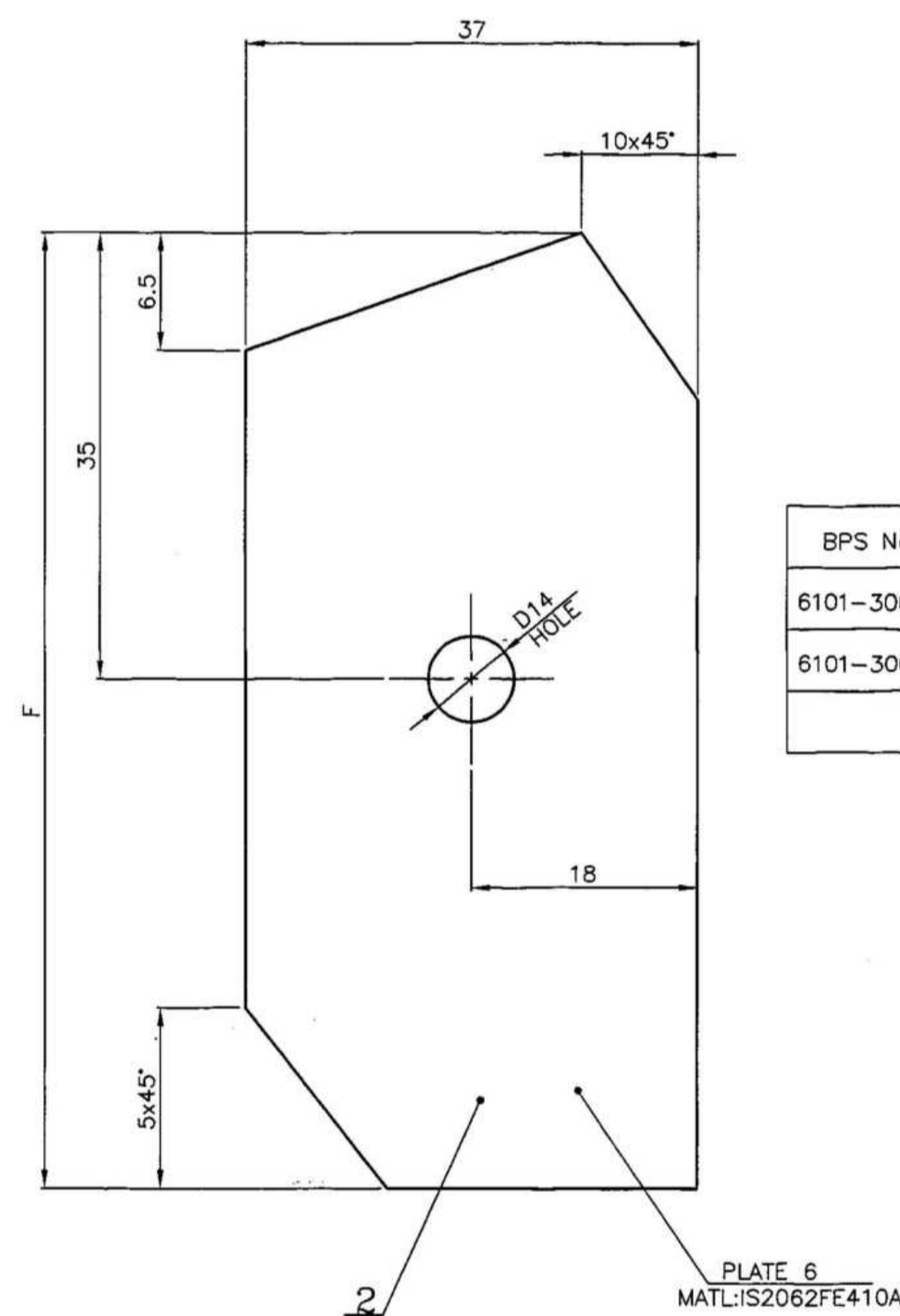


MATL CODE: 15-086-071

BPS No.	L	WT/PIECE IN KG
6101-3003-62	550	3.0
6101-3003-63	660	3.5
6101-3003-64	780	4.3

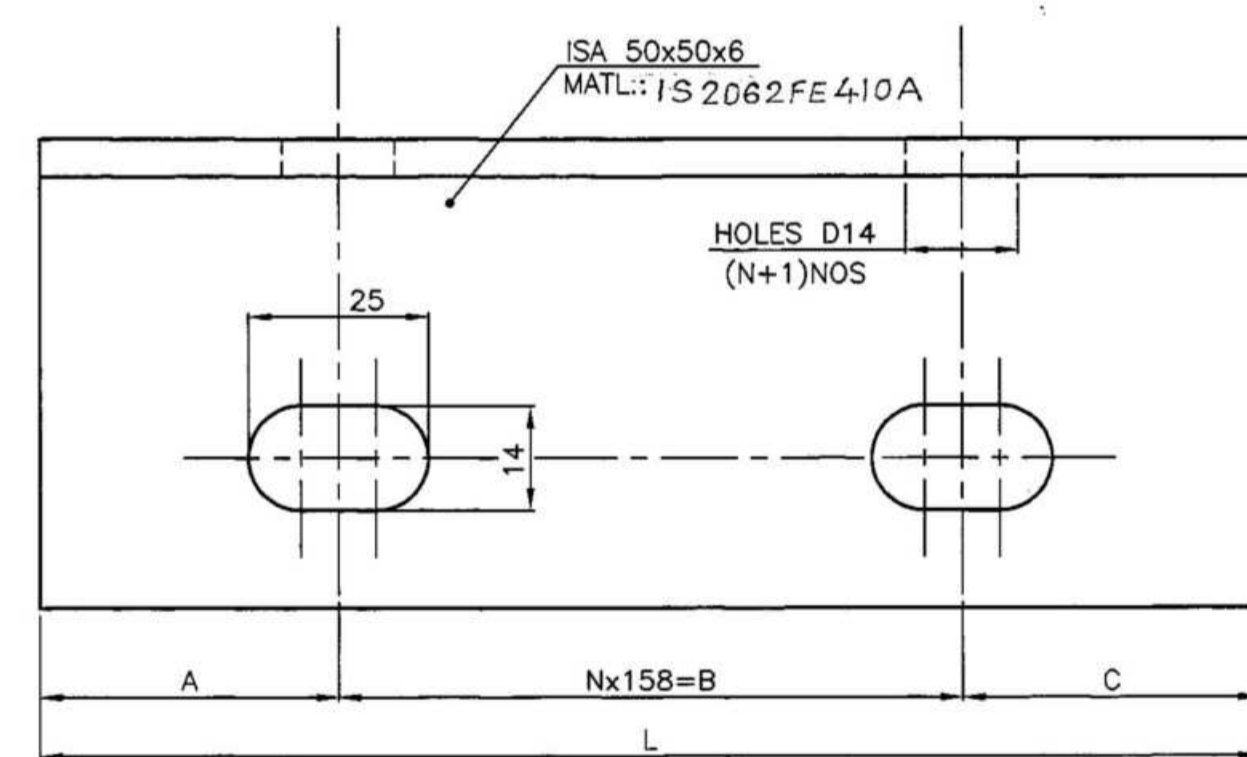
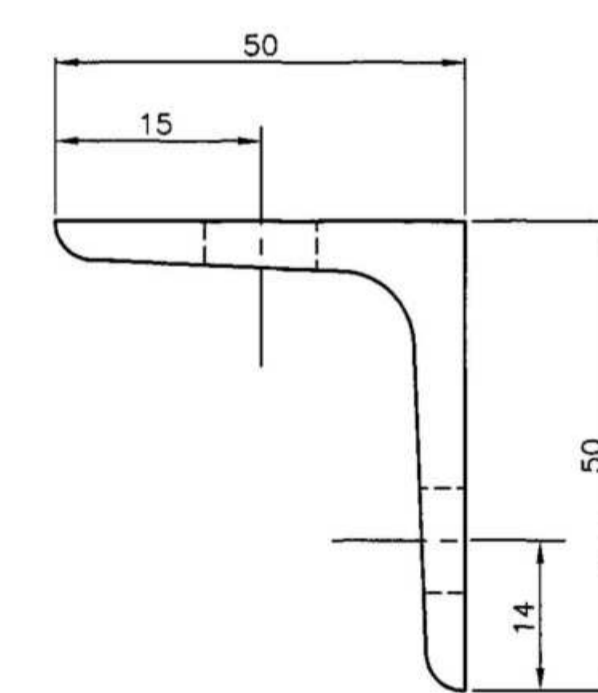
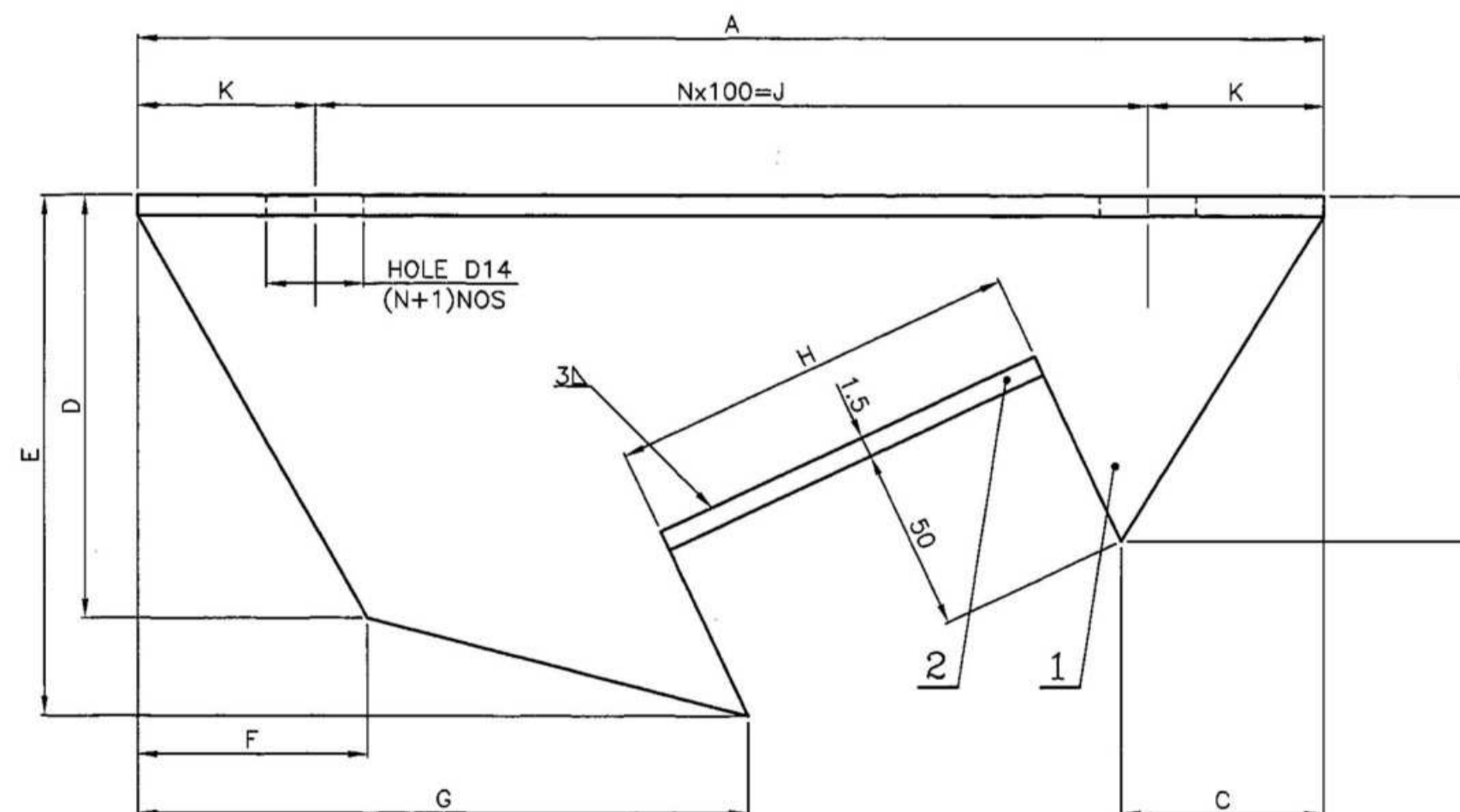
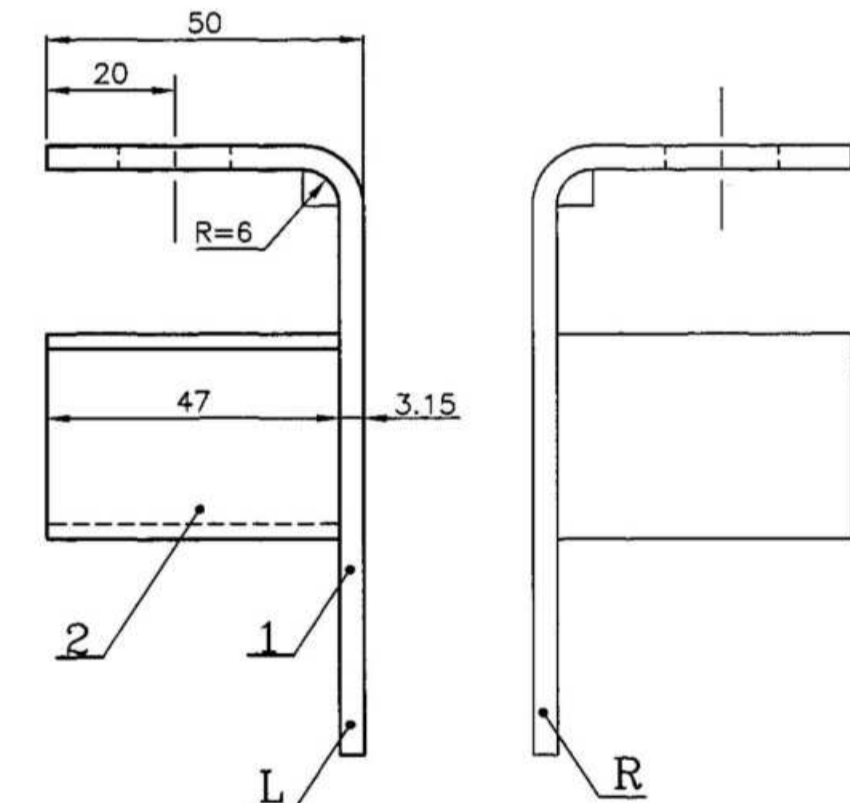
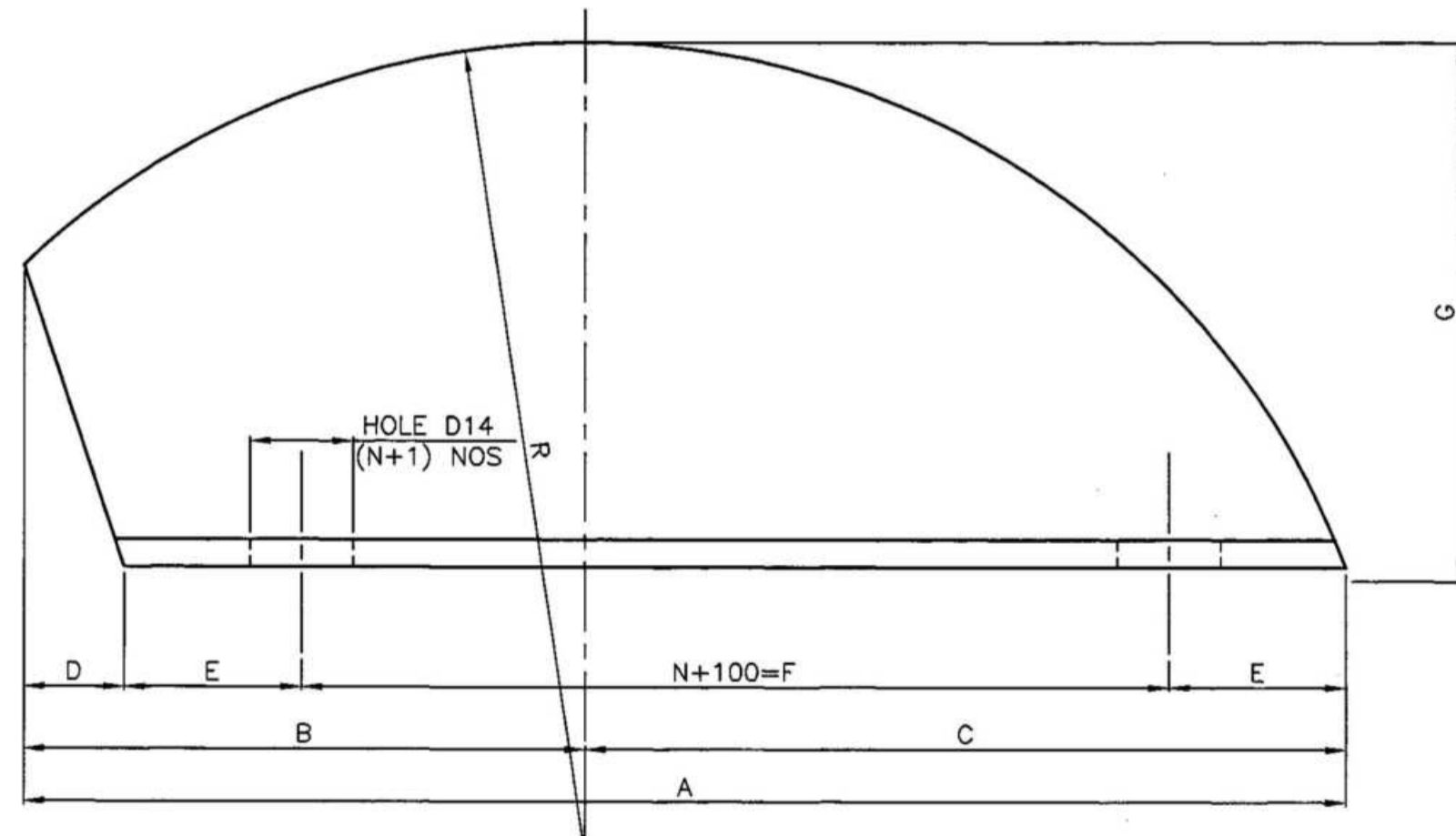
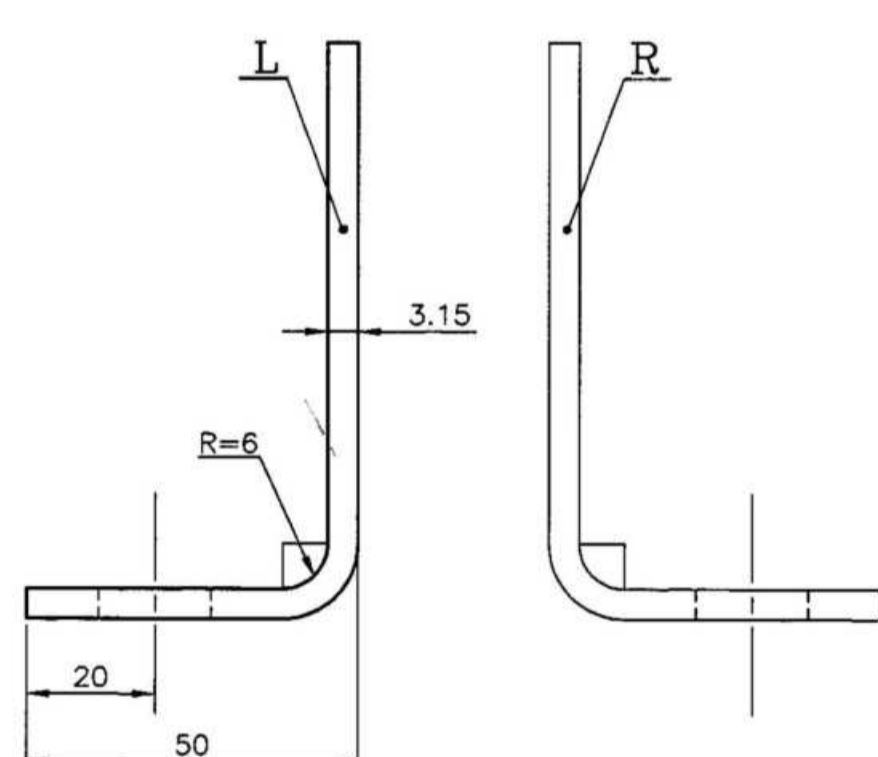
MATL CODE: 15-013-056

BPS No.	A	N	B	LENGTH	WT/PIECE IN KG
6101-3003-56	54	4	400	508	2.3
6101-3003-57	29.5	5	500	559	2.5
6101-3003-58	54.5	5	500	609	2.7
6101-3003-59	30	6	600	660	3.0
6101-3003-60	55.5	6	600	711	3.2



MATL CODE: 15-011-092

BPS No.	L	SIZE	WT/PIECE IN KG
6101-3003-44	97	PL 6; 37x97	0.2
6101-3003-45	86	PL 6; 37x86	0.2



MATL CODE: IS1079FE330

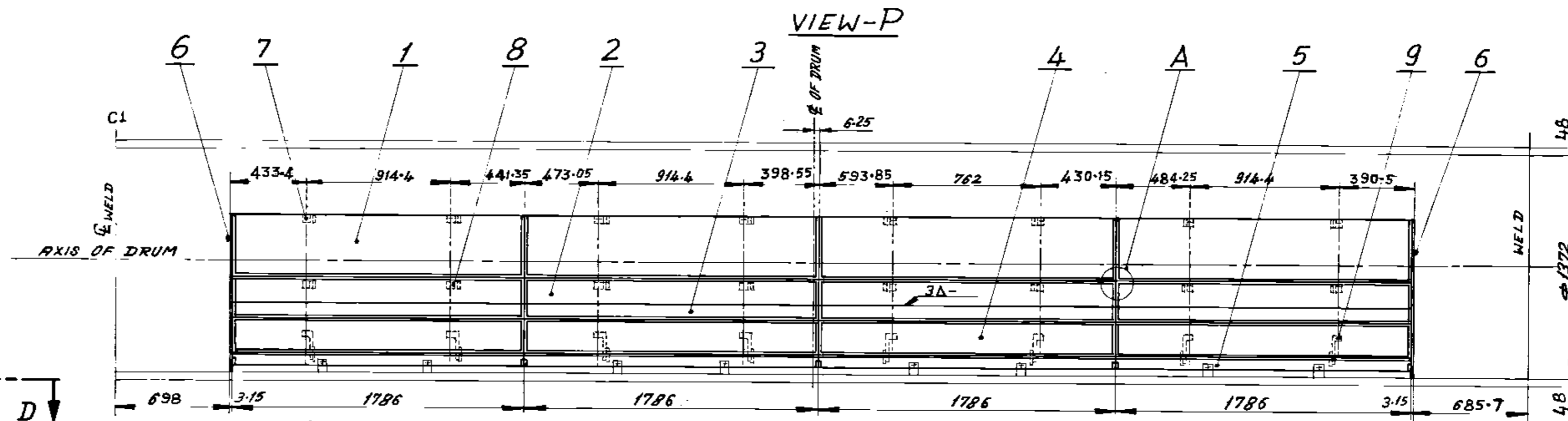
BPS No.			MATERIAL CODE 151078PCE330																	WT/PIECE IN KG	
LEFT	RIGHT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R		SIZE
6101-3003-66	6101-3003-67	914	377	537	74	20	8	800	272	673	sh.3.15; 316 x 914										7.5
6101-3003-68	6101-3003-69	980	403	577	70	55	8	800	272	750	sh.3.15; 316 x 980										8
6101-3003-70	6101-3003-71	1044	432	612	66	39	9	900	272	826	sh.3.15; 316 x 1044										8.5

MATL CODE: 15-011-182

BPS No.	LEFT	RIGHT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	WT/PIECE IN KG
6101-3003-74	6101-3003-75	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	6.85														
6101-3003-76	6101-3003-77	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	6														
6101-3003-78	6101-3003-79	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	0.65														
6101-3003-80	6101-3003-81	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	7.2														
6101-3003-82	6101-3003-83	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	6.5														
6101-3003-84	6101-3003-85	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	0.7														
6101-3003-86	6101-3003-87	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	7.75														
6101-3003-88	6101-3003-89	840	115	124	196	238	75	220	511	8	800	20	SH.3.15; 282x840	1	0.75														

CAUTION: The information on this drawing is for reference only. It is not to be used for manufacturing purposes without the approval of the design engineer.		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
Bharat Heavy Electricals Ltd		UNIT: HIGH PRESSURE BOILER PLANT	
TIRUCHIRAPPALLI - 620014		DRAWING RETRACTED	
361-248		DRAWING NO: 6101-3003	
REV: 1322		REV: 1322	
DATE: 13/01/2014		DATE: 13/01/2014	
BY: R.BINU		BY: R.BINU	
CHK: P.K.MOORTHY			

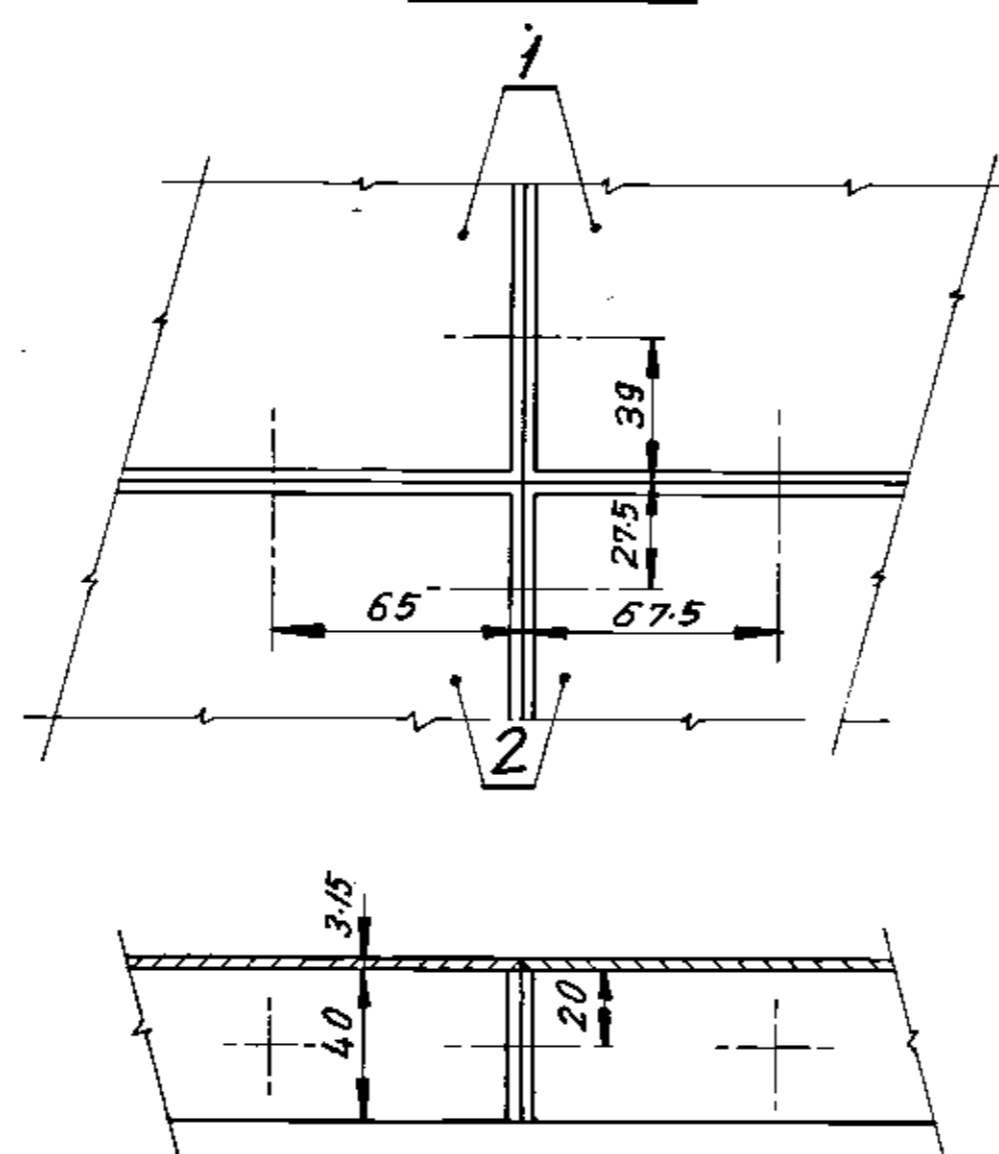
CAUTION THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LTD. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.



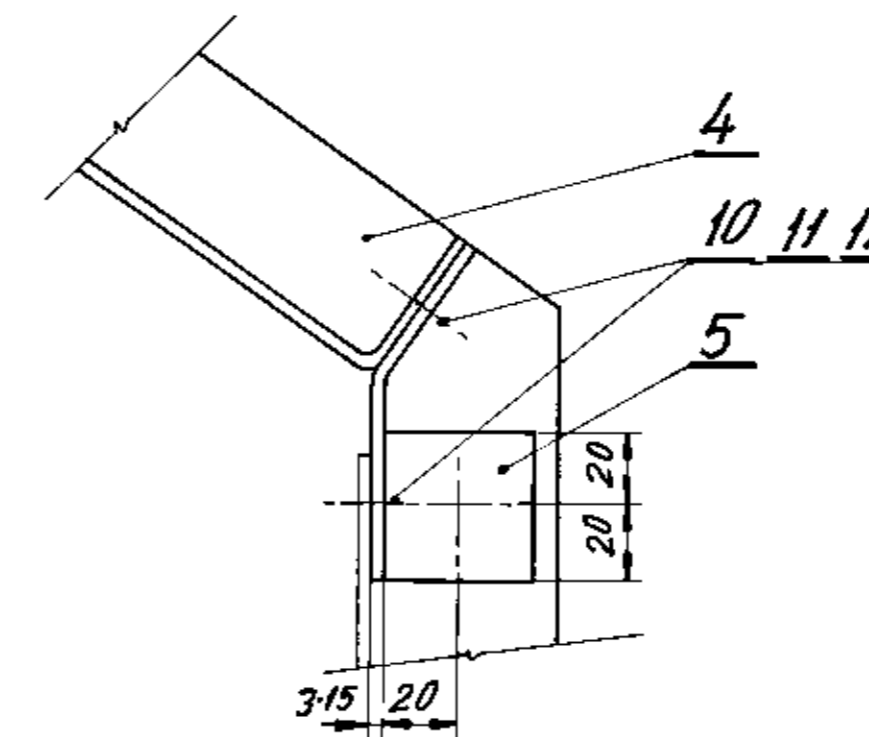
NOTES:-

1. USE TWO NOS. OF WASHERS PER JOINT ONE AT BACK OF NUT AND ANOTHER IN FRONT OF SCREW HEADS FOR ALL SCREWED CONNECTIONS.
2. ALL SCREWED CONNECTIONS ARE TO BE DONE TIGHTLY. SEAL WELDING IS NOT READ.
3. ENDS OF ALL SECTIONS SHOULD BE CHECKED TO MAKE CERTAIN THEY ARE IN THE SAME PLANE ASSURING FULL CONTACT WITH EACH OTHER.
4. NECESSARY MATCH DRILLS TO BE CARRIED OUT DURING ASSEMBLY.

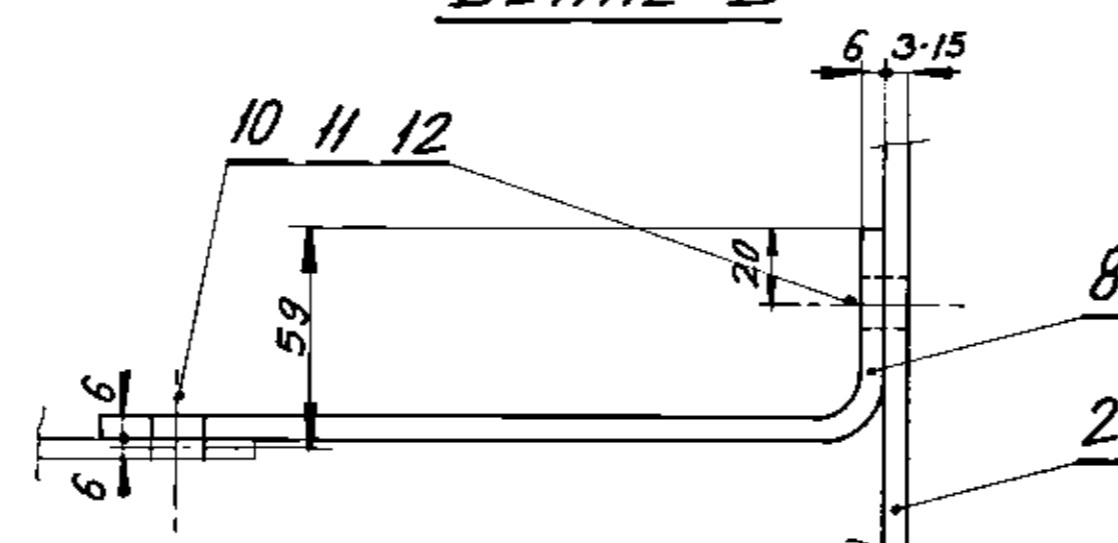
DETAIL-A



DETAIL-C


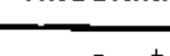


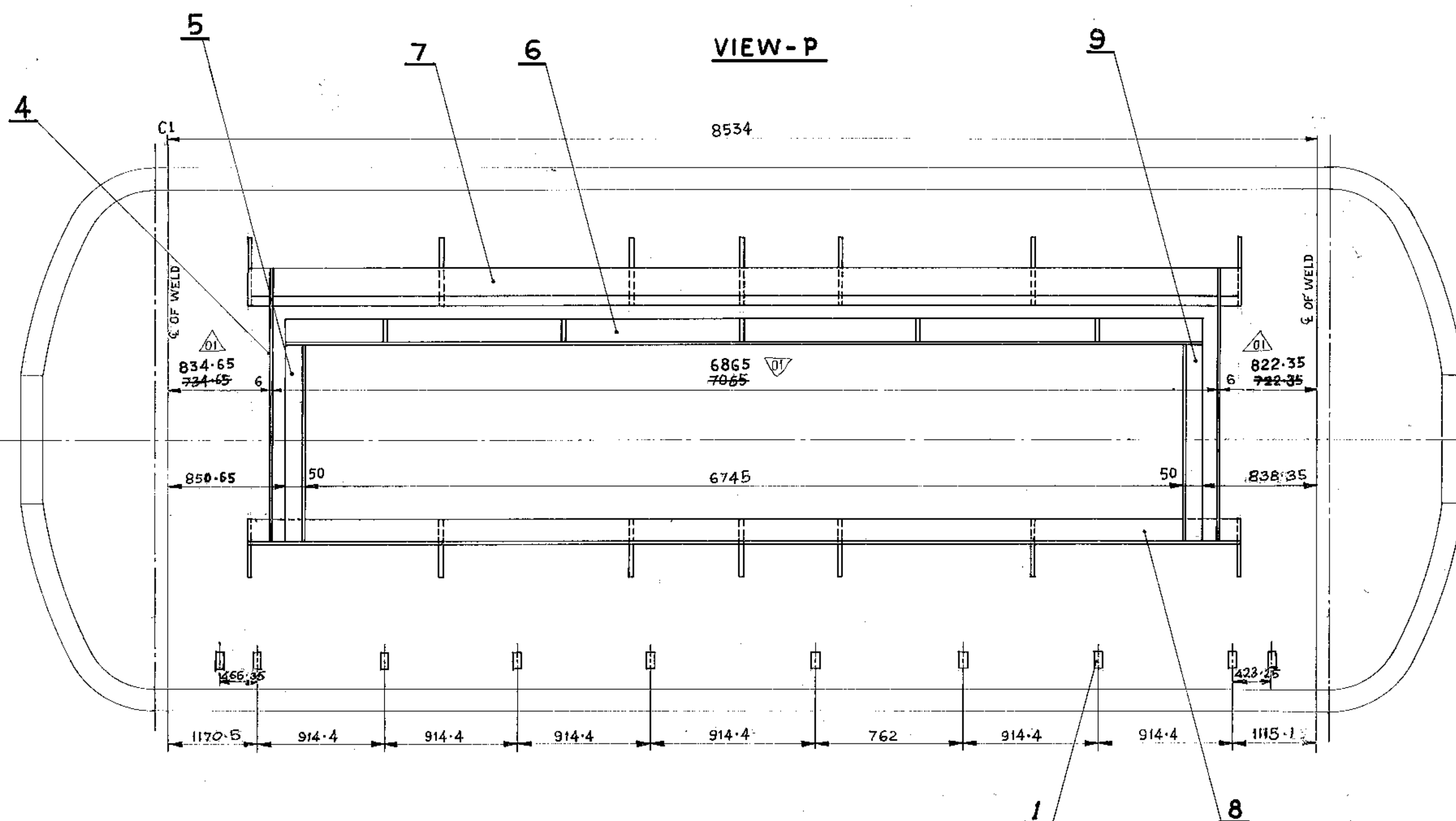
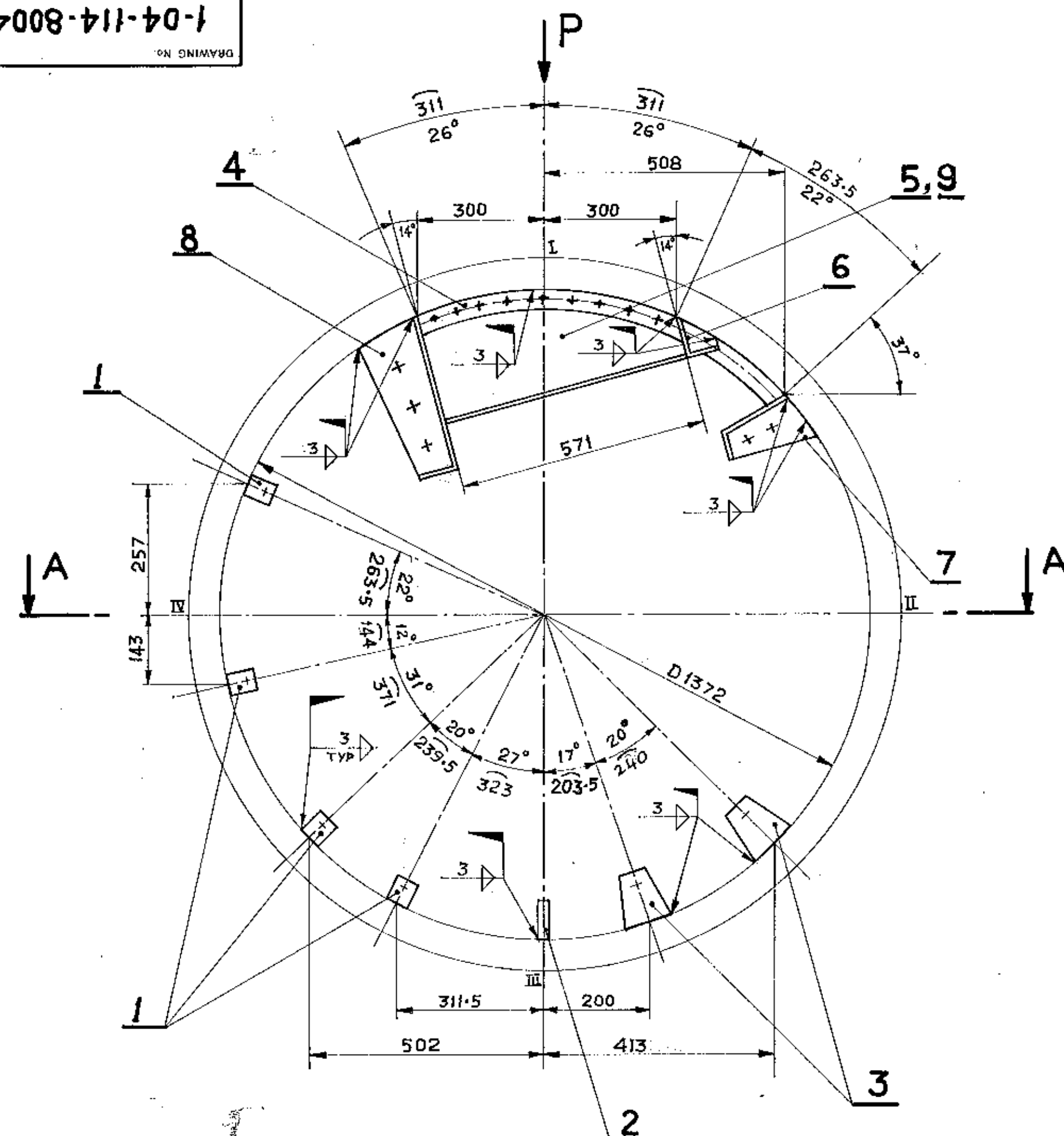
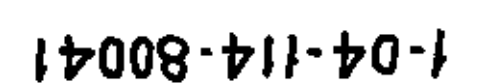
DETAIL-B



BOILER NO:- 0579 & 0580

	12	WASHER 12	S	4140812000		4140800012		0.005			
								400			
	11	HEX. NUT M12	S	4130412000		4130400012		0.018			
								200			
	10	HEX. SCREW M12X30	S	4122212030		4122212030		0.041			
								200			
	09	BENT PLATE	S	6101-3001-86		15-011-092		0.400			
						BM C20		.8			
	08	BENT PLATE	S	6101-3001-85		15-011-092		0.507			
						BM C20		1.6			
	07	BENT PLATE	S	6101-3001-84		15-011-092		0.400			
						BM C20		.8			
	06	END COVER		3-04-114-80123		15-011-188		12.640			
						GMC 10		2			
	05	PANEL		3-04-114-80122				4.263			
						WELDMENT		4			
	04	PANEL		3-04-114-80121				21.318			
						WELDMENT		4			
	03	PANEL		3-04-114-80120				10.516			
						WELDMENT		4			
	02	PANEL		3-04-114-80119				10.650			
						WELDMENT		4			
	01	PANEL		3-04-114-80118				19.882			
						WELDMENT		4			
PART NO.	ITEM NO.	DESCRIPTION	QTY	DRAWING NO.	ITEM NO.	MATL CODE	A	UNIT WT	OR	ZONE	
						MATL SPEC	C	WT			

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		ONGC HAZIRA COGENERATION PLANT HRSG DUAL PRESSURE BOILER 105 t/h; 9.0 ata; sat. & 18.5 t/h; 37.0 ata; sat.						
		Bharat Heavy Electricals Ltd., BOILER PLANT UNIT TIRUCHIRAPALLI-620 014		CINS NAME 8-508477000/01 S. Subramanian		DATE 11/01/80		NO. OF ITEM
REPT I.P.P.D. CODE 1922		GRADE OF UNITS: DIM C/M/F 		SCALE N.T.S.		WEIGHT (kg) 316.716		REF TO ARMY CODE BOOK ITEM NO.
TITLE SEPARATING CHAMBER				CARD CODE U 01		DRAWING NO. 1-04-114-80040		REV



TYPE OF WELD	TYPE OF ELECTRODE	LENGTH OF WELD
3A	E7018	44 M

NOTE.

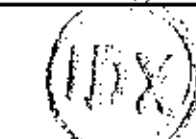
1. ALL ATTACHMENTS ARE TO BE WELDED TO THE DRUM BEFORE STRESS RELIEVING
2. CIRCUMFERENTIAL DIMENSIONS HAVE BEEN CALCULATED FOR THE INTERNAL DIAMETER OF THE DRUM $\phi 1372$

BOILER NO. 0580

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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

O.N.G.C. HAZIRA



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE	NO. OF ITEM
	N-C-SNAIR	<i>Heinman</i>	9-8-86	
END				
		<i>Alfonso</i>		

DEST		GRADE OF UNCL. DIM		SCALE		WEIGHT (kg)		REF TO ASSY / OLD DRG		ITEM NO.	
CODE		C/M/F				287.958					

TITLE	CARD CODE	DRAWING NO.	REV
WELDED ATTACHMENTS FOR DRUM INTERNALS	U 01	1-04-114-80041	02

Size: A1

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

2-03-000-000-00007

DRAWING NO.

TYPE-A

TYPE-B

TYPE-C

NOTES:-

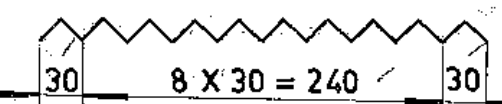
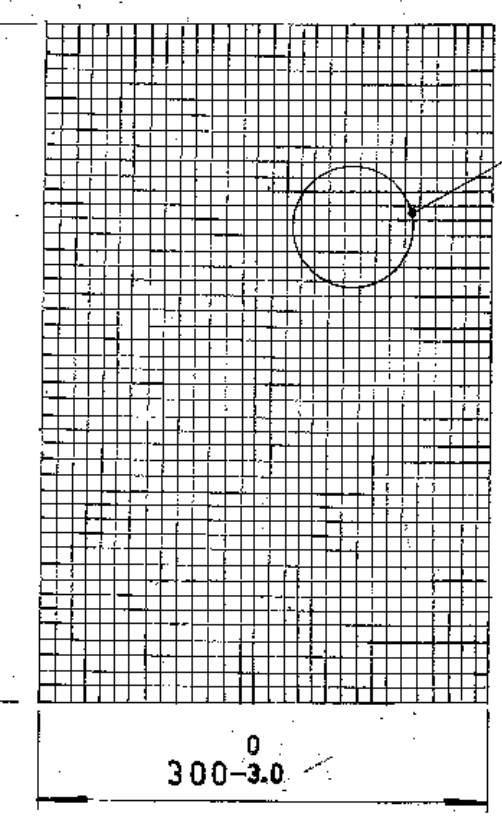
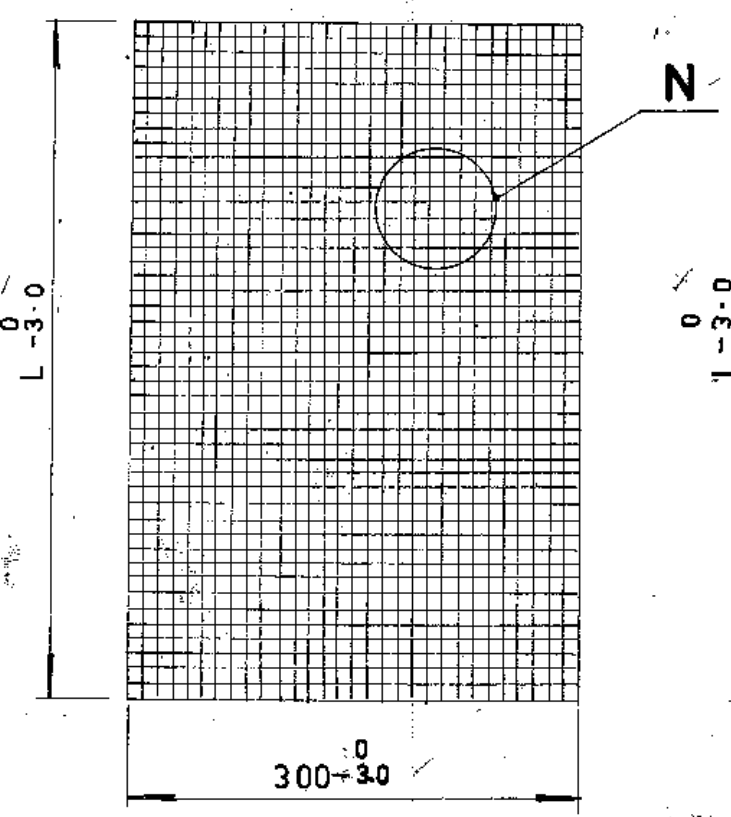
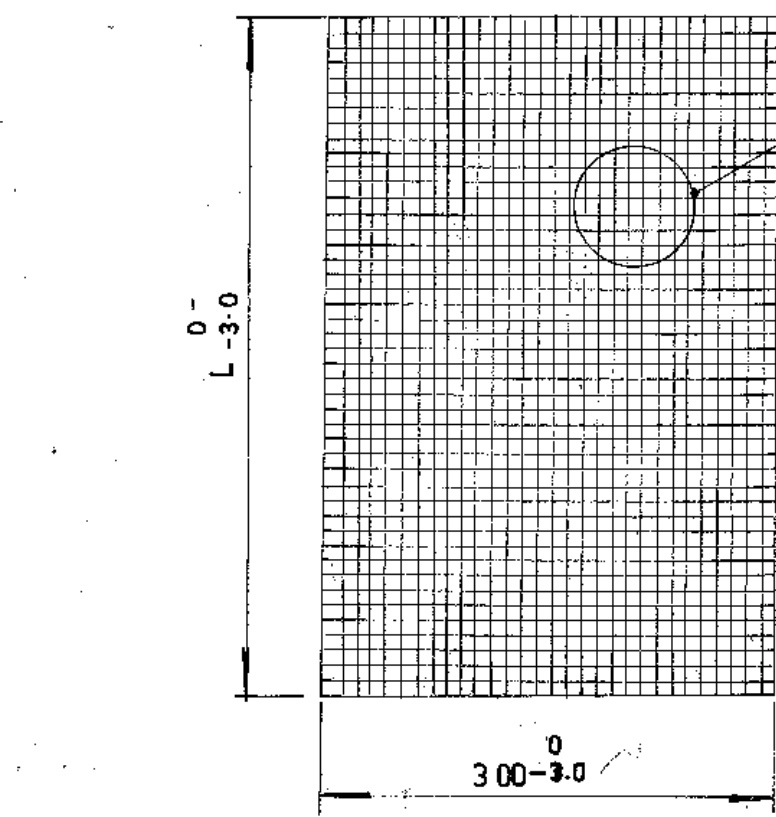
1. THE ENDS OF WIRE MESH ARE TO BE WELDED SUITABLY AFTER TRIMMING THE PROJECTING ENDS OF THE WIRES.
2. THE CORNERS OF THE WIRE MESH SHOULD BE MAINTAINED AT RIGHT ANGLES. THE WIRE MESH SHOULD MAINTAIN SQUARENESS AND SHOULD NOT BE DISTORTED AT THE EDGES.
3. THE WIREMESH SHOULD BE FREE FROM RUST AND A COAT OF VARNISH SHOULD BE APPLIED. BUT NO PAINT SHOULD BE APPLIED OVER THE WIREMESH.
4. THE WIREMESH SHOULD NOT BE GALVANIZED, COPPERED OR TINNED.

15	WIRE MESH TYPE-C L 705	11 006 112	1.610
14	WIRE MESH TYPE-C L 654	11 006 111	1.500
13	WIRE MESH TYPE-C L 603	11 006 110	1.375
12	WIRE MESH TYPE-C L 553	11 006 109	1.260
11	WIRE MESH TYPE-C L 502	11 006 108	1.150
10	WIRE MESH TYPE-B L 705	11 006 107	0.966
09	WIRE MESH TYPE-B L 654	11 006 106	0.896
08	WIRE MESH TYPE-B L 603	11 006 105	0.825
07	WIRE MESH TYPE-B L 553	11 006 104	0.756
06	WIRE MESH TYPE-B L 502	11 006 103	0.688
05	WIRE MESH TYPE-A L 705	11 006 102	3.160
04	WIRE MESH TYPE-A L 654	11 006 101	2.930
03	WIRE MESH TYPE-A L 603	11 006 100	2.700
02	WIRE MESH TYPE-A L 553	11 006 099	2.480
01	WIRE MESH TYPE-A L 502	11 006 098	2.250

MATERIAL: IS 280/78

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		Bharat Heavy Electricals Ltd., BOILER PLANT UNIT TIRUCHIRAPALLI-620 014		STD	SK	DATE	30/10/84	REV	01
DEPT	SS	GRADE OF UNTOOL DIM C/M/F	850	SCALE	N T S	WEIGHT (KG)	6101 3023 01	REF TO	NEW OLD DRG
TITLE				WIRE MESH (FOR INDUSTRIAL BOILER)		CARD CODE	U GT	2-03-000-00007-00	

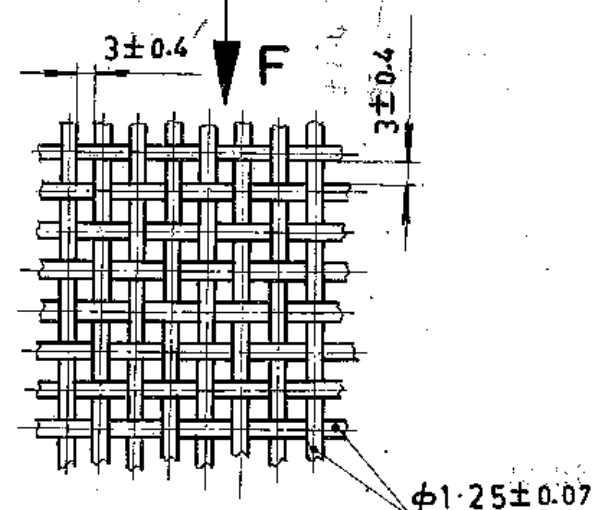
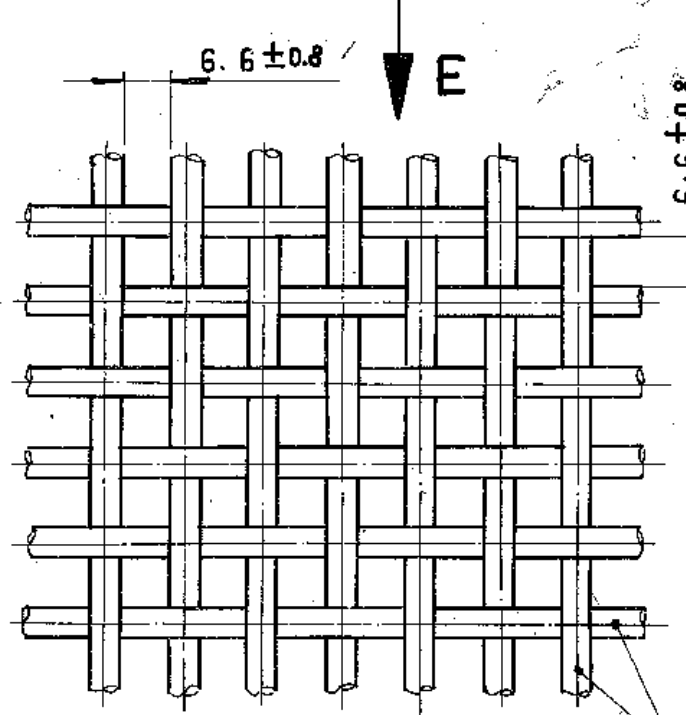
THIS WIRE MESH CAN BE MADE AFTER TAKING THE WIRE MESH OF TYPE-B WITH ADEQUATE SIZE BY BENDING TO V SHAPE.



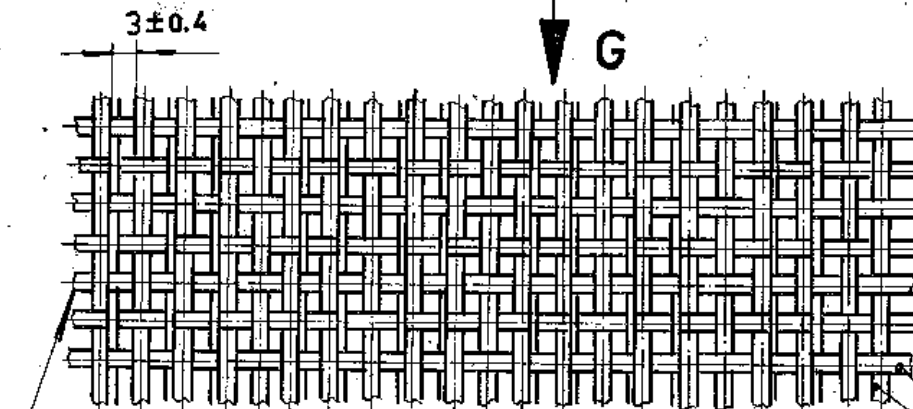
DETAIL-N

DETAIL-P

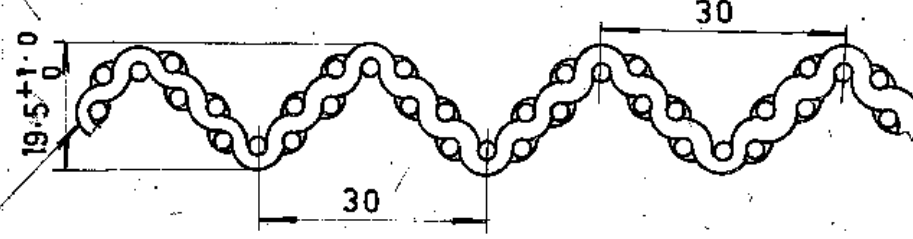
DETAIL-M



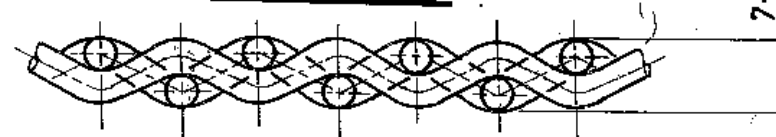
VIEW-F



VIEW-G



VIEW-E

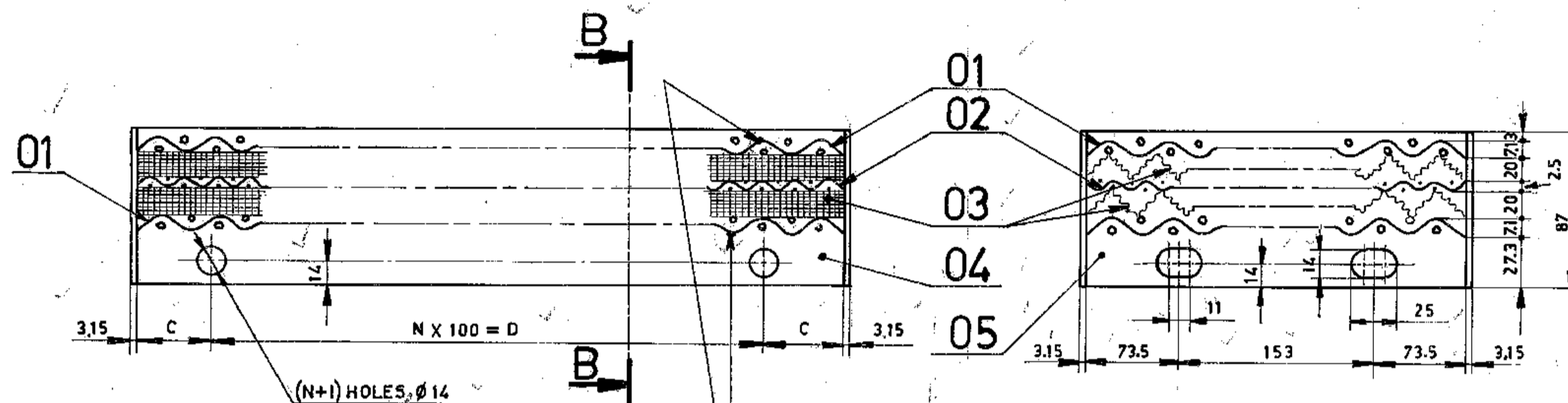


EC-001

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

80000-000-30-2

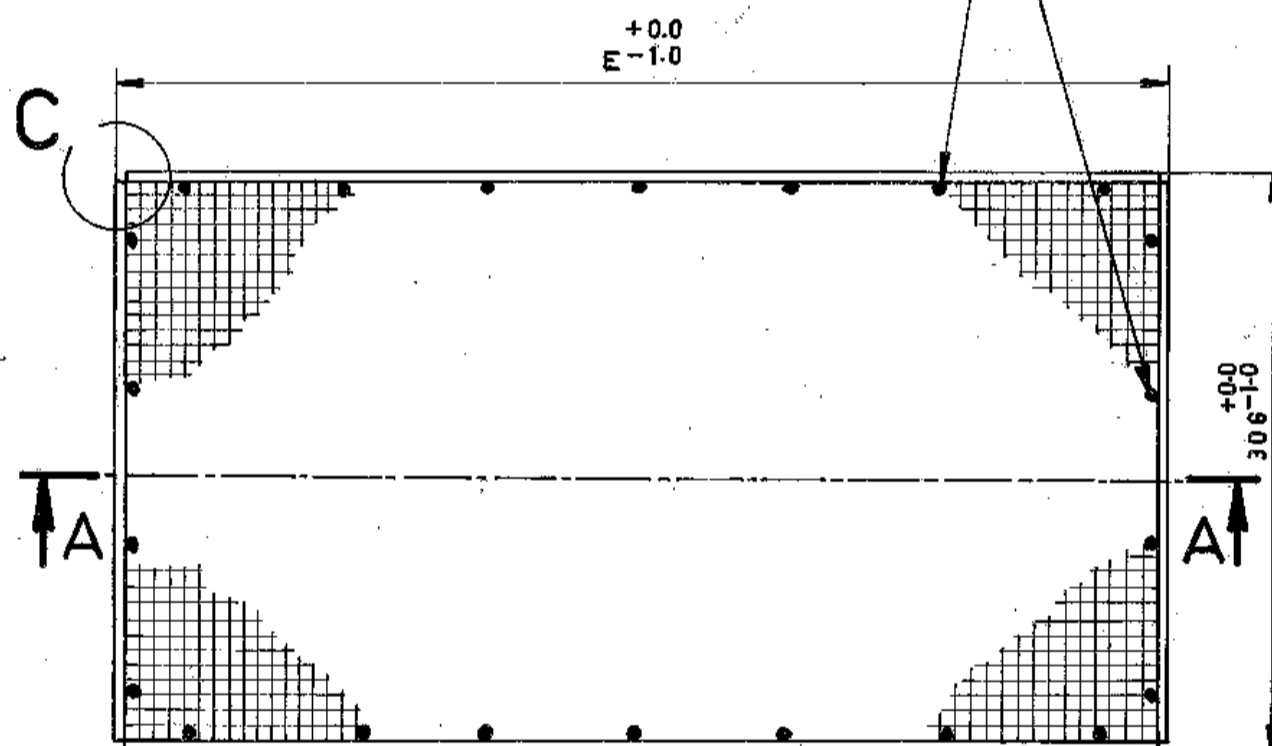
DRAWING NO.



SECTION-A A'

TO BE TACK WELDED AT AN
INTERVAL OF EVERY 10
PITCHES

SECTION-B B'



DETAIL-C'

FOR ITEM NO. 4				FOR ASSY.
ASSY	C	D	N	E
TYPE-A	51	400	4	508
TYPE-B	26.5	500	5	559
TYPE-C	51.5	500	5	609
TYPE-D	27	600	6	660

NOTES:-

1. WIRE MESHERS SHOULD BE TIGHTLY FITTED TO AVOID ANY CLEARANCE BETWEEN END SHEETS (ITEM NO.4 & 5) AND ENDS OF WIRE MESHERS.
2. ITEM NOS. 2 & 3 SHOULD BE PLACED OVER PART NO.1 (BOTTOM) AND A SLIGHT PRESSURE MAY BE EXERTED BEFORE PLACING TOP WIRE MESH (ITEM NO.1).

05	END SHEET 3.15 X 87 X 300	—	15 011 182	—	0
			BMC-10		
04	END SHEET 3.15 X 87 X 654	—	15 011 182	—	146
			BMC-10		
03	WIRE MESH TYPE-C L 654	2-03-000-00007	11 006 111	—	1500
			IS 280		2
02	WIRE MESH TYPE-B L 654	2-03-000-00007	11 006 106	—	0896
			IS 280		1
01	WIRE MESH TYPE-A L 654	2-03-000-00007	11 006 101	—	2930
			IS 280		2
04	PRIMARY SCREEN BOX ASSY TYPE-D	—	—		13958
			—		
05	END SHEET 3.15 X 87 X 300	—	15 011 182	—	0700
			BMC-10		2
04	END SHEET 3.15 X 87 X 603	—	15 011 182	—	1300
			BMC-10		2
03	WIRE MESH TYPE-C L 603	2-03-000-00007	11 006 110	—	1375
			IS 280		2
02	WIRE MESH TYPE-B L 603	2-03-000-00007	11 006 105	—	0825
			IS 280		1
01	WIRE MESH TYPE-A L 603	2-03-000-00007	11 006 100	—	2700
			IS 280		2
03	PRIMARY SCREEN BOX ASSY TYPE-C	—	—		12975
			—		
05	END SHEET 3.15 X 87 X 300	—	15 011 182	—	0700
			BMC-10		2
04	END SHEET 3.15 X 87 X 553	—	15 011 182	—	1200
			BMC-10		2
03	WIRE MESH TYPE-C L 553	2-03-000-00007	11 006 109	—	1260
			IS 280		2
02	WIRE MESH TYPE-B L 553	2-03-000-00007	11 006 104	—	0756
			IS 280		1
01	WIRE MESH TYPE-A L 553	2-03-000-00007	11 006 099	—	2480
			IS 280		2
02	PRIMARY SCREEN BOX ASSY TYPE-B	—	—		12036
			—		
05	END SHEET 3.15 X 87 X 300	—	15 011 182	—	0700
			BMC-10		2
04	END SHEET 3.15 X 87 X 502	—	15 011 182	—	1100
			BMC-10		2
03	WIRE MESH TYPE-C L 502	2-03-000-00007	11 006 108	—	1150
			IS 280		2
02	WIRE MESH TYPE-B L 502	2-03-000-00007	11 006 103	—	0688
			IS 280		1
01	WIRE MESH TYPE-A L 502	2-03-000-00007	11 006 098	—	2250
			IS 280		2
01	PRIMARY SCREEN BOX ASSY TYPE-A	—	—		11088
			—		

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN NAME P.V. RAJAN
END TDM
APPD KMR
DATE 22.7.85
NO. OF VAR 04

REV	DATE	ALTERED	CHECKED
01			
ZONE			

DEPT SS	GRADE OF UNTOOL DIM C/M/F	SCALE NTS	WEIGHT (kg)	REFER UNIT WT.	REV TO NEW / OLD DRG	ITEM NO.
CODE 850					6101-3027-01	
TITLE PRIMARY SCREEN BOX ASSY. (FOR INDUSTRIAL BOILER)			CARD CODE U 01	DRAWING NO. 2-03-000-00008		REV 00

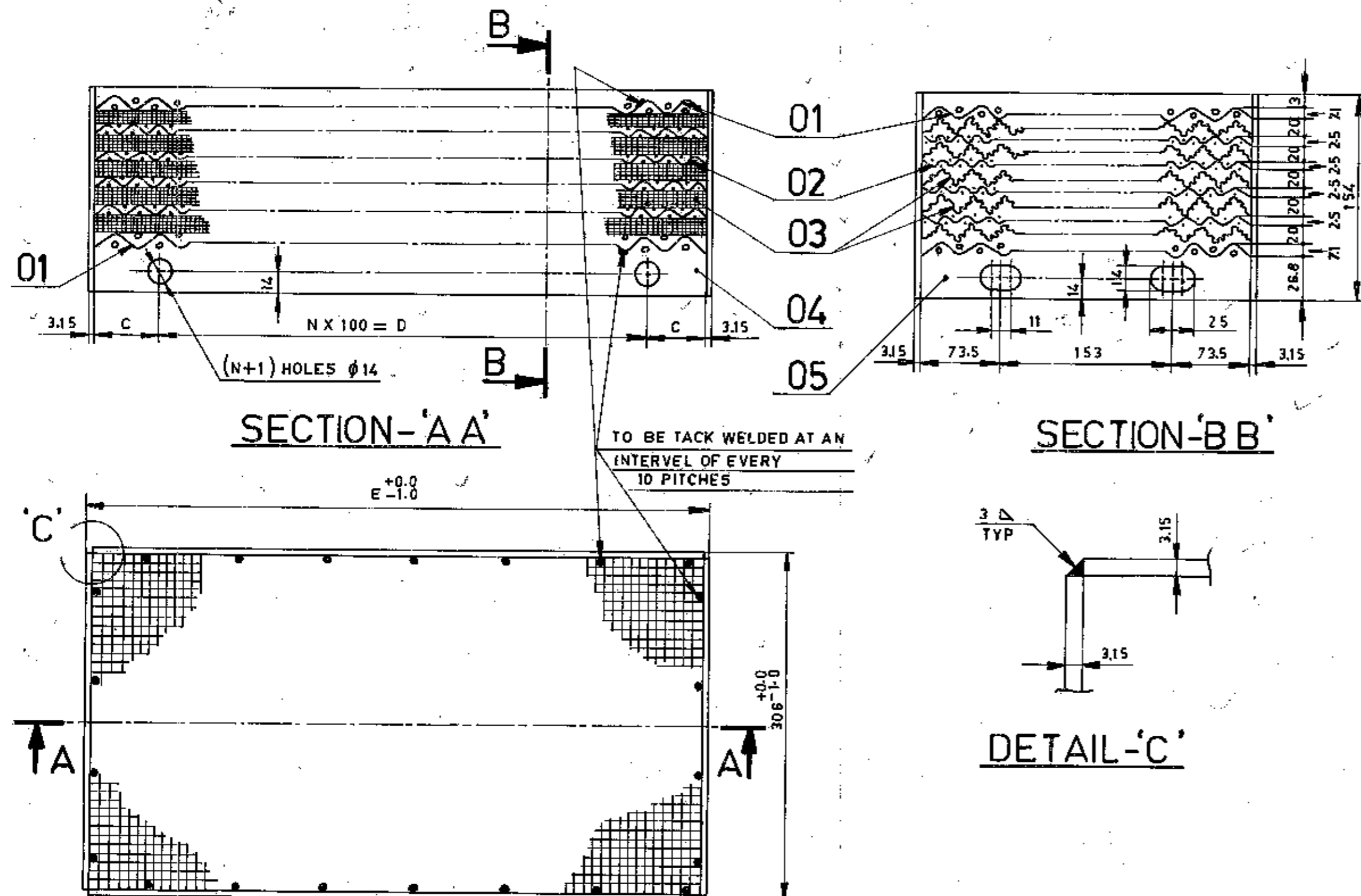
Size A2

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

60000-000-EO-2

DRAWING NO.

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.



NOTES:

1. WIRE MESHES SHOULD BE TIGHTLY FITTED TO AVOID ANY CLERANCE BETWEEN END SHEETS (ITEM NO.4&5) AND ENDS OF WIRE MESHES.
2. ITEM NOS.2&3 SHOULD BE PLACED OVER PART NO.1 (BOTTOM) AND A SLIGHT PRESSURE MAY BE EXERTED BEFORE PLACING TOP WIRE MESH (ITEM NO.1)

FOR ITEM NO. 4				FOR ASSY.
ASSY.	C	D	N	E
TYPE-A	26.5	500	5	559
TYPE-B	51.5	500	5	609
TYPE-C	27	600	6	660
TYPE-D	52.5	600	6	711

05	END SHEET 3.15 X154X300	—	15	011	182	120.0	2
					BMC-10	2	2
04	END SHEET 3.15 X154X705	—	15	011	182	270.0	2
					BMC-10	2	2
03	WIRE MESH TYPE-C L 705	2-03-000-00007	11	006	112	151.0	5
					IS 280	5	5
02	WIRE MESH TYPE-B L 705	2-03-000-00007	11	006	107	096.6	4
					IS 280	4	4
01	WIRE MESH TYPE-A L 705	2-03-000-00007	11	006	102	318.0	2
					IS 280	2	2
04	SECONDARY SCREEN BOX ASSY TYPE-D	—	—	—	—	260.34	—
05	END SHEET 3.15 X154X300	—	15	011	182	120.0	2
					BMC-10	2	2
04	END SHEET 3.15 X154 X854	—	15	011	182	250.0	2
					BMC-10	2	2
03	WIRE MESH TYPE-C L 654	2-03-000-00007	11	006	111	150.0	5
					IS 280	5	5
02	WIRE MESH TYPE-B L 654	2-03-000-00007	11	006	106	089.6	4
					IS 280	4	4
01	WIRE MESH TYPE-A L 654	2-03-000-00007	11	006	101	293.0	2
					IS 280	2	2
03	SECONDARY SCREEN BOX ASSY TYPE-C	—	—	—	—	243.44	—
05	END SHEET 3.15 X154 X300	—	15	011	182	120.0	2
					BMC-10	2	2
04	END SHEET 3.15 X154 X803	—	15	011	182	230.0	2
					BMC-10	2	2
03	WIRE MESH TYPE-C L 603	2-03-000-00007	11	006	110	137.5	5
					IS 280	5	5
02	WIRE MESH TYPE-B L 603	2-03-000-00007	11	006	105	082.5	4
					IS 280	4	4
01	WIRE MESH TYPE-A L 603	2-03-000-00007	11	006	100	270.0	2
					IS 280	2	2
02	SECONDARY SCREEN BOX ASSY TYPE-B	—	—	—	—	225.75	—
05	END SHEET 3.15 X154 X300	—	15	011	182	120.0	2
					BMC-10	2	2
04	END SHEET 3.15 X154 X553	—	15	011	182	210.0	2
					BMC-10	2	2
03	WIRE MESH TYPE-C L 553	2-03-000-00007	11	006	103	126.0	5
					IS 280	5	5
02	WIRE MESH TYPE-B L 553	2-03-000-00007	11	006	104	075.6	4
					IS 280	4	4
01	WIRE MESH TYPE-A L 553	2-03-000-00007	11	006	099	248.0	2
					IS 280	2	2
01	SECONDARY SCREEN BOX ASSY TYPE-A	—	—	—	—	208.84	—

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	DATE	NO. OF
CHD	P.V. RAJAN	22-2-85	VAR
APPD	TDM	5-3-85	04
	KMR	11-Port	6-3-85

REV	DATE	ACTERED
01		CHECKED
ZONE		

DEPT	GRADE OF	SCALE	WEIGHT (kg)	REF TO ASSY / OLD DRG	ITEM
55	UNTOL DIM	NTS			NO.
CODE	G/M/F				
850					
TITLE	DRAWING NO.	REV			
SECONDARY SCREEN BOX ASSY. (FOR INDUSTRIAL BOILER)	2-03-000-00009	00			

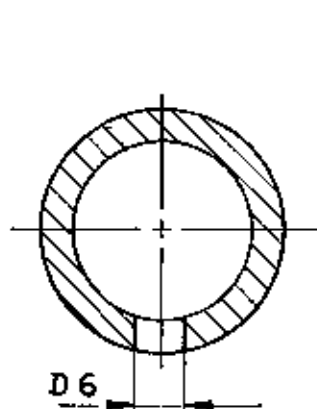
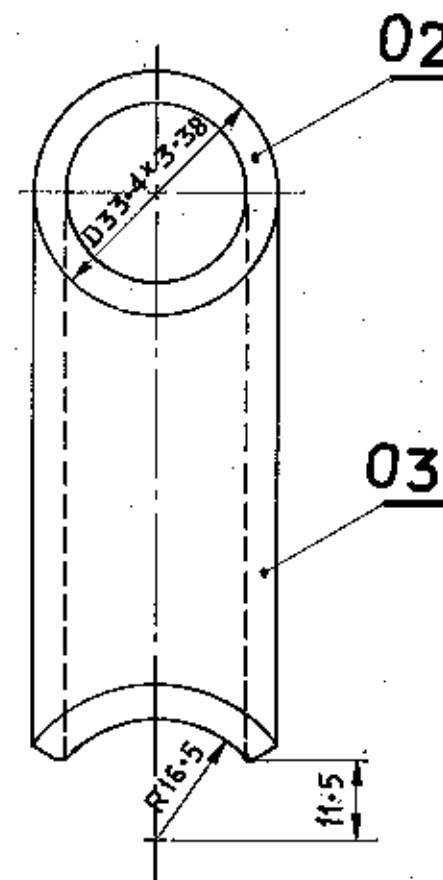
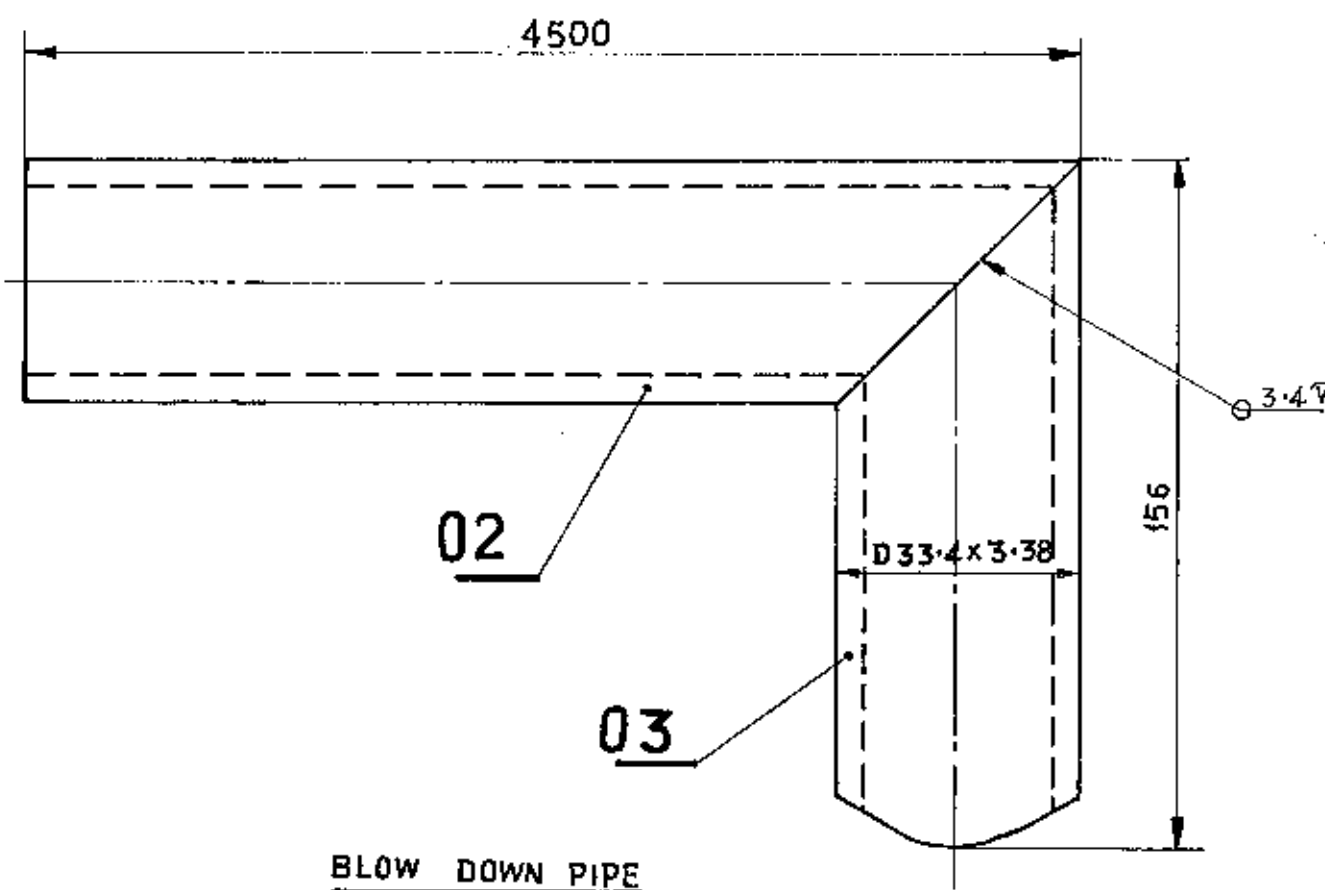
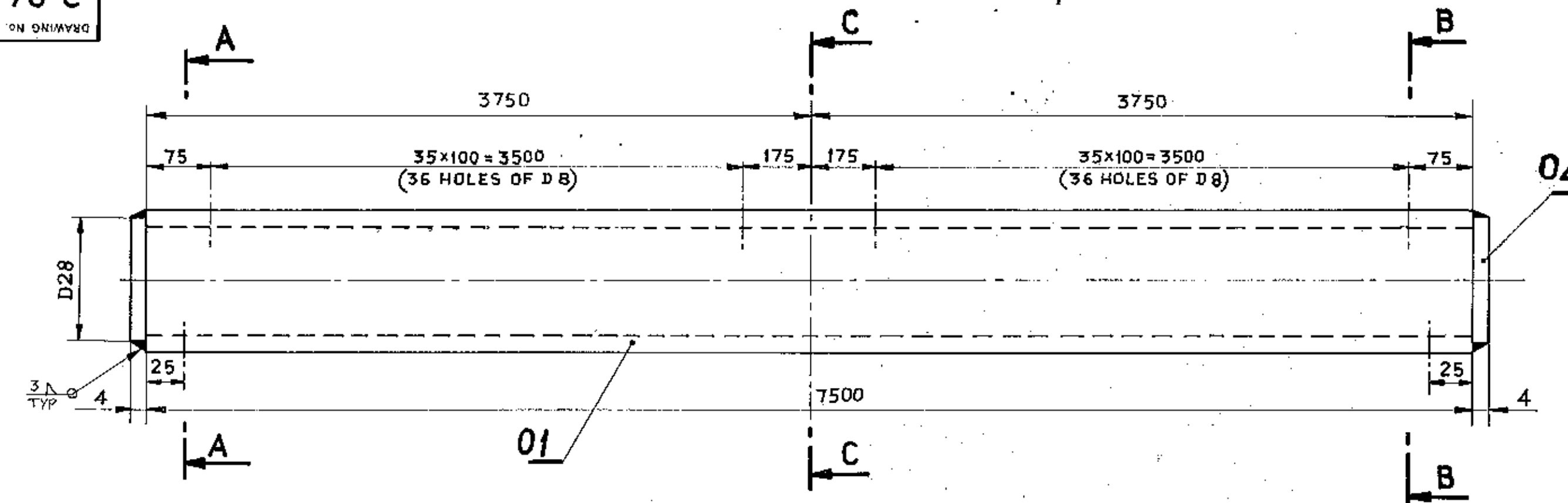
05-228/C

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.

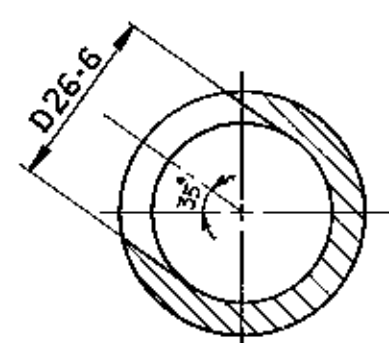
FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

2-04-114-80032

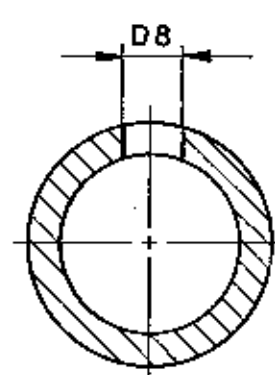
DRAWING NO.



SECTION-AA



SECTION-CC



SECTION-BB

TYPE OF WELD	TYPE OF ELECTRODE	LENGTH/ NO OFF
3Δ	E 7018	2 NO
3.4 ∇	E 7018	1 NO

NOTES:

1. THE PIPINGS CAN BE MADE OUT OF CUT BITS NOT LESS THAN 500 mm
2. THE HOLES ON THE HEADER SHOULD BE MADE ON THE TOP AFTER ASSY.
3. THE TWO DRAIN HOLES SHOULD BE LOCATED AT BOTTOM AFTER ASSY

VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATE CODE	A	UNIT	UNIT WT	QTY	ZONE
	4	PL 4, D 28				15-011-334			0.019		
						BMC 10			2		
	3	TUBE D33.4x3.38 L=156				15-082-010			0.390		
						SA 106 GR B			1		
	2	TUBE D33.4x3.38 L=4500				15-082-010			11.125		
						SA 106 GR B			1		
	1	TUBE D33.4x3.38 L=7500				15-082-010			18.750		
						SA 106 GR B			1		

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN NAME N.G.S. NAIR SIGN DATE 6-10-86 NO. OF VAR

REV	DATE	ALTERED
01		CHECKED
ZONE		

DEPT	GRADE OF UNTOOL DIM C/M/F	SCALE	WEIGHT (KG)	REF TO ASSY FOR DRG	TECH SPEC
			30.303		
TITLE	CARD CODE	DRAWING NO.	REV		
BLOW DOWN HEADER	U 01	2-04-114-80032			

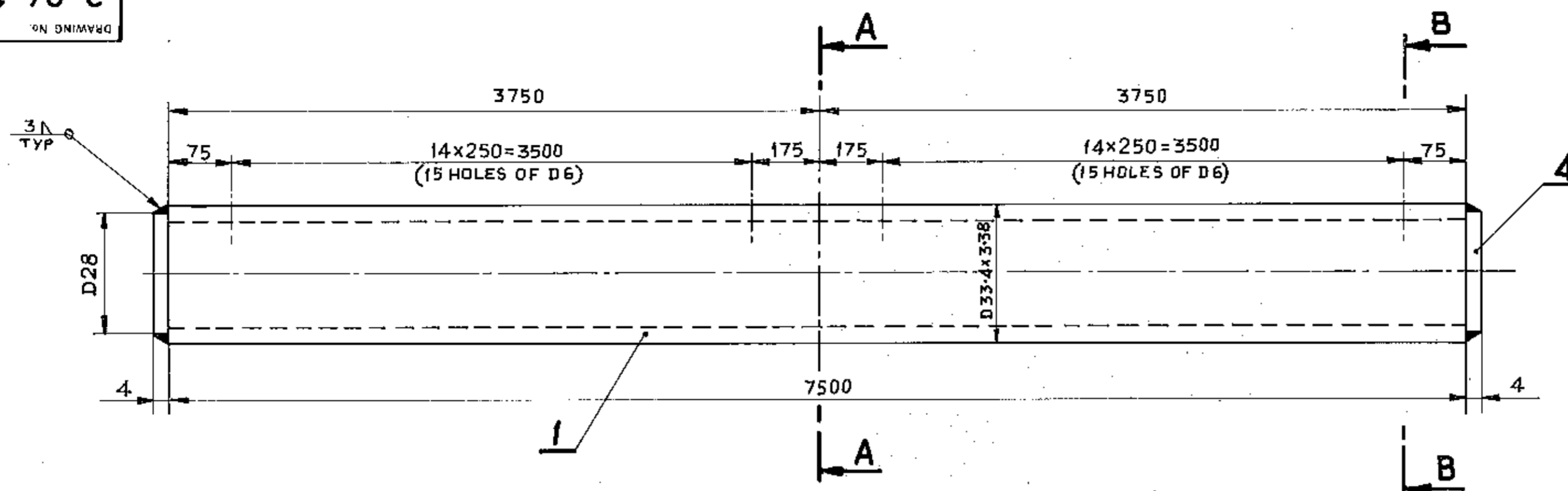
Size A2

05-228/C

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

33008-711-70-2

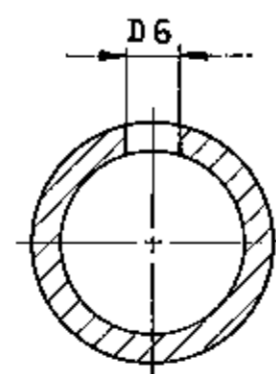
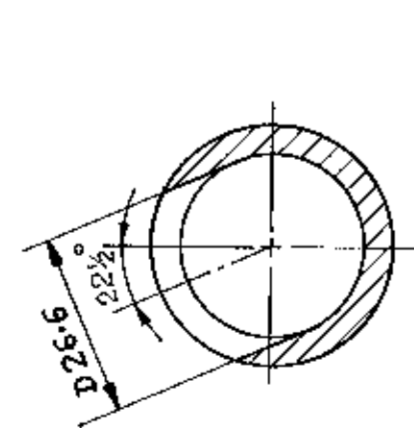
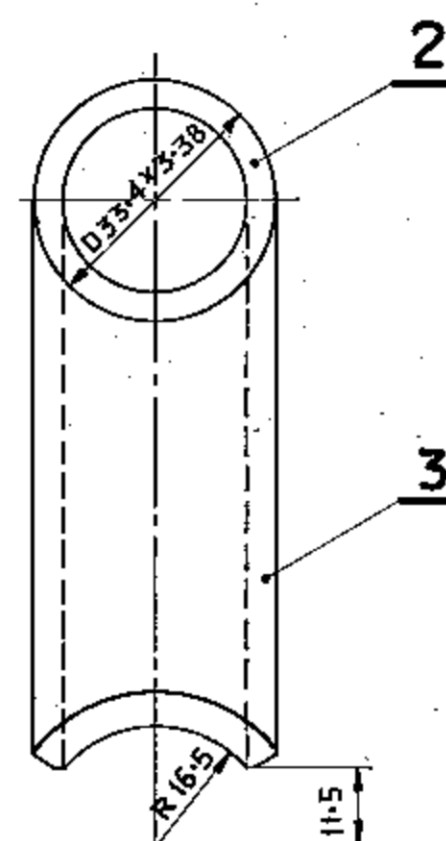
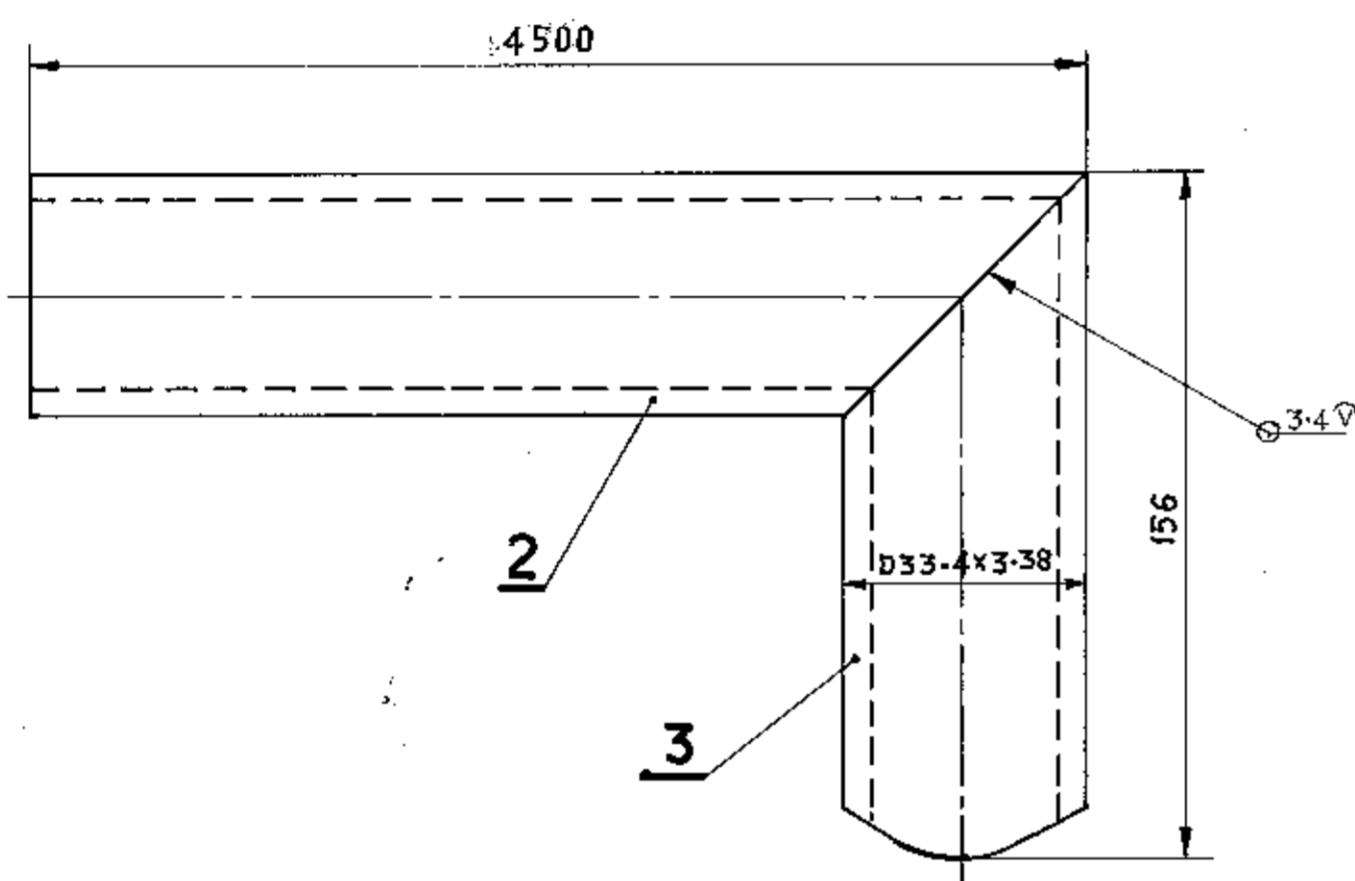
DRAWING No.



TYPE OF WELD	TYPE OF ELECTRODE	LENGTH/ NO OFF
3A	E 7018	2 NO
3-4 V	E 7018	1 NO

NOTES:

1. THE PIPING CAN BE MADE OUT OF CUT BITS NOT LESS THAN 500mm
2. THE HOLES ON THE HEADER SHOULD BE MADE ON THE TOP AFTER ASSY



SECTION-AA

SECTION-BB

ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL CODE	A	UNIT	UNIT WT	QTY	NO. OF VAR
4	PL 4 , D28			15-011-334	BMC 10			0.019	2	
3	TUBE D 33.4 x 3.38 L 156			S 15-082-010	SA 106 GR B			0.390	1	
2	TUBE D 33.4 x 3.38 L 4500			15-082-010	SA 106 GR B			11.125	1	
1	TUBE D 33.4 x 3.38 L 7500			15-082-010	SA 106 GR B			18.750	1	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE	NO. OF VAR
N.C.S.NAIR			6-10-86	
CHD				
APPD				
B. G. GANESAN				

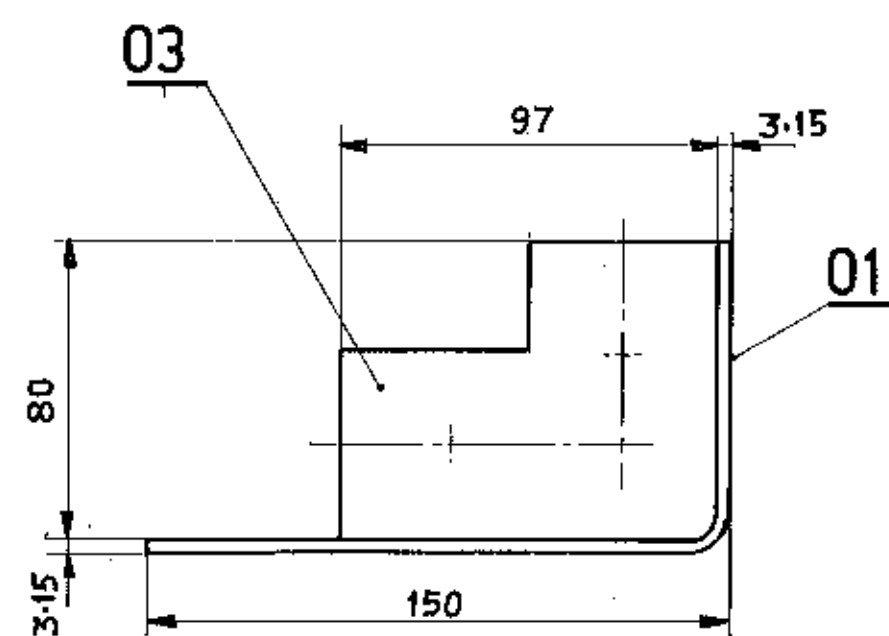
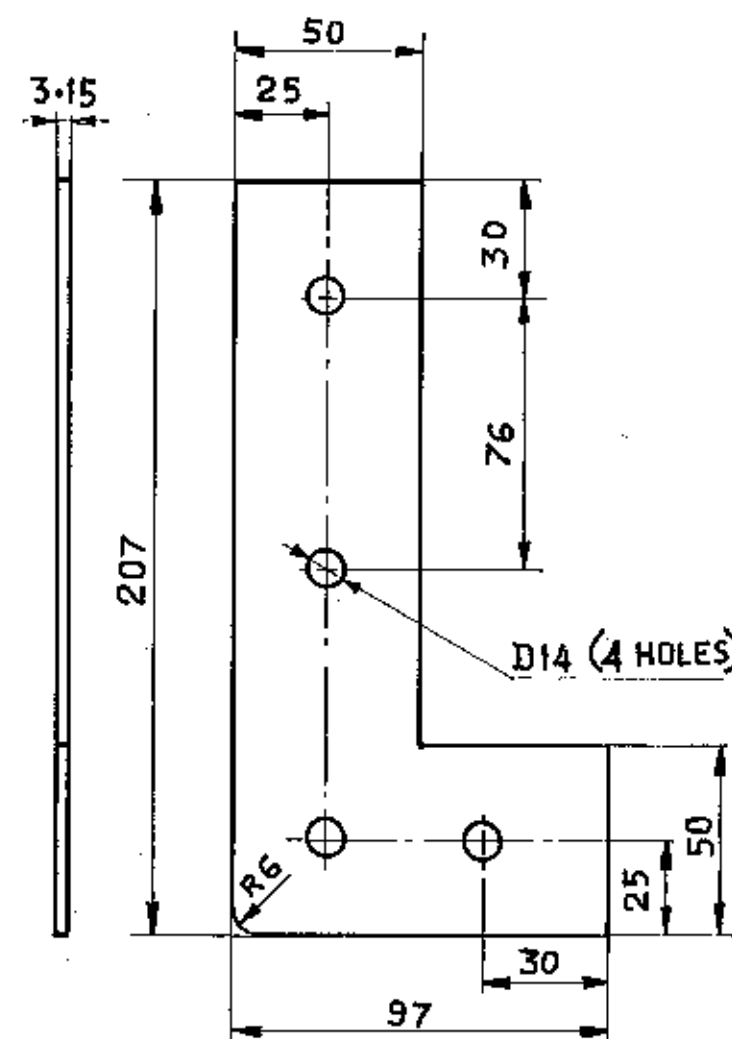
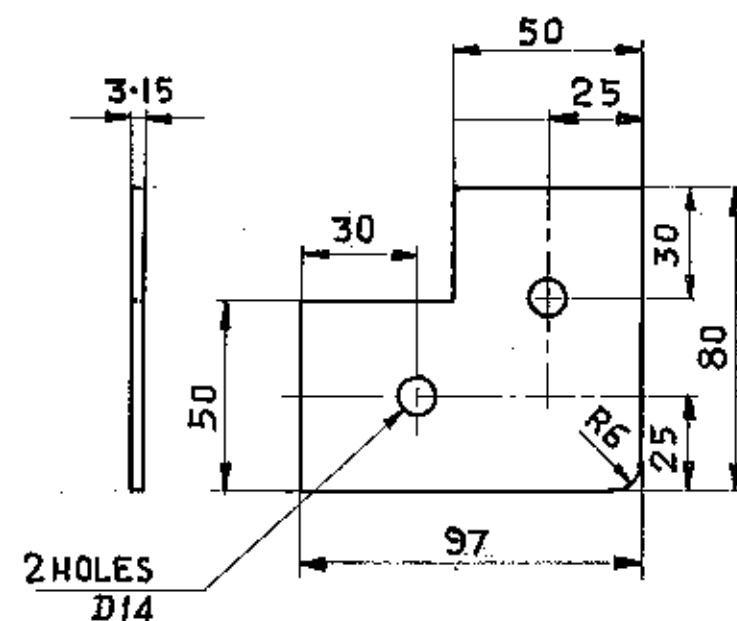
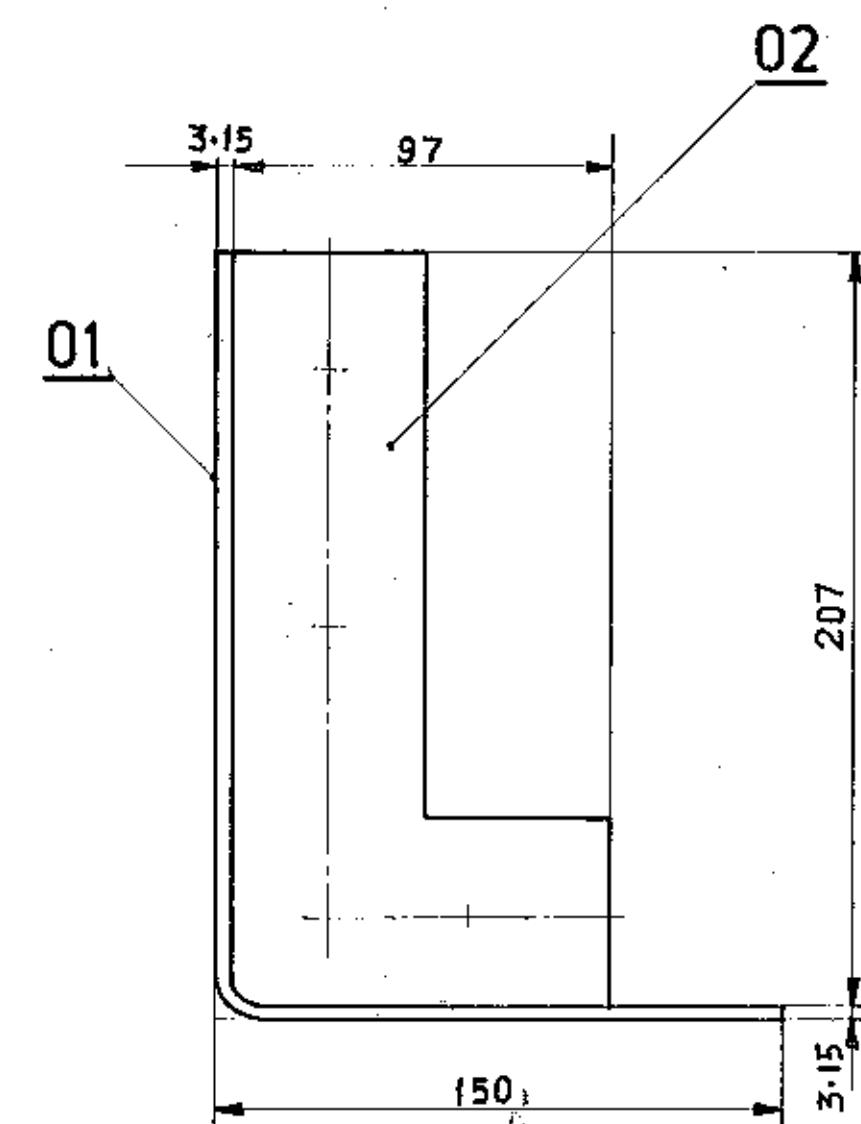
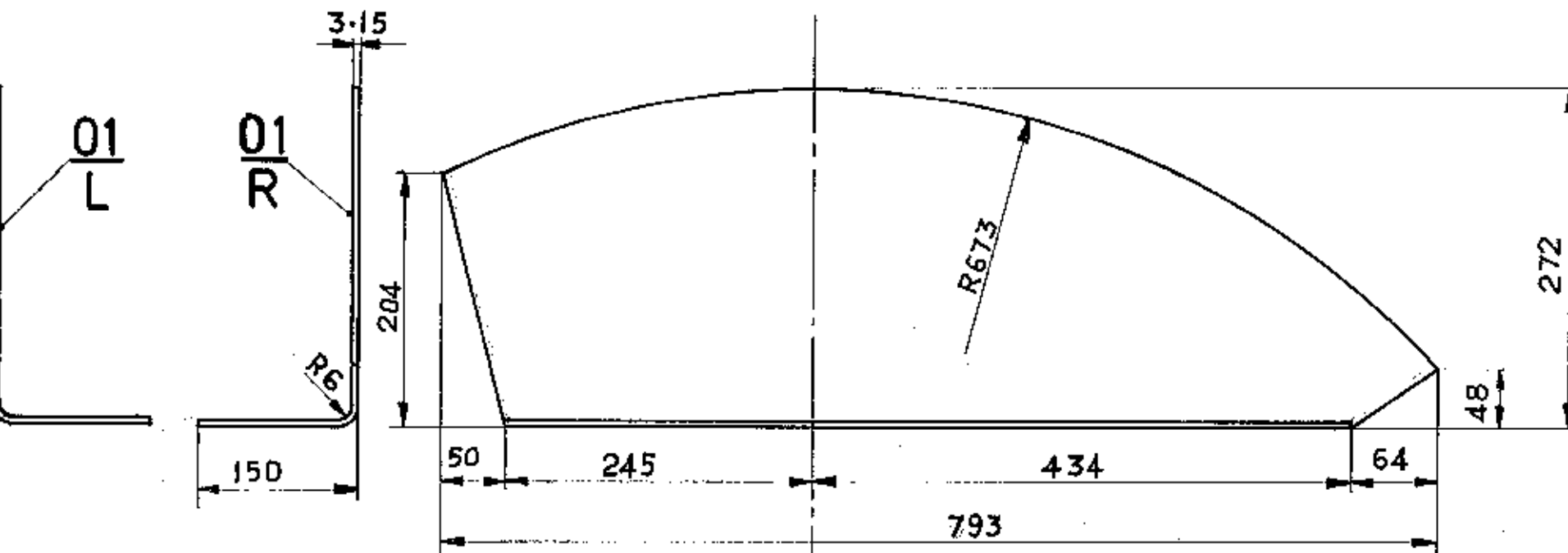
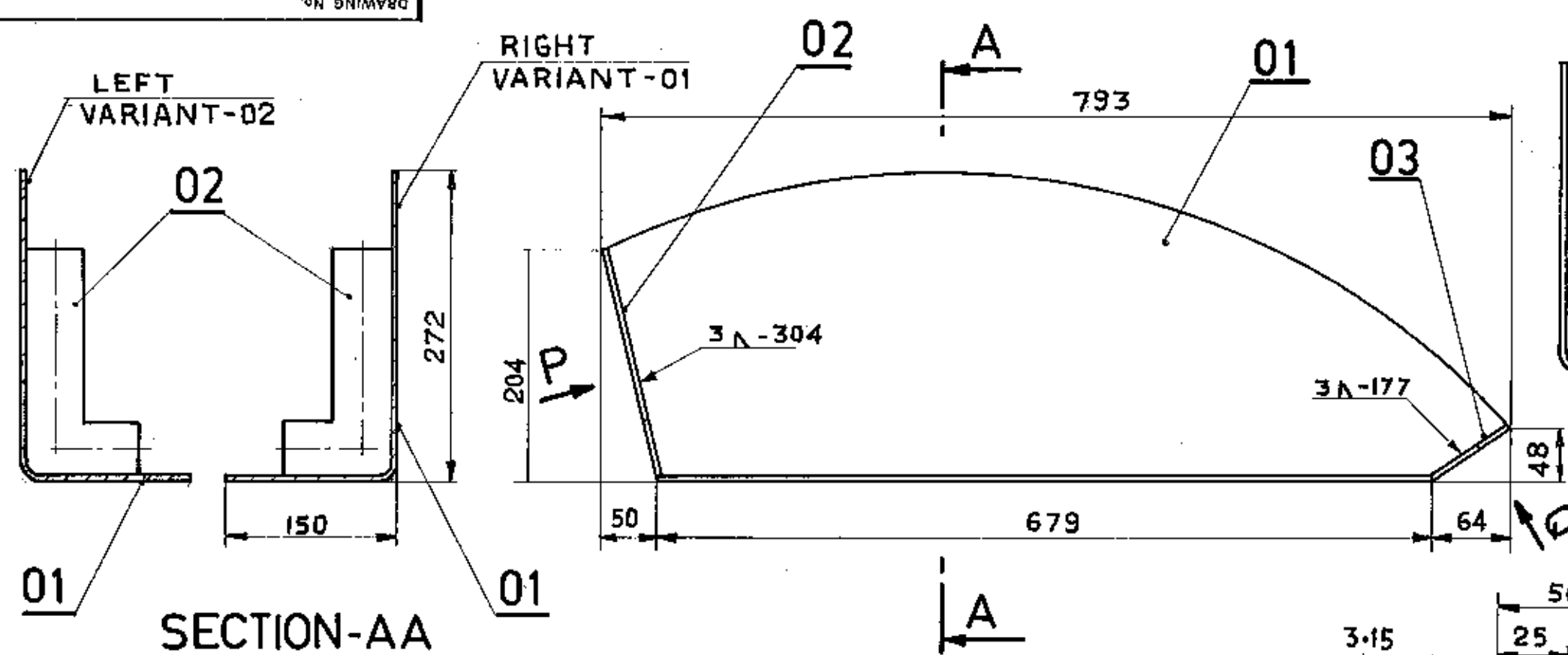
REV	DATE	ALTERED	CHECKED
01			
ZONE			

DEPT	GRADE OF UNTOOL DIM C/M/F	SCALE	WEIGHT (KG)	REF TO ASSY (OLD DRG)	ITEM NO.
			30.303		
TITLE	CARD CODE	DRAWING NO.	REV		
CHEMICAL DOSING HEADER	U 01	2-04-114-80033			

Size A2

15008-711-70-Z

WELD:- E 7018 - D-481M



NOTE:-

ITEMS 02&03 SHOULD BE WELDED WITH ITEM 01 ONLY AFTER TRIAL ASSEMBLY IN THE SHOP



1134315

REV	DATE	ALTERED	CHECKED	ZONE	DESCRIPTION	DRAWING NO.	ITEM NO.	MATL CODE	UNIT	UNIT WT	QTY	ZONE
02	03				SH 3.15x80x97			15-011-182 BMC 10		0.192	1	
02	02				SH 3.15x97x207			15-011-182 BMC 10		0.655	1	
02	01				SH 3.15x422x793			15-011-182 BMC 10		8.276	1	
01	03				SH 3.15; 80x97			15-011-182 BMC 10		0.192	1	
01	02				SH 3.15; 97x207			15-011-182 BMC 10		0.655	1	
01	01				SH 3.15; 422x793			15-011-182 BMC 10		8.276	1	

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE	NO. OF
N-C-S-NAIR			22-6-87	VAR
CHD	U. KARUNAKARAN	U. KARUNAKARAN		
APPD	B. S. S. S. S. S.			

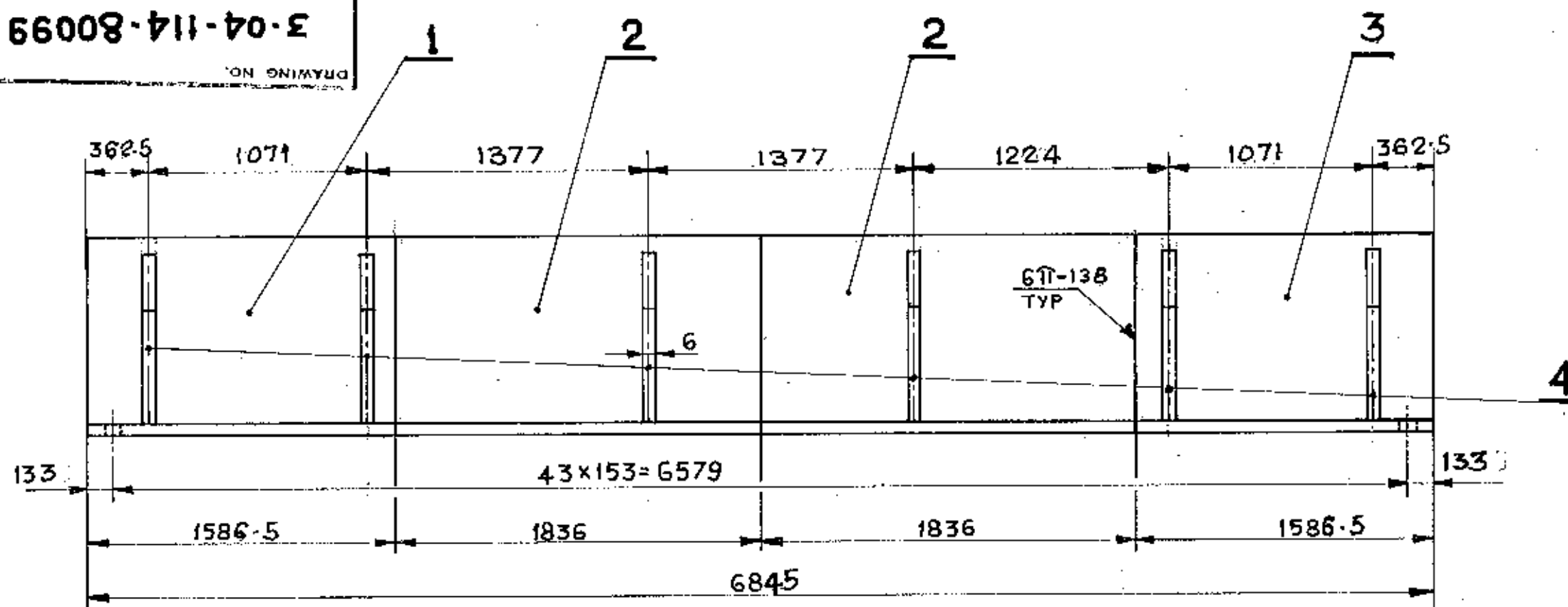
REV	DATE	ALTERED	CHECKED	ZONE
01				
02				

DEPT	GRADE OF UNTOOL DIM C/M/P	SCALE	WEIGHT (kg)	REF TO ASSY / OLD DRG
		1	9.123	
TITLE	CODE	DRAWING NO.		
END COVER	U 01	2-04-114-80051		

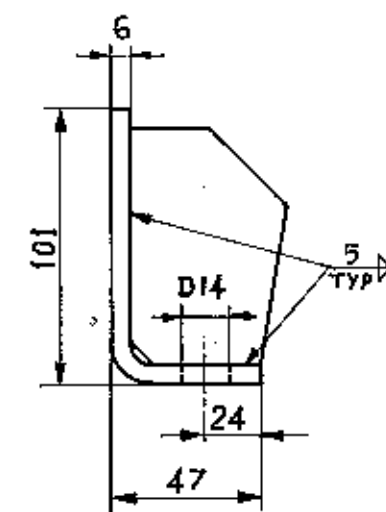
FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

66008-114-80099

DRAWING NO.



5D E7018 1.05m
6T E7018 0.444m



VARIANT NO.	ITEM NO.	DESCRIPTION	QTY	DRAWING NO.	ITEM NO.	MATL. CODE	A/C	UNIT	UNIT WT.	QTY.	GS
	4	STIFFNER PL-6	5	6101-3002-29		15011092			0.150		
						BMC20			6		
	3	PL-6		4-04-114-80152		15011092			10.312		
						BMC20			1		
	2	PL-6	5	6101-3002-10		15011092			12.000		
						BMC20			2		
	1	PL-6		4-04-114-80151		15011092			10.312		
						BMC20			1		

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN. NAME SIGN DATE NO. OF
CHD. N.C.S-NAIR 14-8-86 VAR
APPD. B.OLAGANATHAN

REV 01 DATE ALTERED
CHECKED

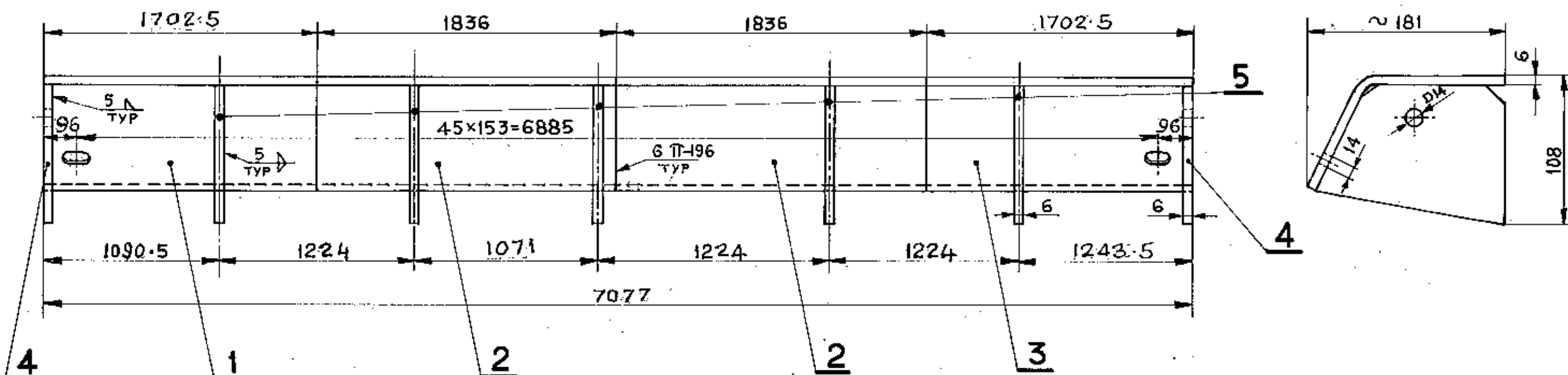
DEPT. GRADE OF UNFOL DIM SCALE WEIGHT (kg) REF TO ASSY/OLD DRG ITEM NO.
CODE C/M/F 45.524

TITLE CARD CODE DRAWING NO. REV.
BENT PLATE-I U 01 **3-04-114-80099**

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

3-04-114-80100

DRAWING NO.

BOILER N^o 579 & 580

5 Δ - E7018 - 1.368 m
6 Π - E7018 - 0.588 m

VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A/C	UNIT	UNIT WT.	QTY.
	5	STIFFNER PL-6	S	6101-3002-24	15 011 092	BMC 20			0.760	5
	4	STIFFNER PL-6	S	6101-3002-23	15 011 092	BMC 20			0.760	2
	3	PL-6		4-04-114-80156	15 011 092	BMC 20			18.120	1
	2	PL-6	S	6101-3002-06	15 011 092	BMC 20			20.000	2
	1	PL-6		4-04-114-80155	15 011 092	BMC 20			18.120	1

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECTBharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO. OF VAR.
CHD.	N.C.S. NAIR		14-8-86	
APPD.	B. DAGANATHAN			

REV	DATE	ALTERED
01		CHECKED

DEPT	GRADE OF UNTOOL DIM G/M/F	SCALE	WEIGHT (kg)	REF TO ASSY/OLD DRG	ITEM NO.
			81.560		
TITLE			CARD CODE	DRAWING NO.	REV.
BENT PLATE - II			U 01	3-04-114-80100	

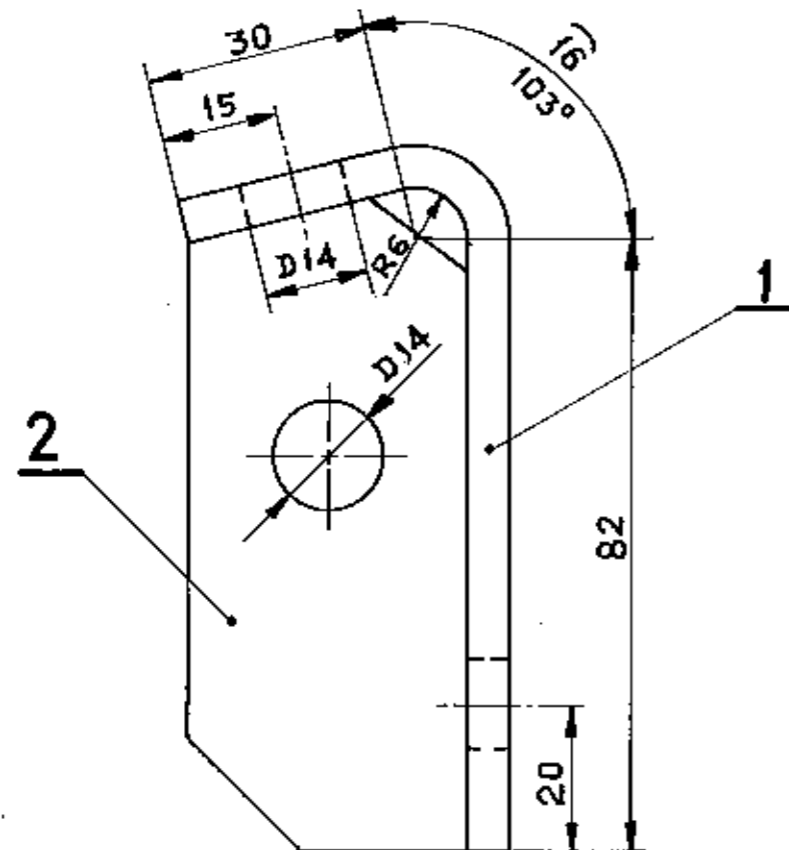
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Size A3

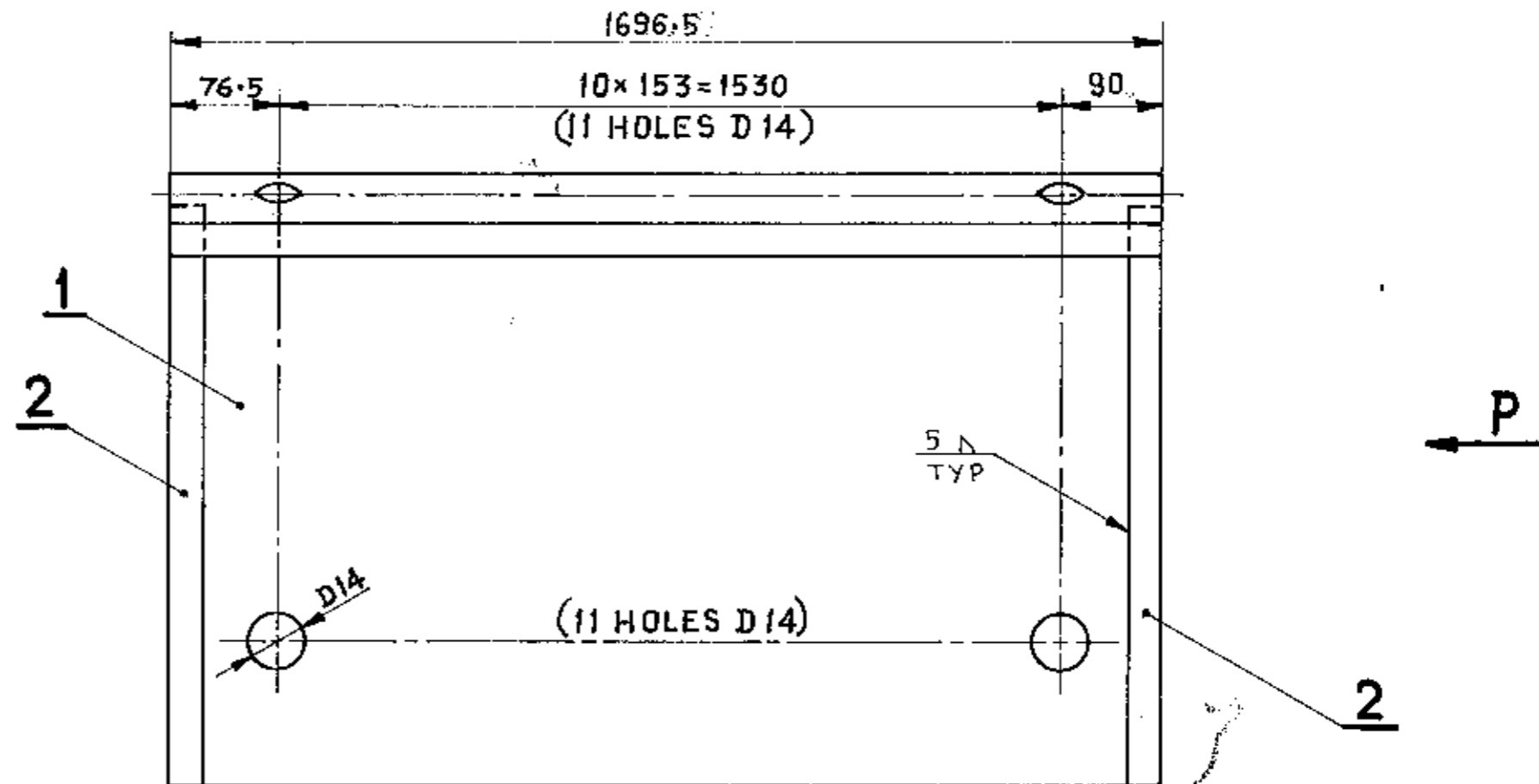
3 04 14 80107

DRAWING NO.

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VIEW-P

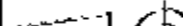



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TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

Gharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME N.C.S. NAIR	SIGN <i>[Signature]</i>	DATE 4-10-86	NO OF PAGE
CHO.				
APPD.	BOLCANATHAN	<i>[Signature]</i>		

DEPT CODE	GRADE OF MATERIAL DIM C/M/F		SCALE 	WEIGHT (kg) 10.628	REF TO ASSY OLD DRG	ITEM NO.
TITLE BENT PLATE				CARD CODE U 01	DRAWING NO. 3-04-114-80107	REV.

BENT PLATE

3-04-114-80107

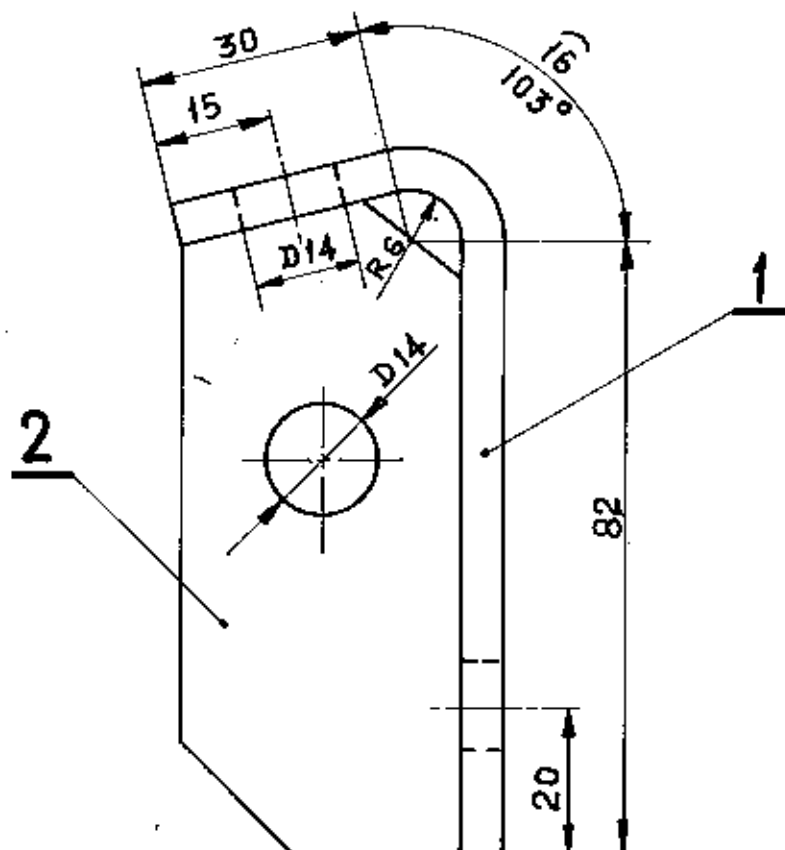
Size A3

05-229 / C

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.

80108 711 70 E


DRAWING NO.

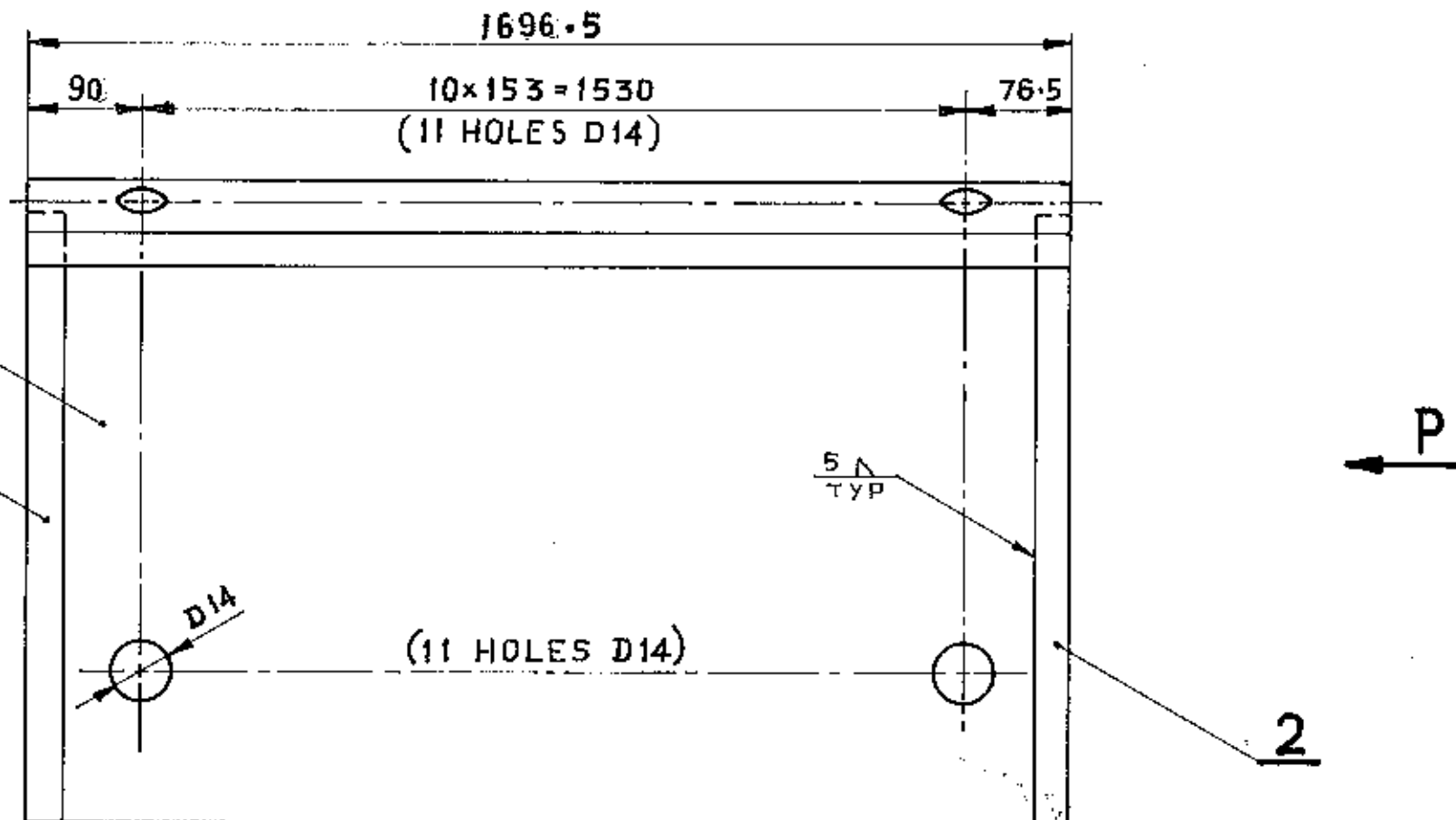


VIEW-P

VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A	UNIT	UNIT WT.	QTY.	CS
	2	STIFFENER PL 6	S	6101-3003-45		15-011-092			0.200		
						BMC 20			2		
	1	PL 6 x 128 x 1696.5				15-011-092			10.228		
						BMC 20			1		

REV	DATE	ALTERED	CHECKED
01			

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				 Bharat Heavy Electricals Ltd., BOILER PLANT UNIT TIRUCHIRAPALLI-620 014				DRN:	NAME	SIGN	DATE	NO. OF VAR
									N. C. S. NAIR	<i>[Signature]</i>	4-10-86	
								CHG.				
								APPD.	P. BHAGANATHAN	<i>[Signature]</i>		
				DEPT	GRADE OF UNTOOL DIM C/M/F	SCALE	WEIGHT (kg)	REF TO ASSY/OLD DRG				ITEM NO.
				CODE			10.628					
				TITLE				CARD CODE	DRAWING NO.			REV.
				BENT PLATE				U 01	3-04-114- 80108			



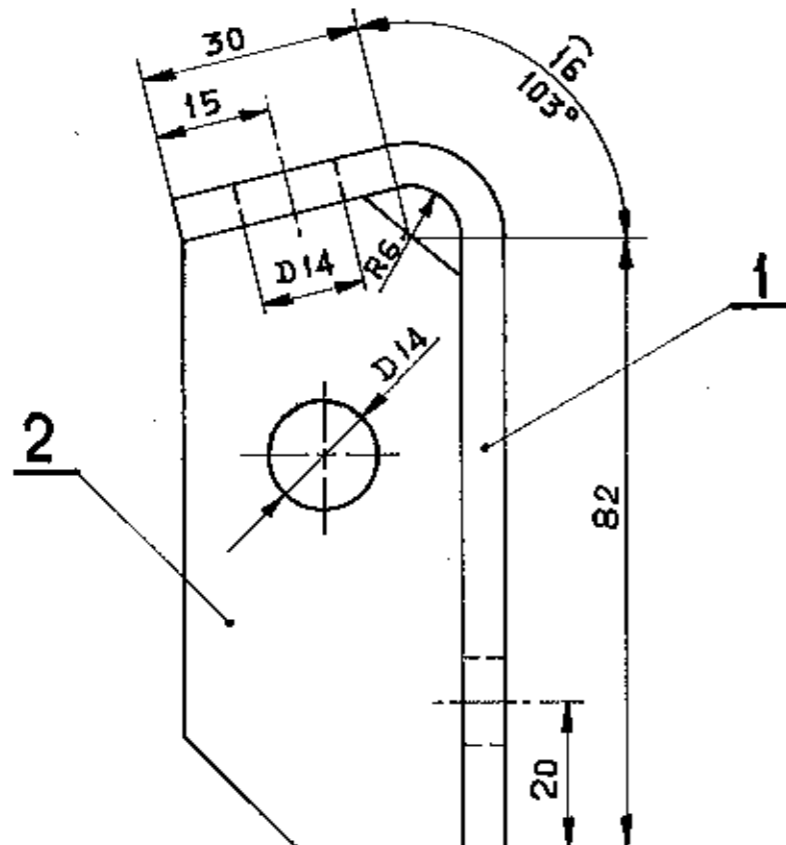
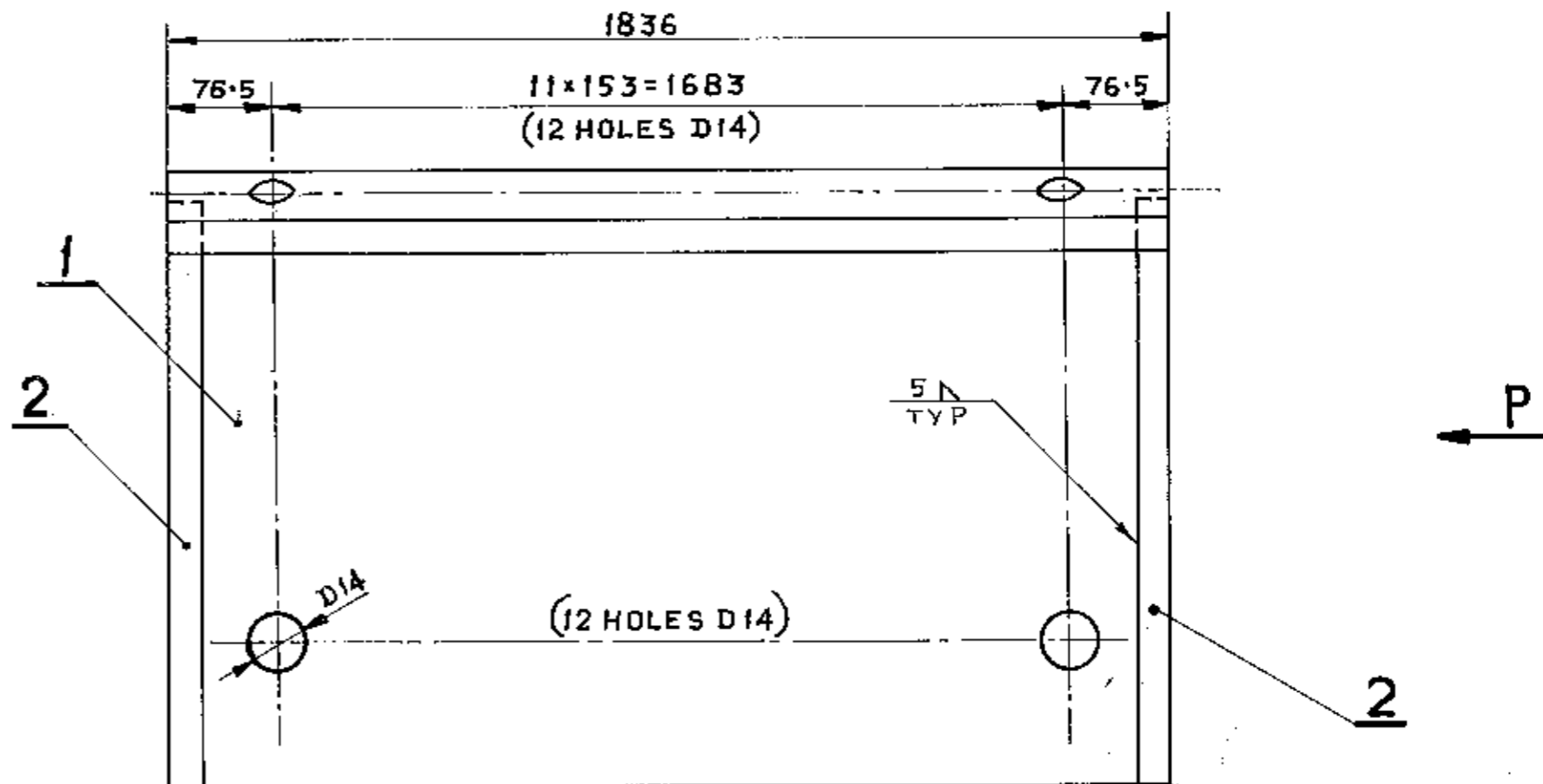
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05-229 / C

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60108-711-70-E

DRAWING NO.



VIEW-P

VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A	UNIT	UNIT WT.	QTY.
	2	STIFFENER PL 6	S	6101-3003-45		15-011-092			0.200	
	1	PL 6x128x1836				BMC 20			2	
						15-011-092			1.069	
						BMC 20			1	

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO OF VAR
	N.C.S. NAIR	<i>Heaven</i>	4-10-86	
CHD.				
APPD.	P. DRAGANATHAN	<i>[Signature]</i>		

REV	DATE	ALTERED
01		CHECKED

DEPT	GRADE OF UNTOOL DIM C/M/P	SCALE	WEIGHT (kg)	REF TO ASSY I/O L/D ORG	ITEM NO.
			11.469		
FILE	CARD CODE	DRAWING NO.	REV.		
BENT PLATE	U 01	3-04-114-80109			

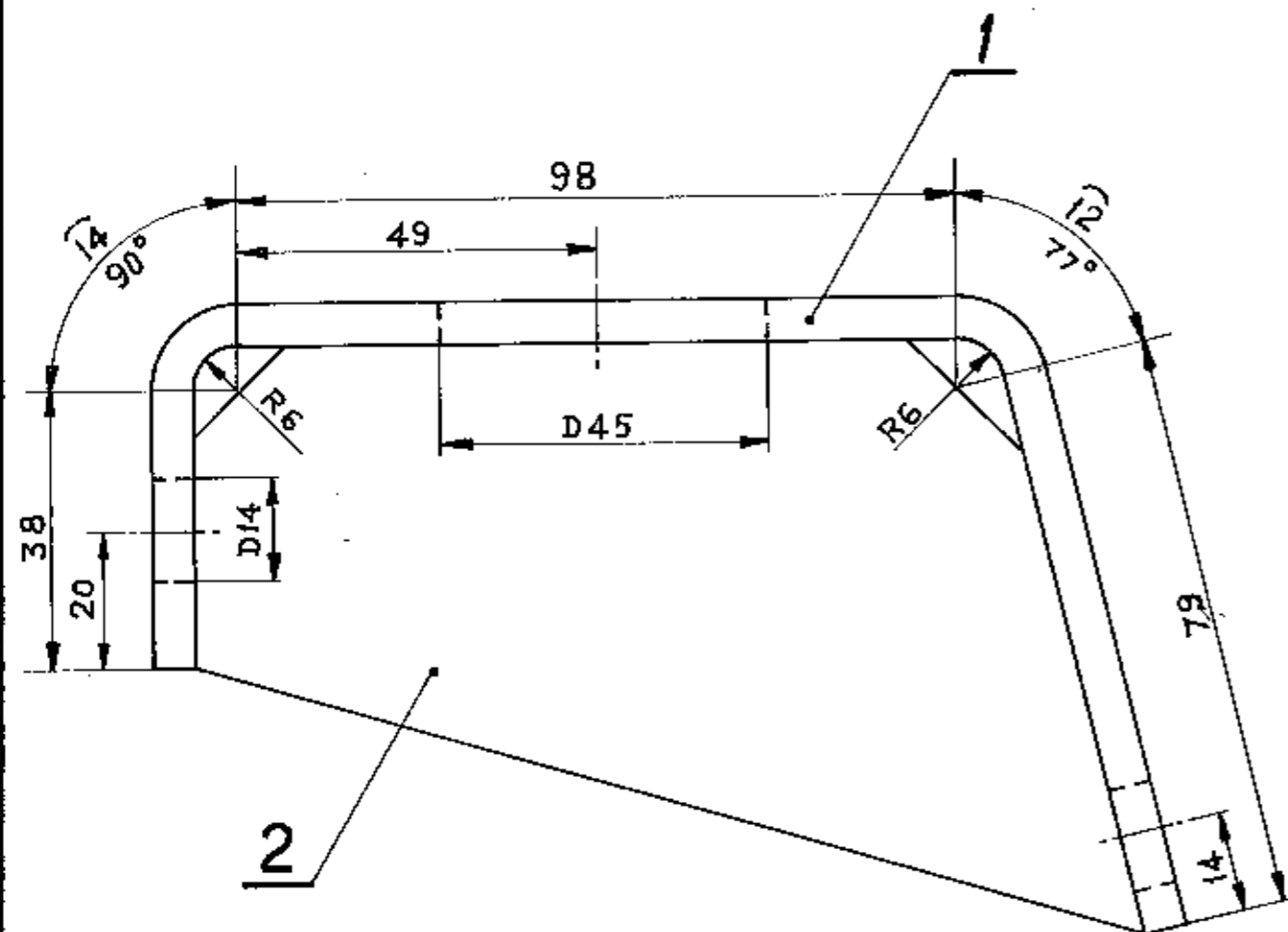
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FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

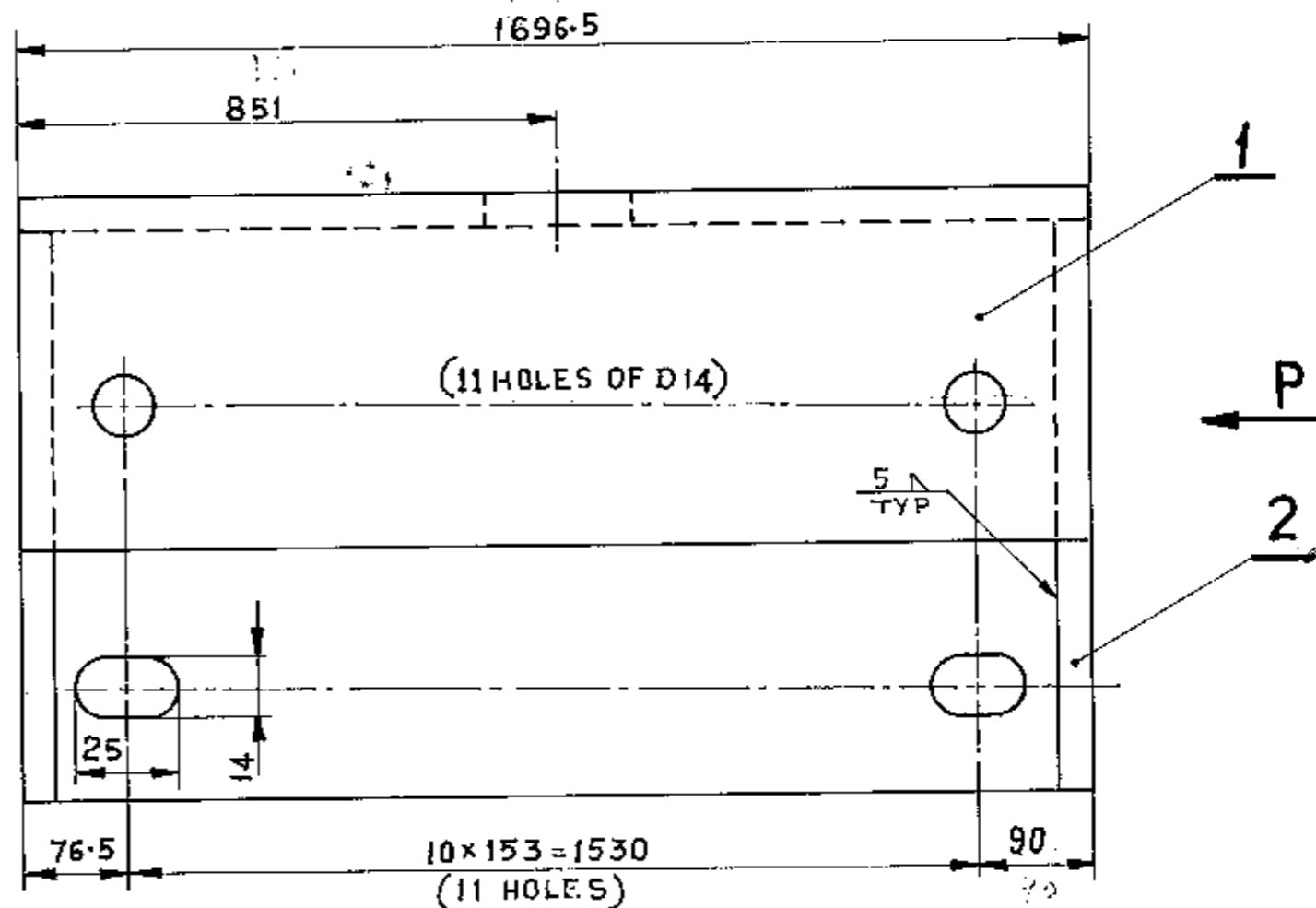
01108-711-70-E

DRAWING NO.

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VIEW-P



VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A/C	UNIT	UNIT WT.	QTY.	GS
	2	STIFFENER PL-6	S	6101-3003-17		15-011-092 BMC 20			9.500	2	
	1	PL-6x241x1696.5				15-011-092 BMC 20			19.257	1	

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECTBharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO OF VAR
	N.C.S. NAIR	Heaven	4-10-86	
CHD.				
APPD.				
	B. DIAGANATHAN	Wepman		

REV	DATE	ALTERED
01		CHECKED

DEPT	GRADE OF UNTOI DIM C/M/F	SCALE	WEIGHT (kg)	REF TO ASSY/OLD DRG	ITEM NO.
			20.257		
TITLE	CARD CODE	DRAWING NO.	REV.		
BENT PLATE	U 01	3-04-114-80110			

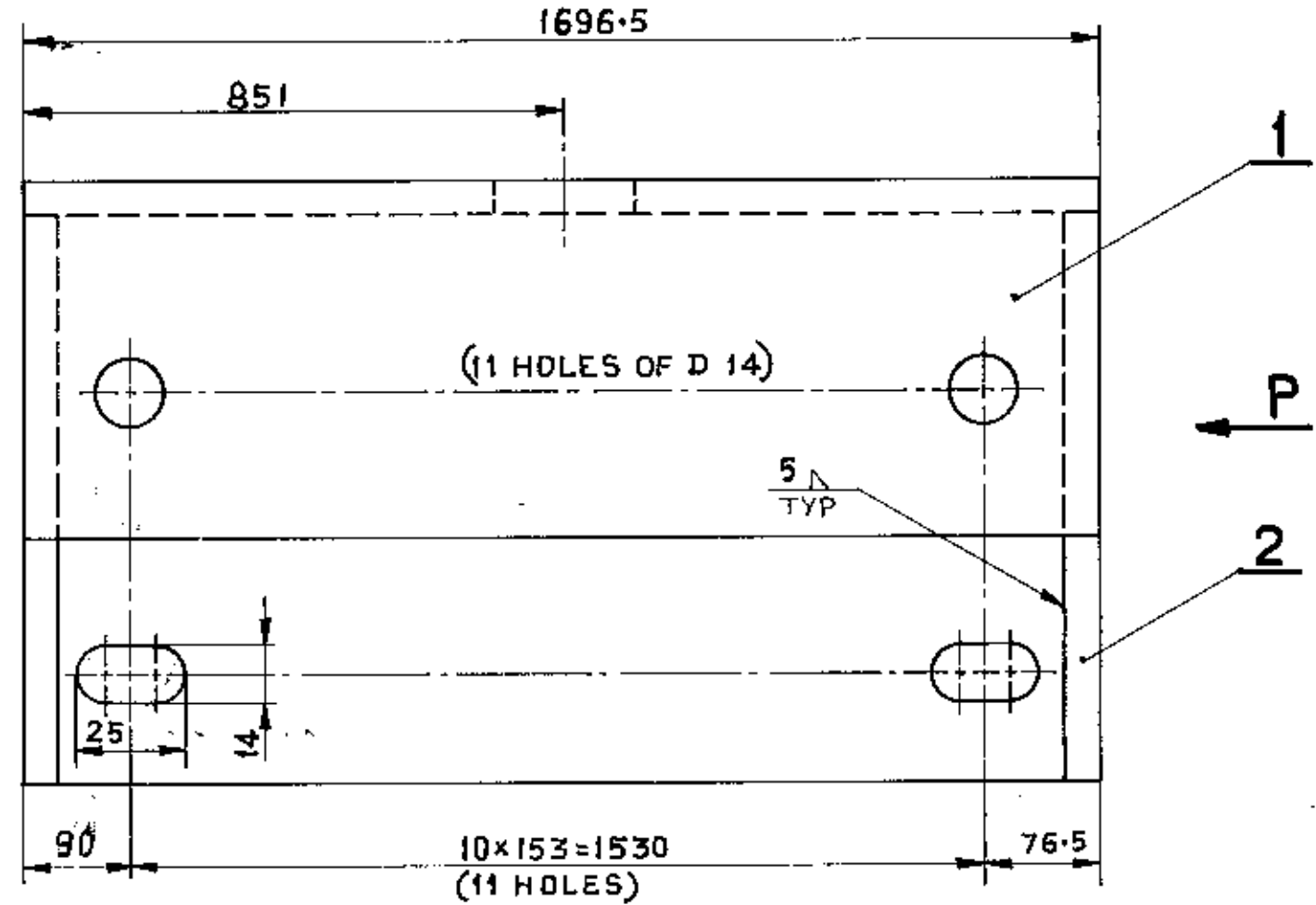
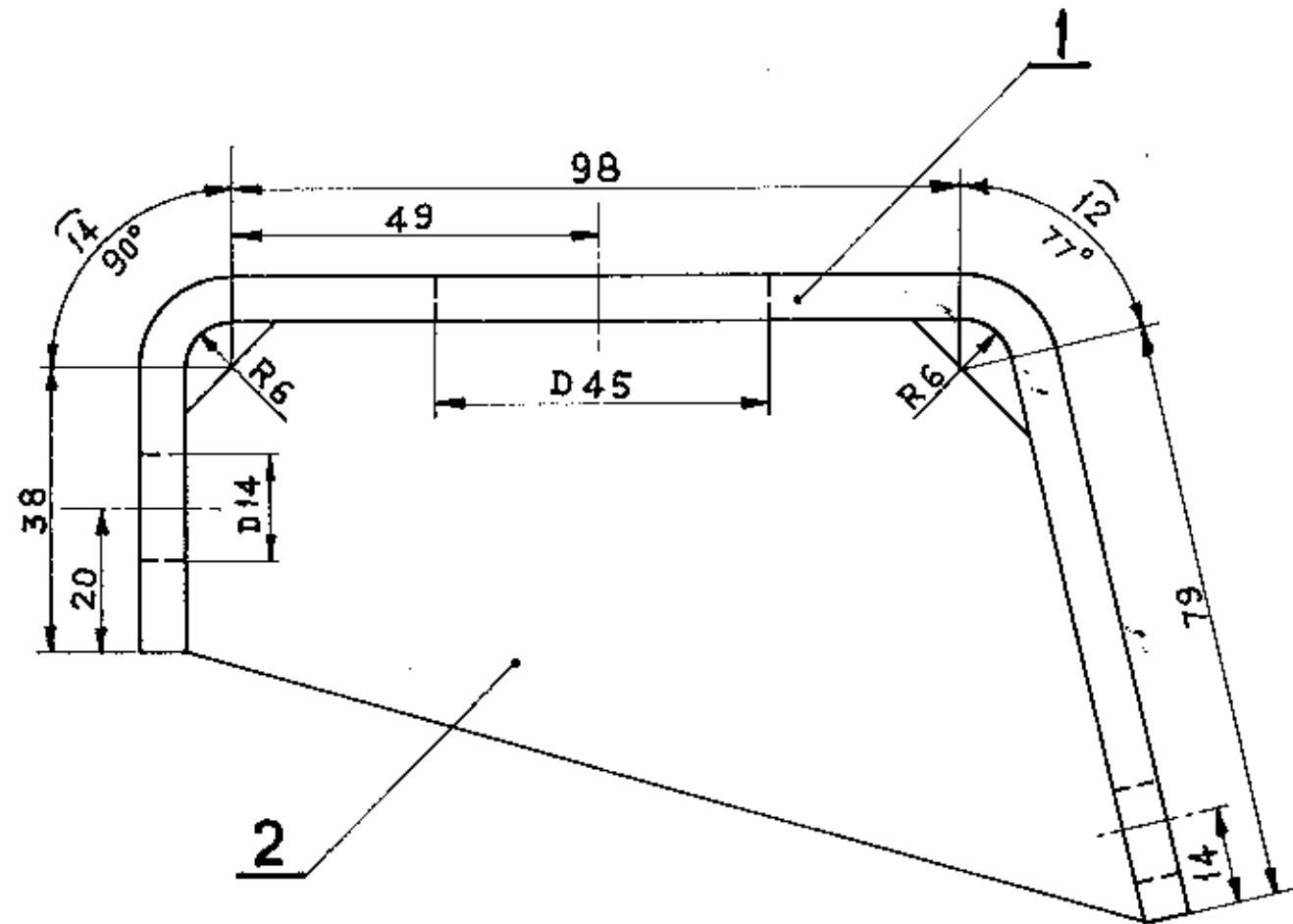
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FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

11108-711-70-E

DRAWING NO.

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.



VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	UNIT	UNIT WT.	QTY.
	2	STIFFENER PL-6	S	6101-3003-17		15-011-092		0.500	2
	1	PL-6x241x1696.5				15-011-092		19.257	1
						BMC 20			
						BMC 20			

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN. N.C.S. NAIR
CHD.
APPD. B. LAKSHMAN
NAME SIGN DATE 4-10-86
NO. OF VAR

REV 01 DATE ALTERED CHECKED

DEPT. GRADE OF UNTOL DIM C/M/F SCALE WEIGHT (kg) 20.257 REF TO ASSY/OLD DRG ITEM NO.

BENT PLATE

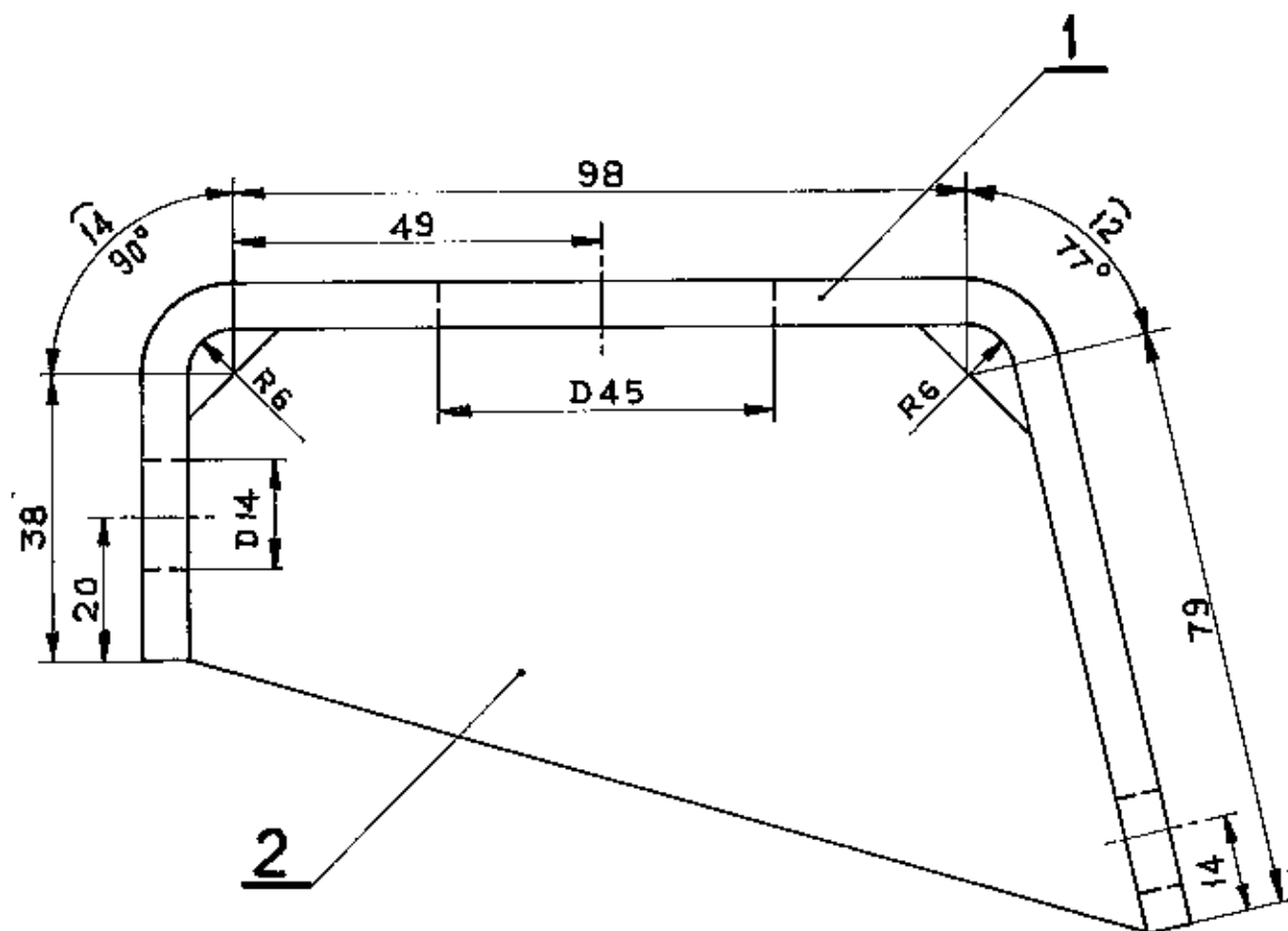
CARD CODE U 01 DRAWING NO. 3-04-114-80111 REV

05-229/C

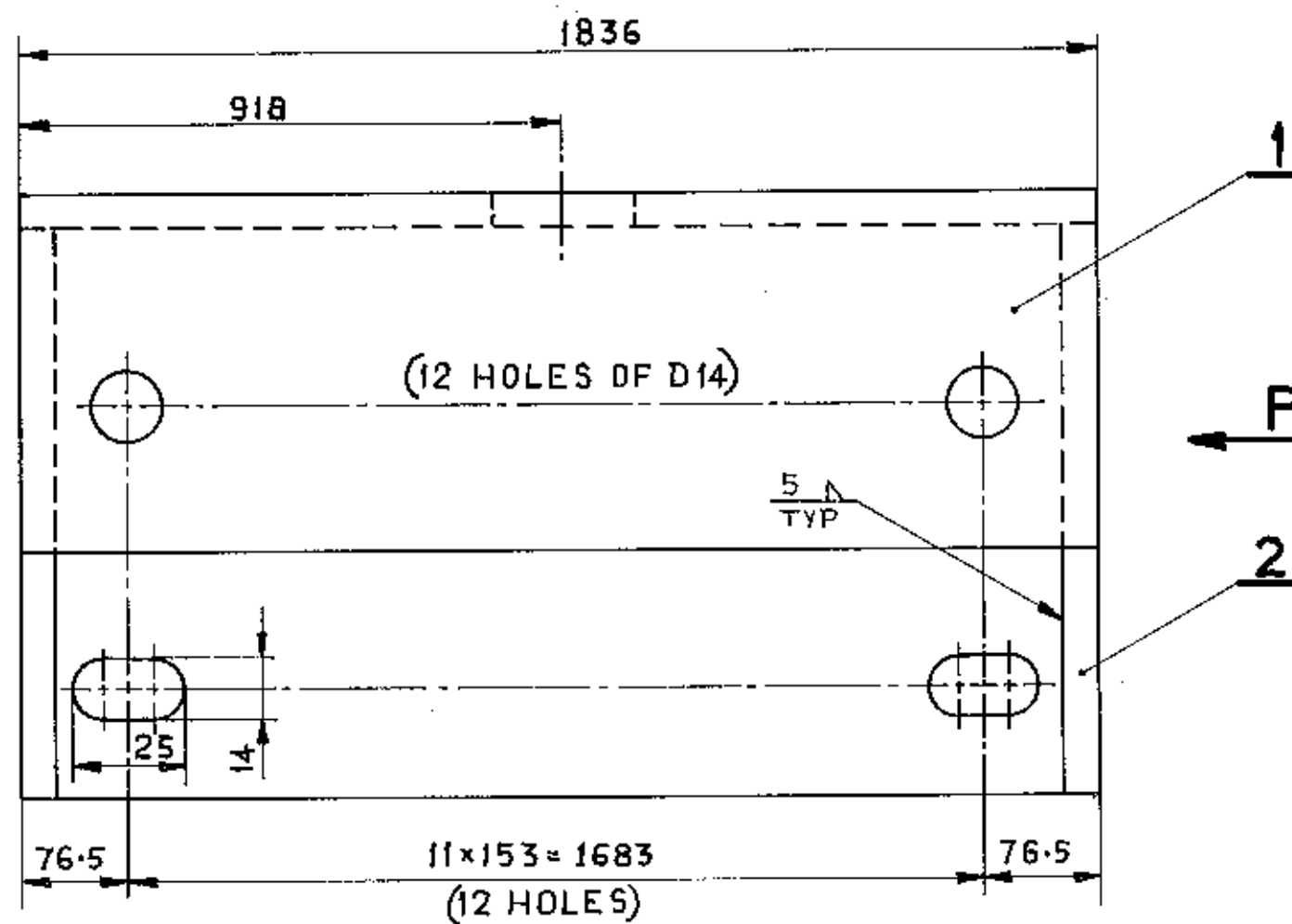
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Z1108-711-70-E

DRAWING NO.



VIEW-P



VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A	UNIT	UNIT WT.	QTY.	GS
	2	STIFFENER PL 6		6101-3003-17		15-011-092			0.500		
						BMC 20			2		
	1	PL-6x241x 1836				15-011-092			20.841		
						BMC 20			1		

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECTBharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO. OF VAN
	N.E.S. NAIR		4-10-86	
CHD.				
APPD.	BOLAGANATHAN			

REV	DATE	ALTERED
01		CHECKED

DEPT	GRADE OF UNTOLO DIM C/M/F	SCALE	WEIGHT (kg)	REF TO ASSY/OLD DRG	ITEM NO.
			21.841		
TITLE	CARD CODE	DRAWING NO.	REV.		
BENT PLATE	U 01	3-04-114-80112			

Size A3

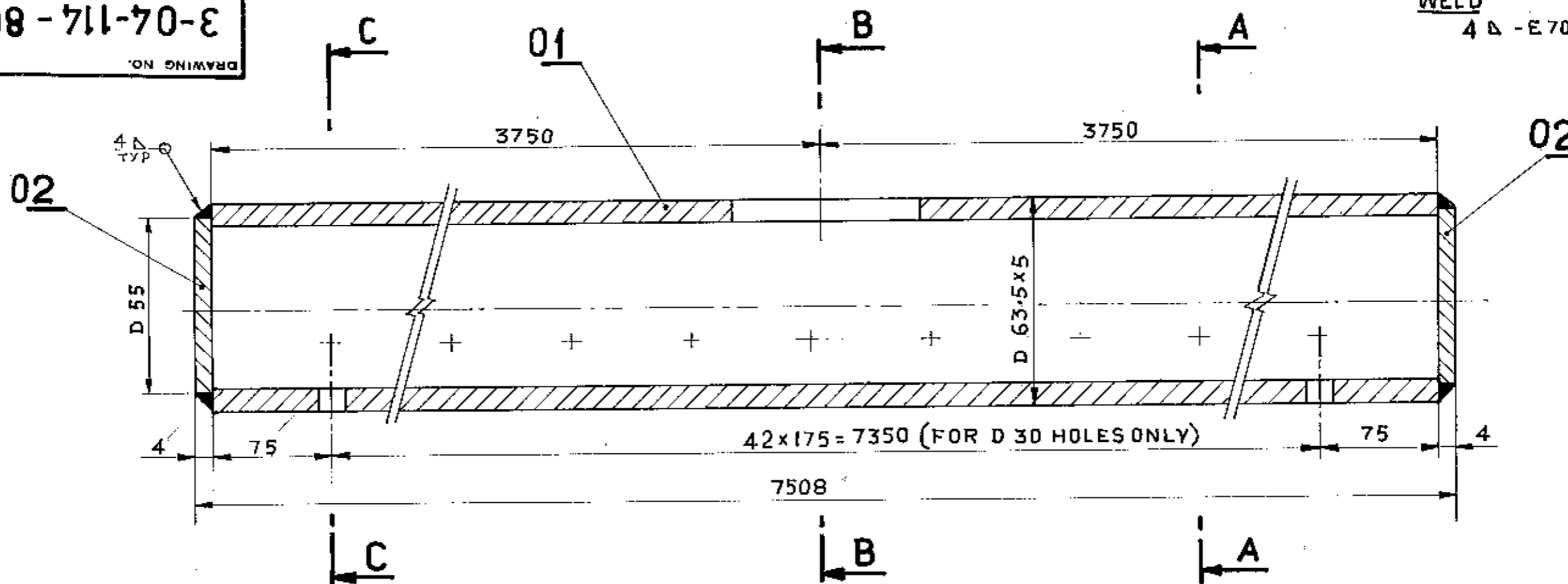
FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

3-04-114-80113

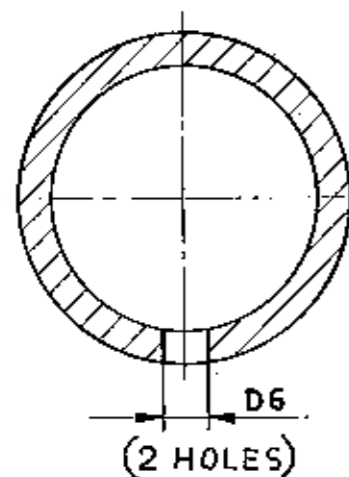
DRAWING NO.

WELD

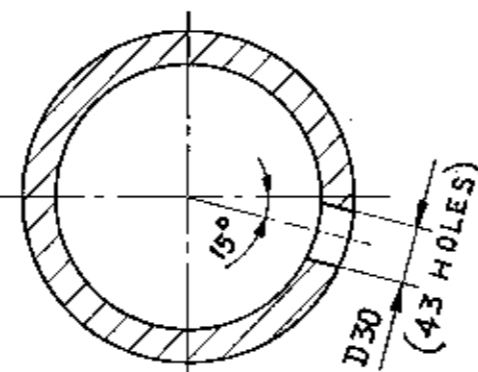
4 Δ - E 7018 - 0.32 M



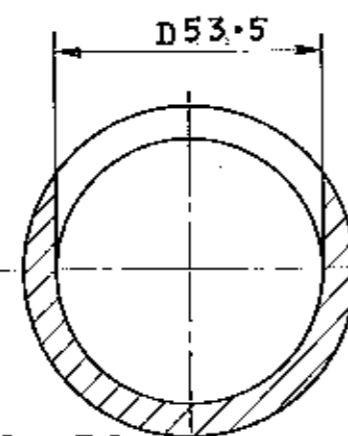
SECTION-CC



SECTION-AA



SECTION-BB



VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A/C	UNIT	UNIT WT.	QTY.
	02	PL 4 ; D 55				15-011-334			0.074	
						BMC 10			2	
	01	TUBE D 63.5x5 L=7500				15-084-113/60			61.050	
						SA 192			1	

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO OF VAR
	N.C.S. NAIR		7-10-86	
CHD.				
APPD.				
	BOLAGANAN			

REV	DATE	ALTERED
01		CHECKED

DEPT	GRADE OF UNTOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY I/O LDRG	ITEM NO.
	C/M/F		61.198		

TITLE	CARD CODE	DRAWING NO.	REV.
FEED HEADER	U 01	3-04-114-80113	

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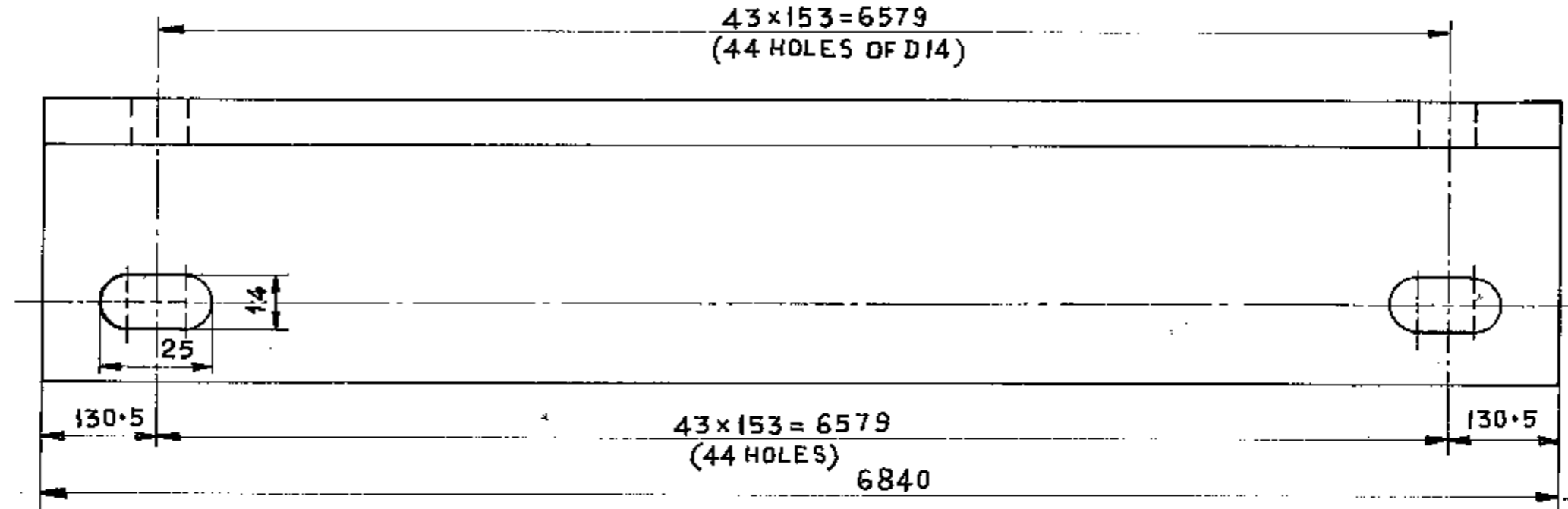
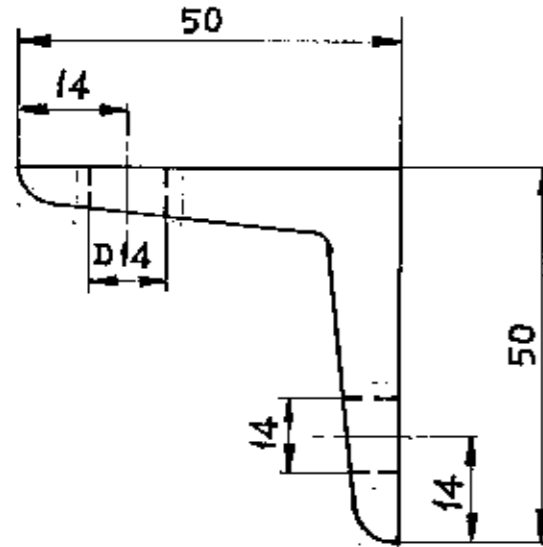
05-229/C

Size A3

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

71108-711-70-E

DRAWING NO.



VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A	UNIT	UNIT WT.	QTY.	GS
		ANGLE 50x50x6 ; L 6840				15-013-056 BMC 20			30.780	1	

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO OF VAR
	N.C.S. NAIR	<i>[Signature]</i>	7-10-86	
CHD.				
APPD.				
	B. DIAGANATHAN	<i>[Signature]</i>		

REV	DATE	ALTERED
01		CHECKED

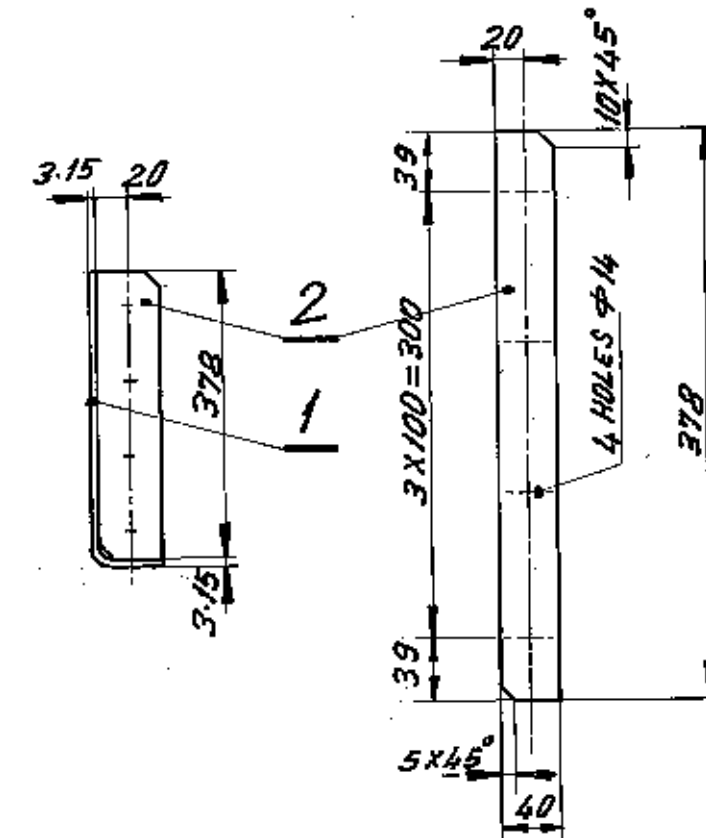
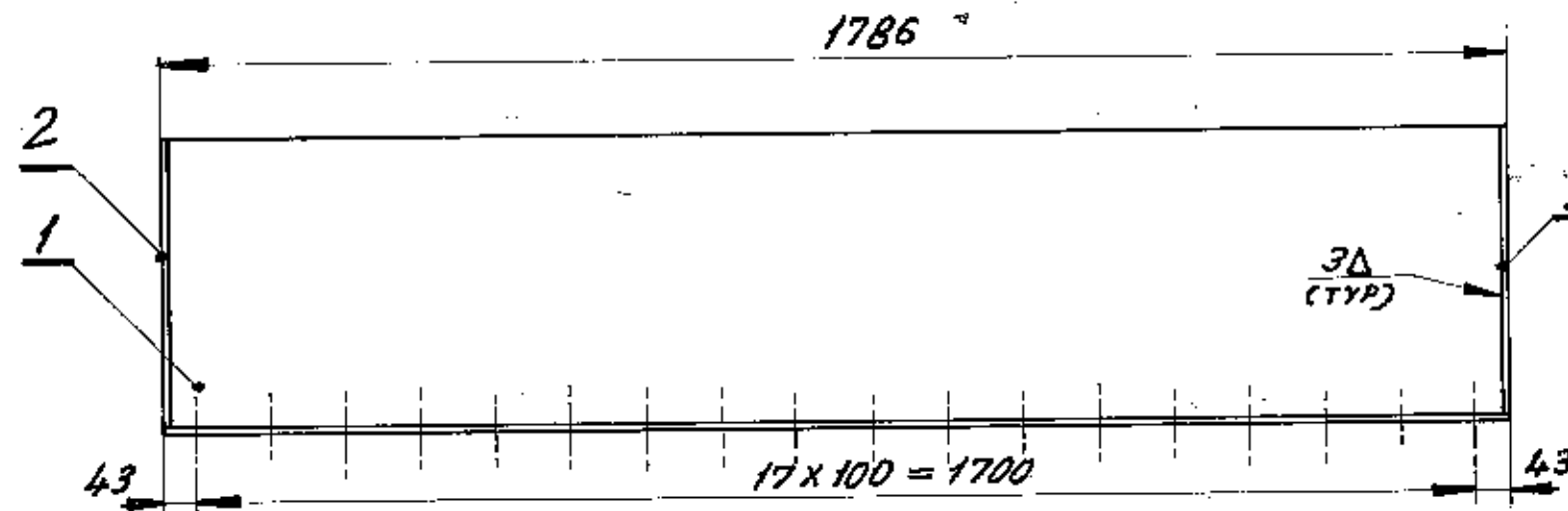
DEPT	GRADE OF UNFOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY/O.L.B. ORG	ITEM NO.
	C/M/F	<i>[Symbol]</i>	30.780		
TITLE	CARD CODE	DRAWING NO.	REV.		
ANGLE	U 01	3-04-114-80114			

Size A3

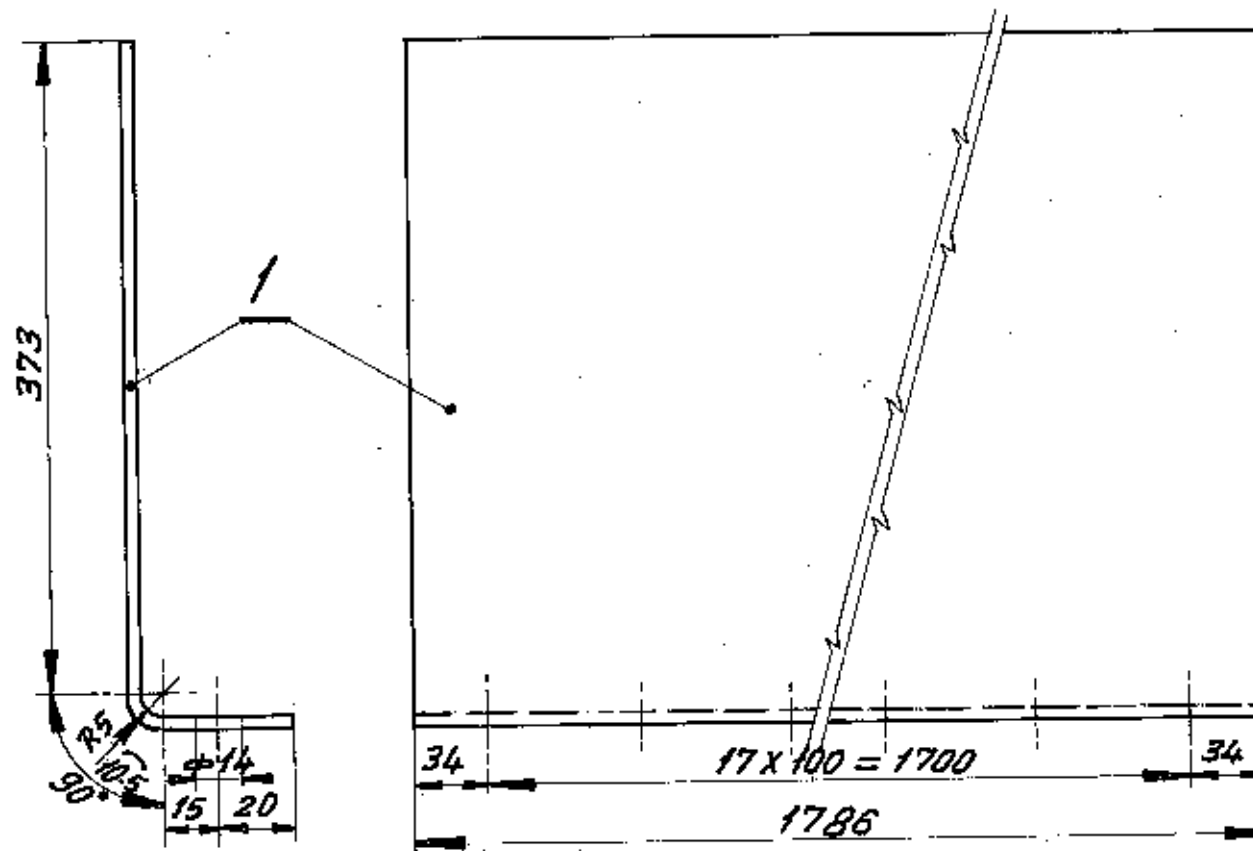
05-229/C

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DRAWING NO.



BOILER NO: 0579 & 0580



VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A	UNIT	UNIT WT.	GS
	2	PLATE 6 X 40 X 378		6101-3001-70		15/01/092			0.700	
	1	SHEET 3.15 X 418.5 X 1786		3-04-114-80118		15/01/182			18.482	
						BM C10			1	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT **ONGC HAZIRA COGENERATION PLANT GUJARAT**
DUAL PRESSURE BOILER
105 t/h; 9.0 ata; sat & 18.5 t/h; 37.0 ata; sat.



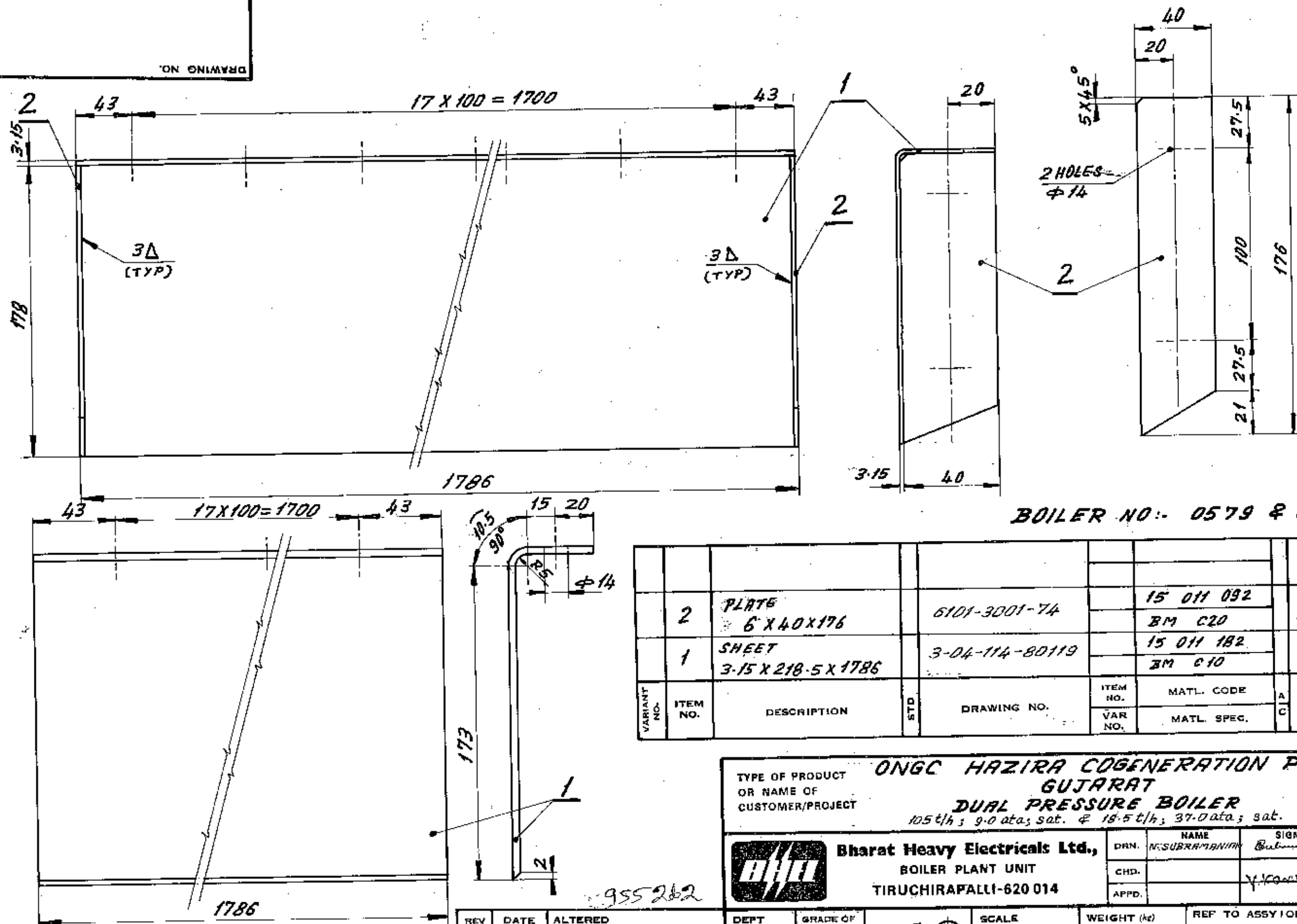
Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014



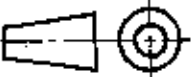
DRN.	NAME	SIGN	DATE	NO. OF VAR
	K. SUBRAMANIAM	Subramaniam	01-08-85	
CHD.				
APPD.				

REV	DATE	ALTERED	DEPT	GRADE OF UNTOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY/OLD DRG	ITEM NO.
01		CHECKED		C/M/F	N.T.S.	19.882		

TITLE	CARD CODE	DRAWING NO.	REV
PANEL	U 01	3-04-114-80118	

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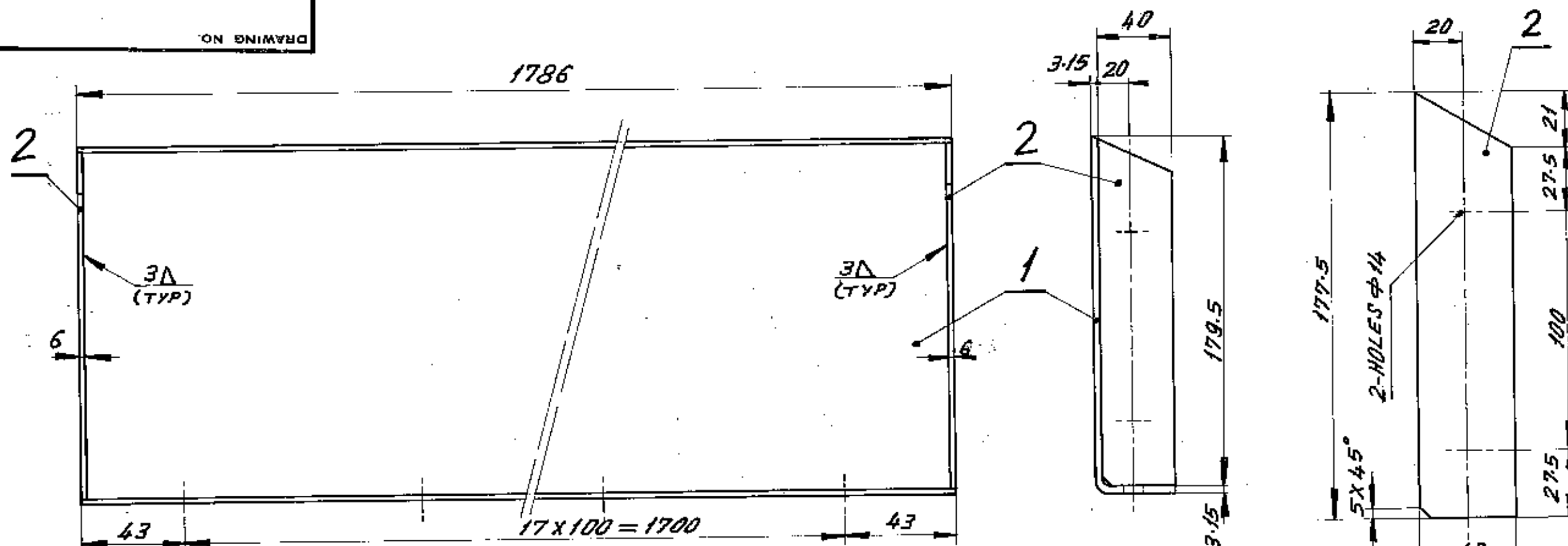
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		ONGC HAZIRA COGENERATION PLANT GUJARAT DUAL PRESSURE BOILER 105 t/h; 9.0 ata; sat. & 18.5 t/h; 37.0 ata; sat.						
		Bharat Heavy Electricals Ltd., BOILER PLANT UNIT TIRUCHIRAPALLI-620 014		DRN.	NAME N. SUBRAMANIAM	SIGN <i>Subramaniam</i>	DATE 02-08-85	NO. OF VAR
				CHD.				
				APPD.				
DEPT	GRADE OF UNTOL DIM C/M/F		SCALE N.T.S.	WEIGHT (kg) 10.450	REF TO ASSY/OLD DRG	ITEM NO.		
CODE								
TITLE PANEL				CARD CODE U 01	DRAWING NO. 3-04-114-80119		REV	

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

05-229/C

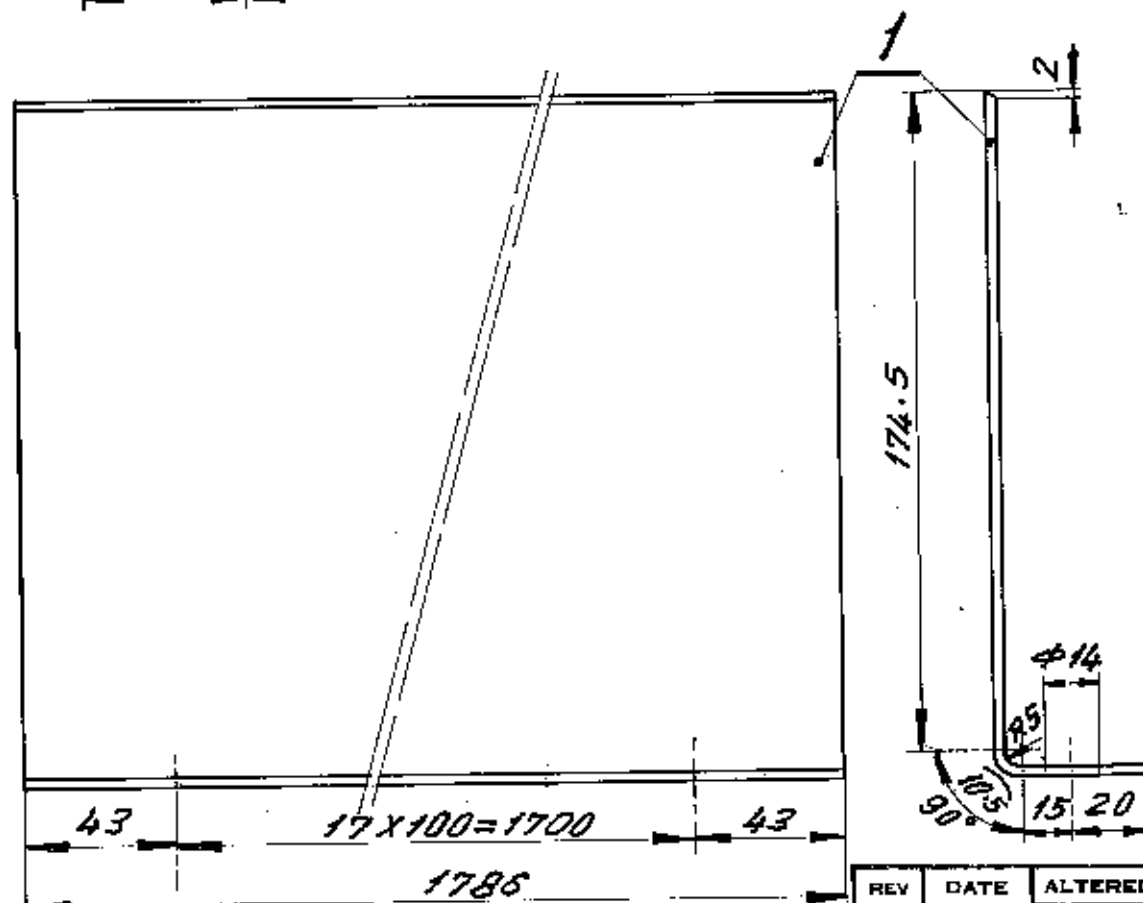
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DRAWING NO.



BOM

BOILER NO:- 0579 & 0580



ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATL. CODE	UNIT	QTY.
02	PLATE 6 X 40 X 177.5	6101-3001-74	15 011 092	BM C20		2
01	SHEET 3.15 X 220 X 1786	3-04-114-80120	15 011 182	BM C10		1

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT **ONGC HAZIRA COGENERATION PLANT GUJARAT DUAL PRESSURE BOILER**

105 t/h; 9.0 MPa; sat. & 18.5 t/h; 37.0 MPa; sat.

NAME	SIGN	DATE	NO. OF VAR
N. SUBRAMANIAN	[Signature]	04-08-86	
CHD.	APPD.		

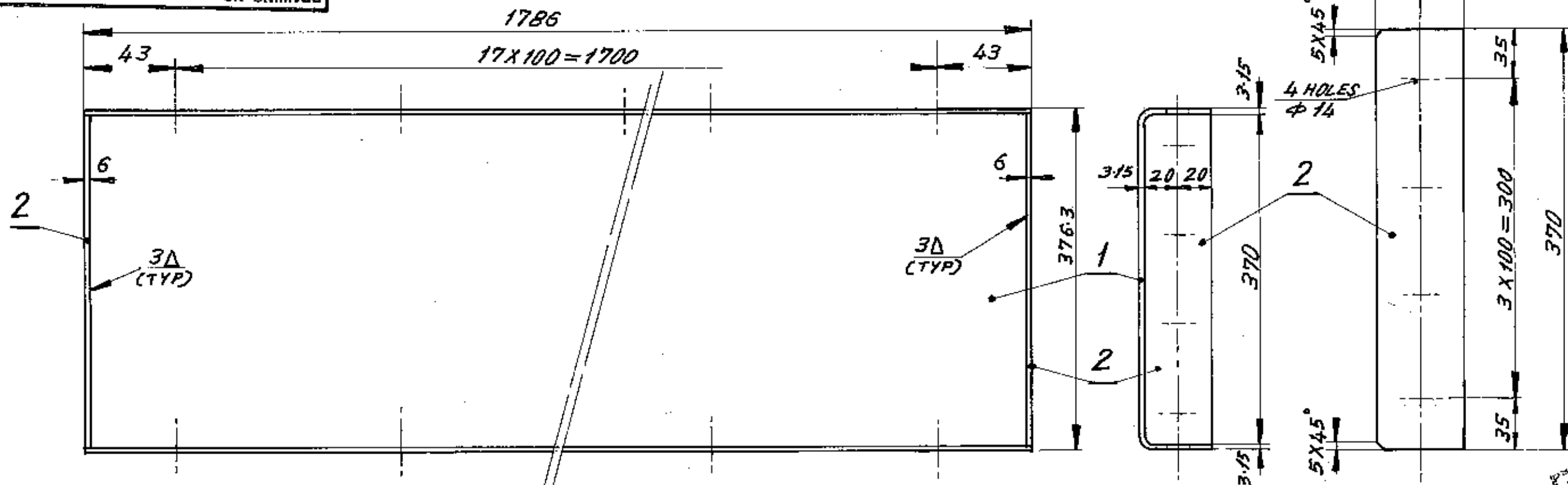
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	G/M/F	N.T.S	10.516		
TITLE	CARD CODE	DRAWING NO.	REV		
PANEL	U 01	3-04-114-80120			

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

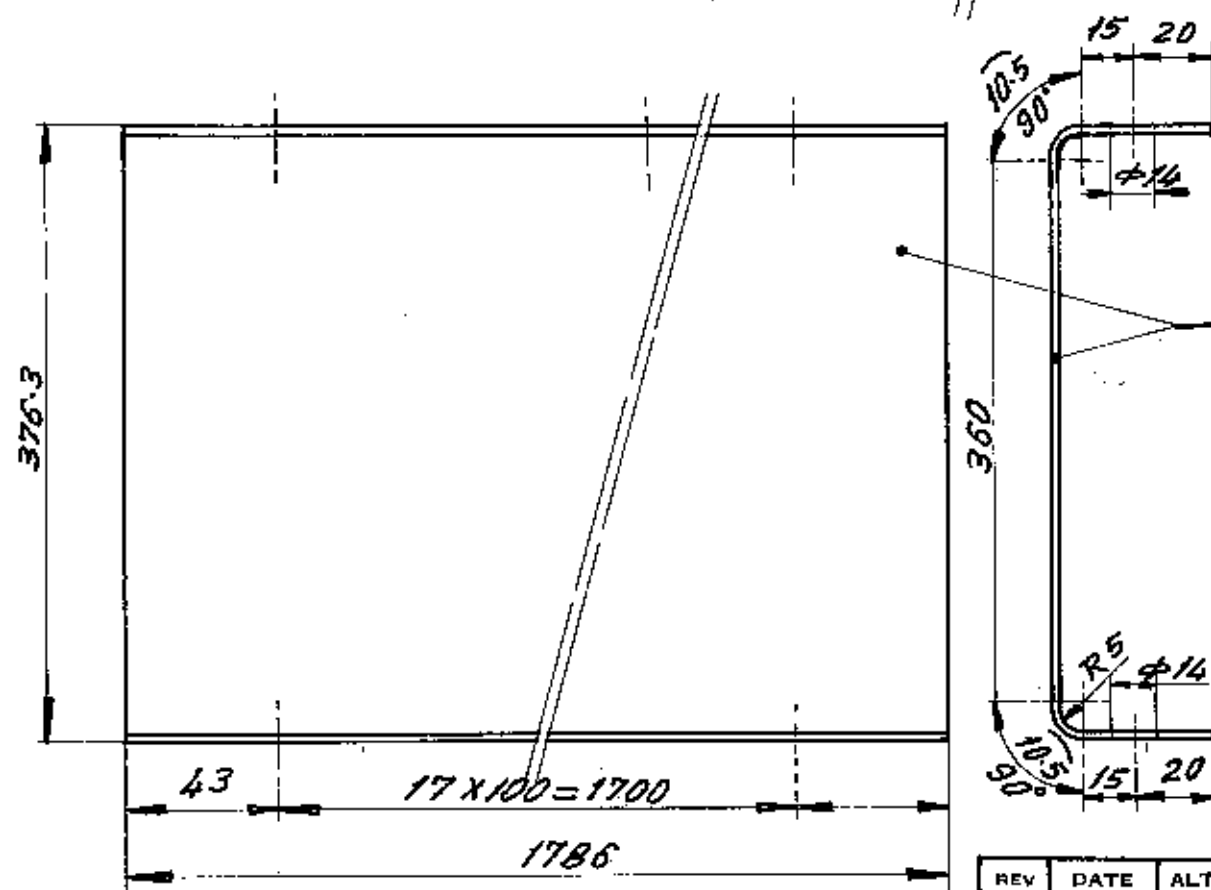
05-229/C

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DRAWING NO.



BOILER NO:- 0579 & 0580



VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A/C	UNIT	UNIT WT.	QTY.	GS
	02	PLATE 6 X 40 X 370		6101-3001-71		15 011 092 BM C20			0.700	2	
	01	SHEET 3-15 X 451 X 1786		3-04-114-80121		15 011 182 BM C10			19.918	1	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT **ONGC HAZIRA COGENERATION PLANT GUJARAT**
DUAL PRESSURE BOILER
105 t/h; 9.0 ata; sat. & 18.5 t/h; 37.0 ata; sat.

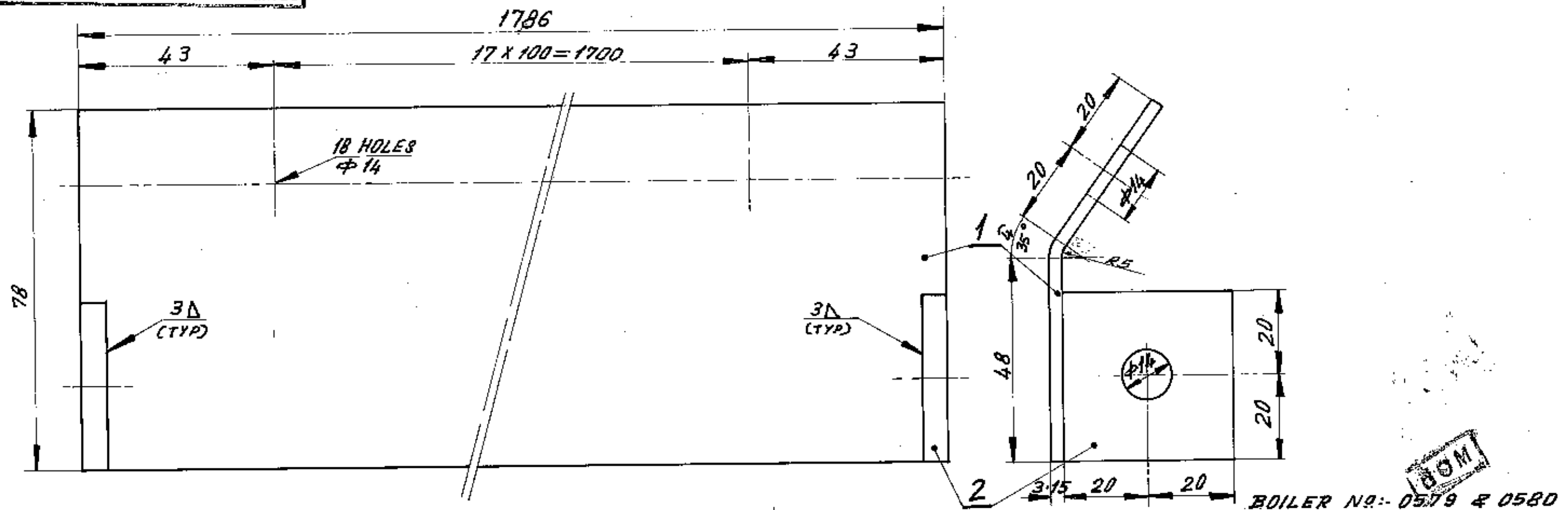




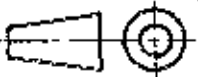
Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO. OF VAR
	N. SUBRAMANIAN		04-08-86	
CHD.				
APPD.				

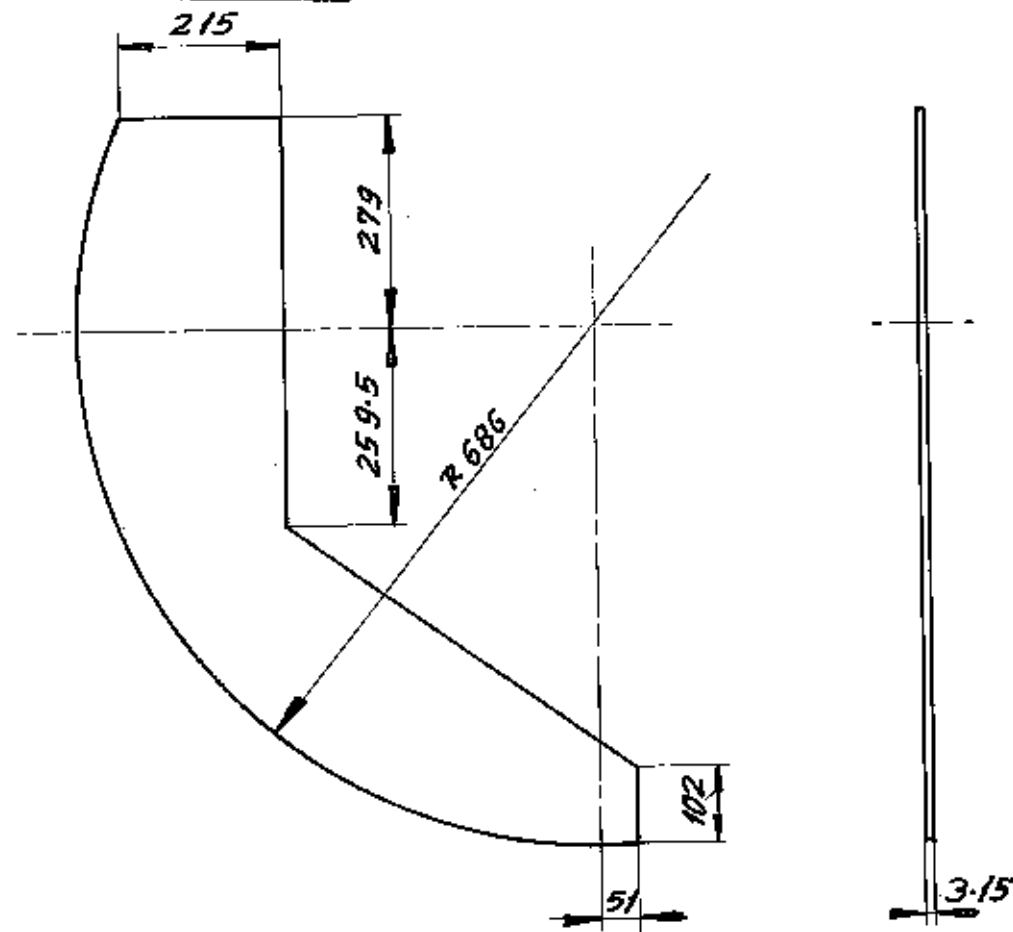
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01		CHECKED		C/M/F	N.T.S	21.318		
TITLE					CARD CODE	DRAWING NO.	REV.	
PANEL					U 01	3-04-114-80121		

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[illegible]

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		ONGC HAZIRA COGENERATION PLANT GUJARAT DUAL PRESSURE BOILER 105 t/h; 9.0 ata; sat. & 18.5 t/h; 37.0 ata; sat.					
 Bharat Heavy Electricals Ltd., BOILER PLANT UNIT TIRUCHIRAPALLI-620 014		DRN.	NAME N. SUBRAMANIAN	SIGN Bharat	DATE 05-08-86	NO. OF VAR	
		CHD.					
		APPD.		V. Subramanian			
DEPT	GRADE OF UNTOL DIM C/M/F			SCALE N.T.S.	WEIGHT (Kgs) 4.263	REF TO ASSY/OLD DRG	ITEM NO.
CODE							
TITLE PANEL					CARD CODE U 01	DRAWING NO. 3-04-114-80122	REV.



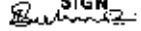

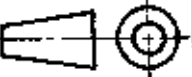
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BOM

BOILER NO:-0579 & 0580

[illegible]

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		ONGC HAZIRA COGENERATION PLANT GUJARAT DUAL PRESSURE BOILER 105 t/h ; 9.0 ata, sat. & 10.5 t/h ; 37.0 ata, sat.						
		Bharat Heavy Electricals Ltd., BOILER PLANT UNIT TIRUCHIRAPALLI-620 014		DRN.	NAME N. SURESH KANNAN	SIGN 	DATE 08-08-88	NO. OF PAGE
				CHD.				
				APPD.				
DEPT	GRADE OF UNTOOL DIM C/M/F			SCALE N.T.S.	WEIGHT (kg) 12.400	REF TO ASSY / OLD DRG		ITEM NO.
CODE								
TITLE END COVER					CARD CODE U 01	DRAWING NO. 3-04-114-80123		REV 01

955258

REV	DATE	ALTERED
01		CHECKED

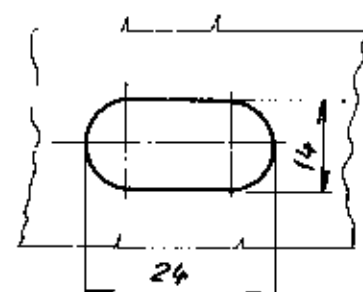
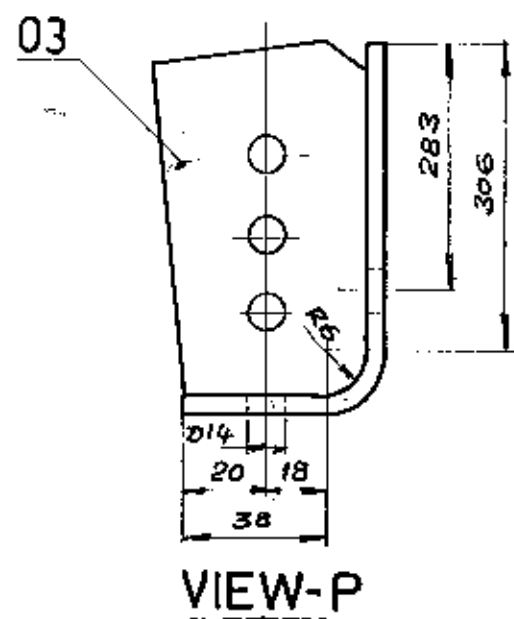
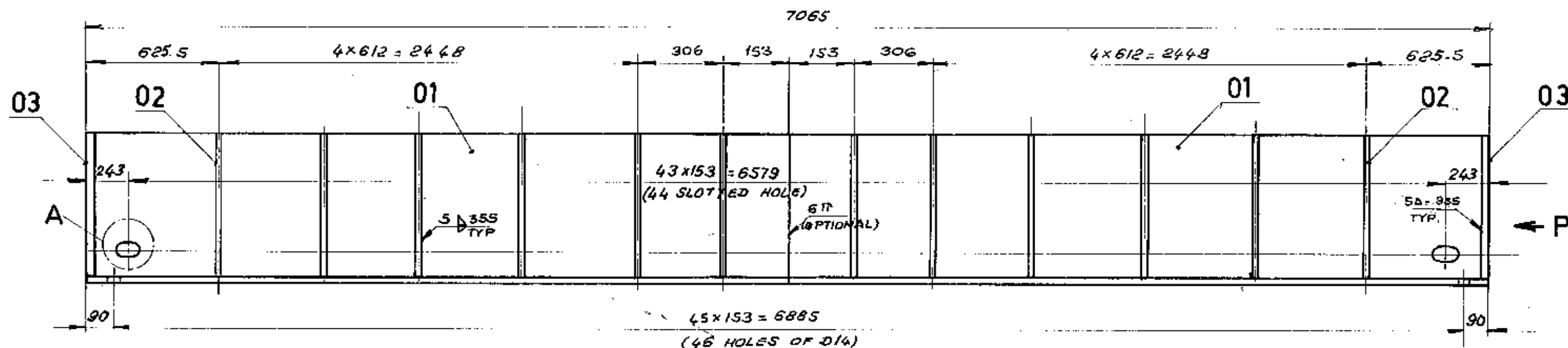
END COVER

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

05-223 / C

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DRAWING NO.

(OPTIONAL) 6T - E7018 - 0.358 M
5D - E7018 - 9.2 M

VARIANT NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO.	MATL. CODE	A/C	UNIT	UNIT WT.	QTY.	GS
	03	STIFFENER PL. 6	S	6101-3002-21		15 011 092			1.000		
						BM C20			2		
	02	STIFFENER PL. 6	S	6101-3002-22		15 011 092			1.000		
						BM C20			1.2		
	01	PL. 6; 358 x 3532.5				15 011 092			59.437		
						BM C20			2		

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

BOM

Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN.	NAME	SIGN	DATE	NO OF VAR
CHD.				
APPD.				

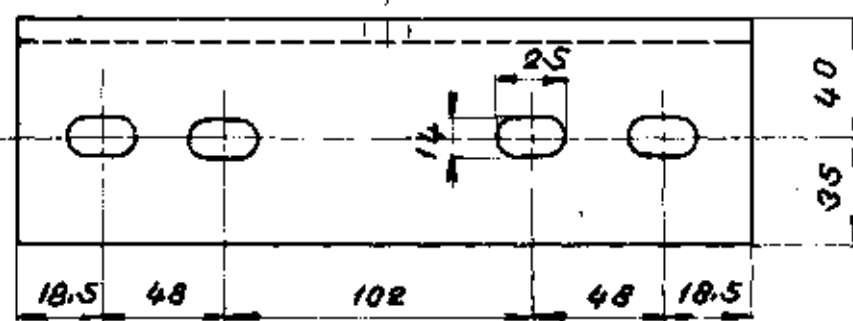
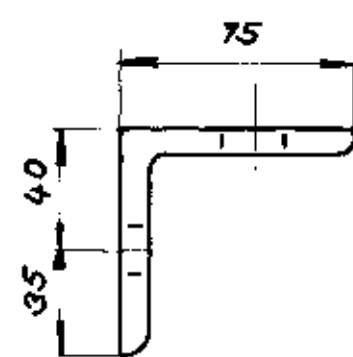
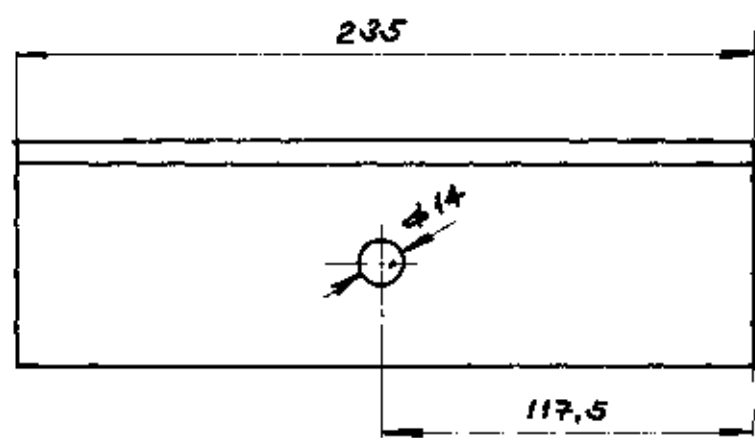
REV	DATE	ALTERED
01		CHECKED

DEPT	GRADE OF UNTOLO DIM C/M/F	SCALE	WEIGHT (kg)	REF TO ASSY/OLD DRG	ITEM NO.
CODE			132.874		
TITLE			CARD CODE	DRAWING NO.	REV.
BENT PLATE - I			U 01	3-04-116-80129	

05-249 / 8

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REV	DATE	ALTERED	REV	DATE	ALTERED
01		CHECKED	02		CHECKED



MICROFILMED ON

00318 FIVE 0814

00043

107

	ISA 75x75x6; L 235		15/013/005		1.6
			BMC20		
VARIANT NO.	DESCRIPTION	STD	MATL CODE	A C	UNIT
			MATL SPEC		QTY



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

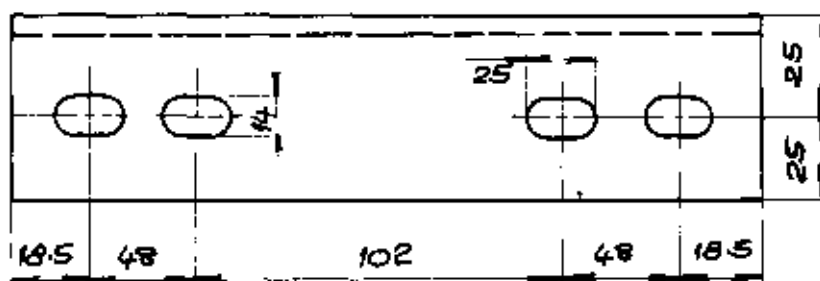
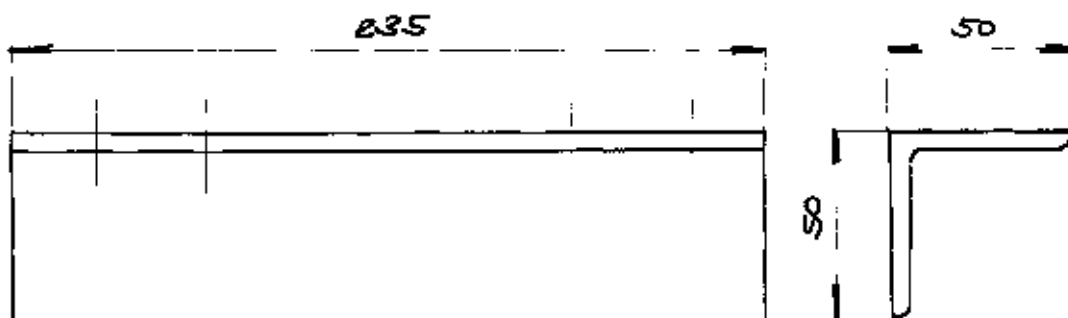
DRN	NAME	SIGN	DATE
CHD	BOLASANATHAN	[Signature]	16/6/01
APPD	RAJATHY.S.	[Signature]	

DEPT. FIPP	GRADE OF UNTOL DIM C/M/F	SCALE	WEIGHT (kg)	REF TO ASSY / OLD DR	ITEM NO.
CODE 1322		/	1.6		

TITLE	CARD CODE	DRAWING NO.	REV
ANGLE	U 01	4-04-114-80009	

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MF

700045

	ISA 50x50x6; 235	15 013 056		1.057
		BNC20		
VARIANT NO.	DESCRIPTION	MATL CODE	A	UNIT WT
		MATL SPEC	C	



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
CHD	B. CLAGANATHAN	M. S. S. S.	17/9/24
APPD	Q. VERAO	Q. VERAO	

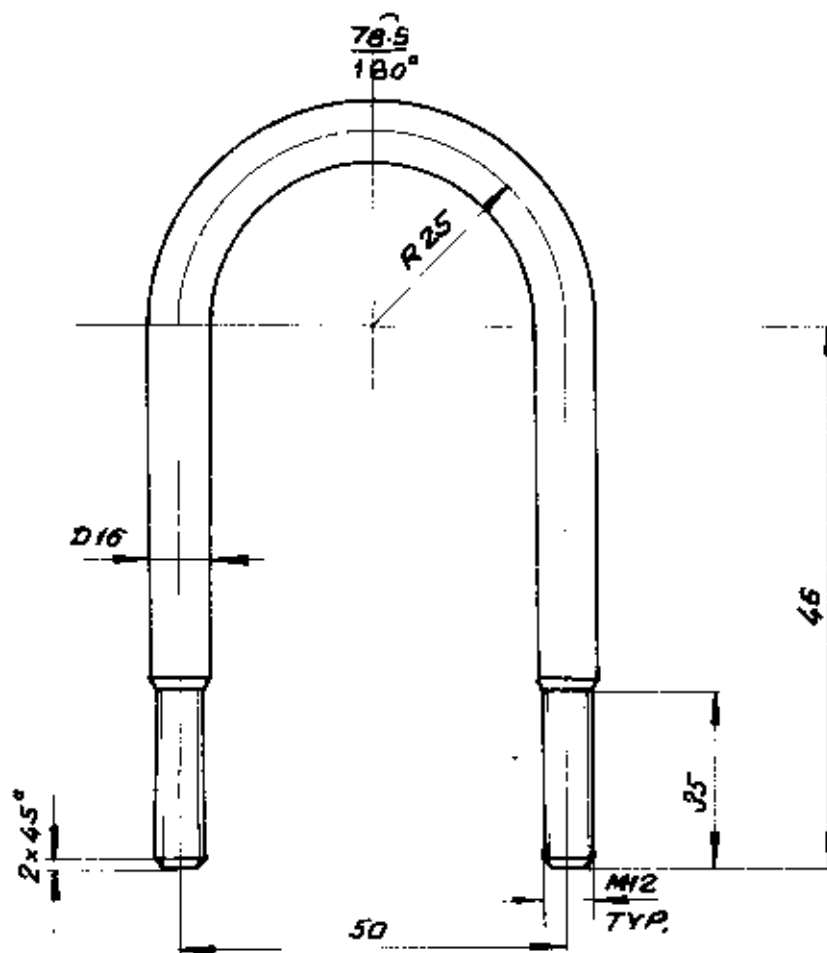
DEPT. 254/PP	GRADE OF UNTOL DIM C/M/F	SCALE	WEIGHT (KG)	REF TO ASSY / OLD DRG	ITEM NO.
CODE 1822			1.057	0-04-114-80011	

TITLE	CARD CODE	DRAWING NO	REV
ANGLE	U 01	4-04-114-80125	



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955076

	ROUND D16; L=170.5		15 004 106		0.300
			BMC20		
VARIANT NO.	DESCRIPTION	STD	MATL CODE	A	UNIT WT
			MATL SPEC	C	QTY

**Bharat Heavy Electricals Ltd.,**
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
CHD	M. OLACA		
APPD	NATHAN		

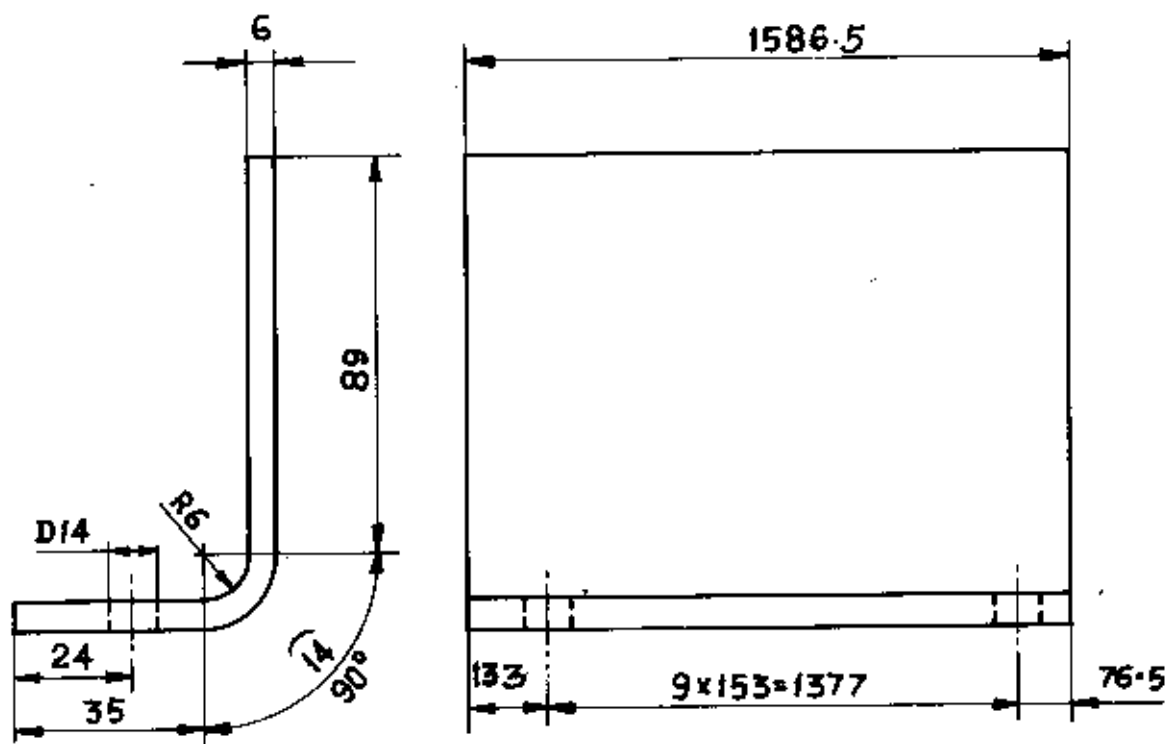
DEPT.	GRADE OF UNTOOL. DIM C/M, F		SCALE	WEIGHT (kg)	REF TO ASSY / OLD DRG	ITEM P
CODE				0.300		
TITLE	U-ROD			CARD CODE	DRAWING NO	REV
				U 01	4-04-114-80134	

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

05-249/C

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01		CHECKED	02		CHECKED



MF 25506
BOILER NO 579 & 580

	PL - 6 ; 1586.5x138	15-011-092		10-312
		BMC 20		
VARIANT NO.	DESCRIPTION	MATL CODE	A/C	UNIT
		MATL SPEC		QTY



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
CND	N.C.S. NAIR	<i>[Signature]</i>	18-8-86
APPD	B.OLAGANATHAN	<i>[Signature]</i>	

DEPY.	GRADE OF TOL D/M	SCALE	WEIGHT (kg)	REF TO ASSY / OLD DRG
CODE	C/M/F		10-312	

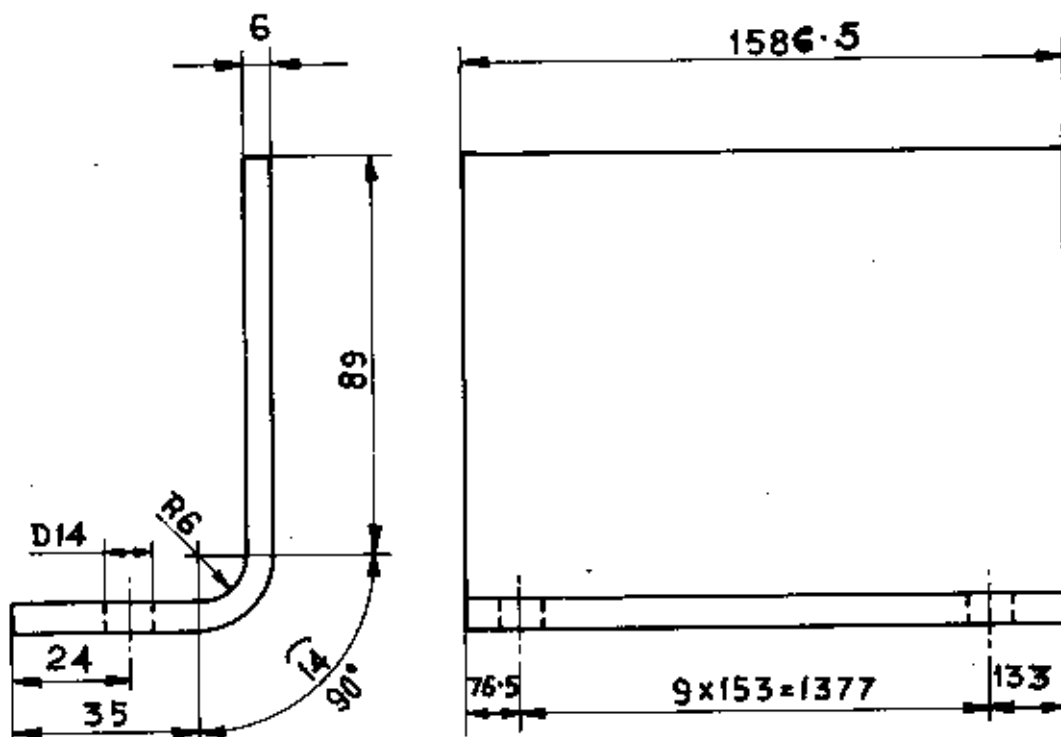
TITLE	CARD CODE	DRAWING NO.	REV
BENT PLATE	U 01	4-04-114-80151	



05-249/C

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01		CHECKED	02		CHECKED



MF 455060
BOILER NO 579 & 580

	PL-6; 1586.5x138	15-04-092		10-312
		BMC 20		
VARIATION NO.	DESCRIPTION	MATL CODE	A	UNIT WT
		MATL SPEC	C	QTY



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
	N.C.S. NAIR	<i>[Signature]</i>	18-8-86
CHD			
APPD			
	P. OLAGANATHAN	<i>[Signature]</i>	

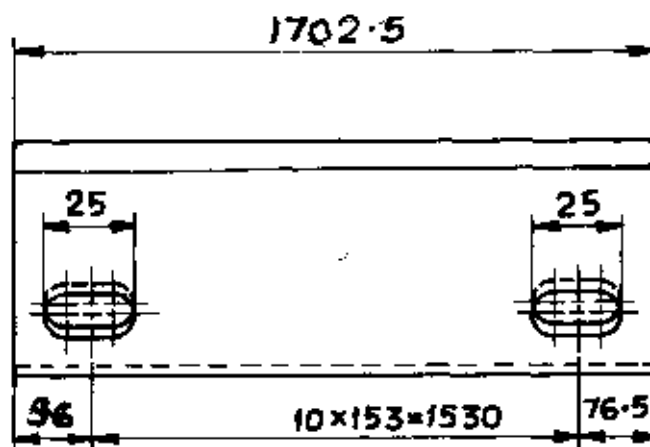
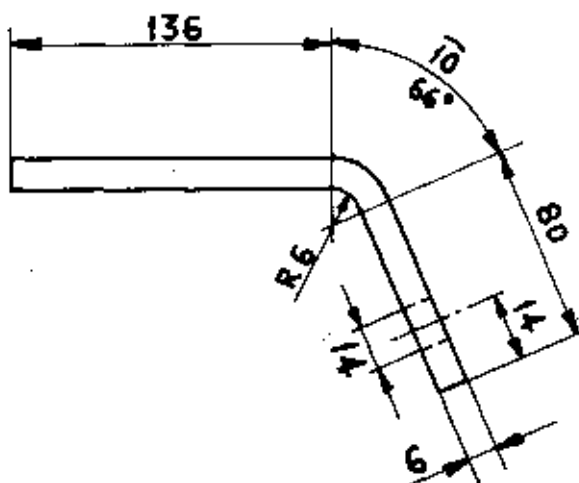
DEPT.	GRADE OF UNTOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY / OLD DRG
CODE	C/M/F		10-312	

TITLE	CARD CODE	DRAWING NO	REV
BENT PLATE	U 01	4-04-114-80152	

06-249

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01		CHECKED	02		CHECKED



MF

955057

BOILER NO 579 & 580

	PL-6; 1702.5 x 226	15-011-092		15-120
		BMC 20		
VARIANT NO.	DESCRIPTION	MATL CODE	A	UNIT WT
		MATL SPEC	C	QTY



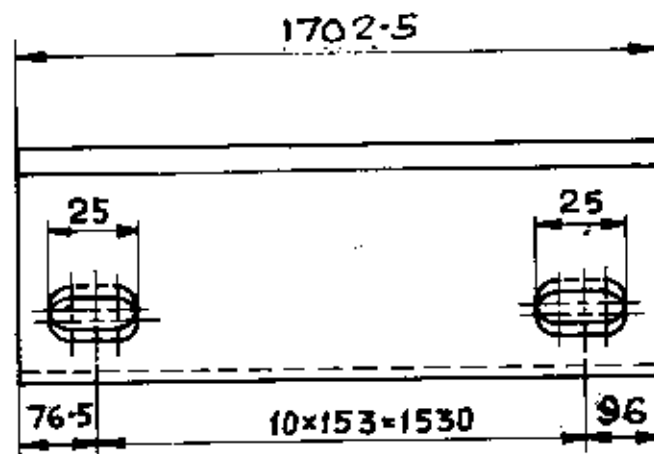
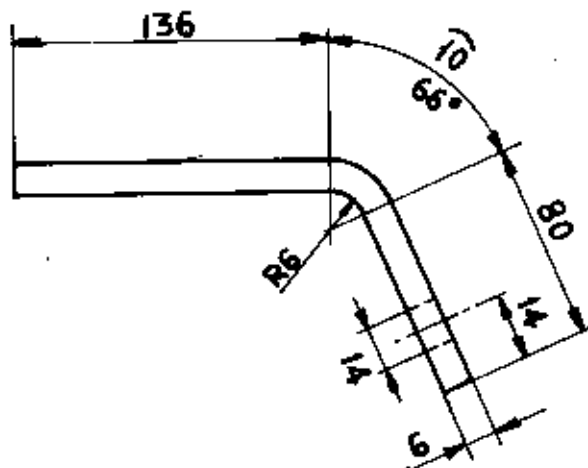
Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
CHO	N. C. S. NAIR	<i>[Signature]</i>	
APPD	13 OLAGANATHAN	<i>[Signature]</i>	

DEPT.	GRADE OF UNTOLO DIM	SCALE	WEIGHT (Kg)	REF TO ASSY / OLD DRG	ITEM NO.
CODE	C/M/F		15-120		
TITLE	CARD CODE	DRAWING NO.	REV		
BENT PLATE	U 01	4-04-114-80155			



REV	DATE	ALTERED	REV	DATE	ALTERED
01		CHECKED	02		CHECKED



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MF 955056
BOILER No 579 & 580

	PL-6, 1702.5x226	15-011-092		18-120
		BMC 20		
VARIANT NO.	DESCRIPTION	MATL CODE	A/C	UNIT WT.
		MATL SPEC		QTY



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

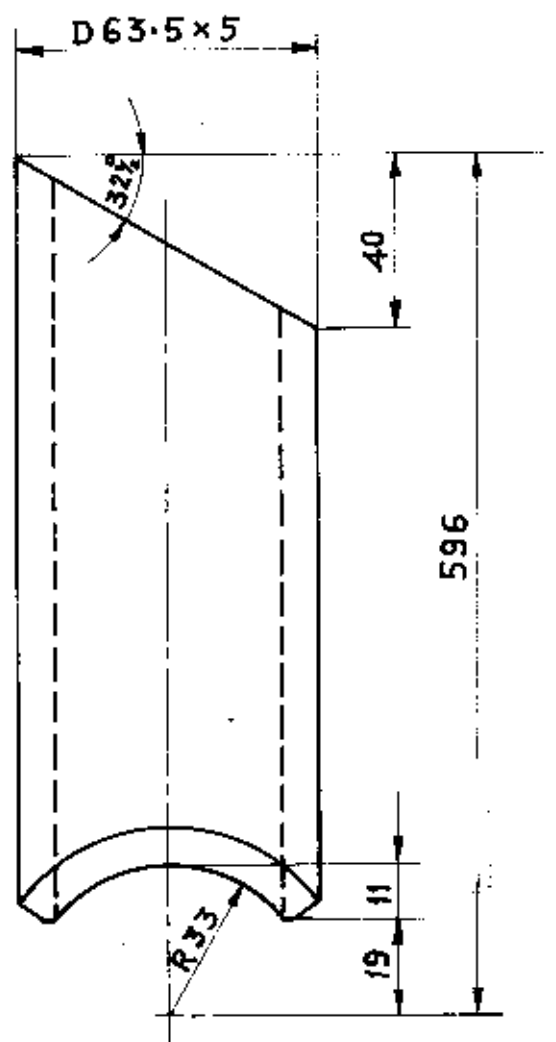
DRN	NAME	SIGN	DATE
CHD	N.C.S. NAIR	<i>[Signature]</i>	18-8-86
APPD	B. CLAGANATHAN	<i>[Signature]</i>	

DEPT.	GRADE OF UNTOLO DIM	SCALE	WEIGHT (KG)	REF TO ASSY / OLD DR	ITEM
CODE	C/M/F		18-120		
TITLE	CARD CODE	DRAWING NO.	REV		
BENT PLATE	U 01	4-04-114-80156			

D6 249/C

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MF 955054

	PIPE D 63.5 x 5 L=577	15-084-113/60 SA 192		4-696 1
VARIANT NO	DESCRIPTION	MATL CODE	A C	UNIT
		MATL SPEC		QTY



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
	N.C.S. NAIR	<i>[Signature]</i>	6-10-86
CHD			
APPD	B. D. LAGANATHAN	<i>[Signature]</i>	

DEPT	GRADE OF INTOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY Dwg
CODE	C M F		4-696	

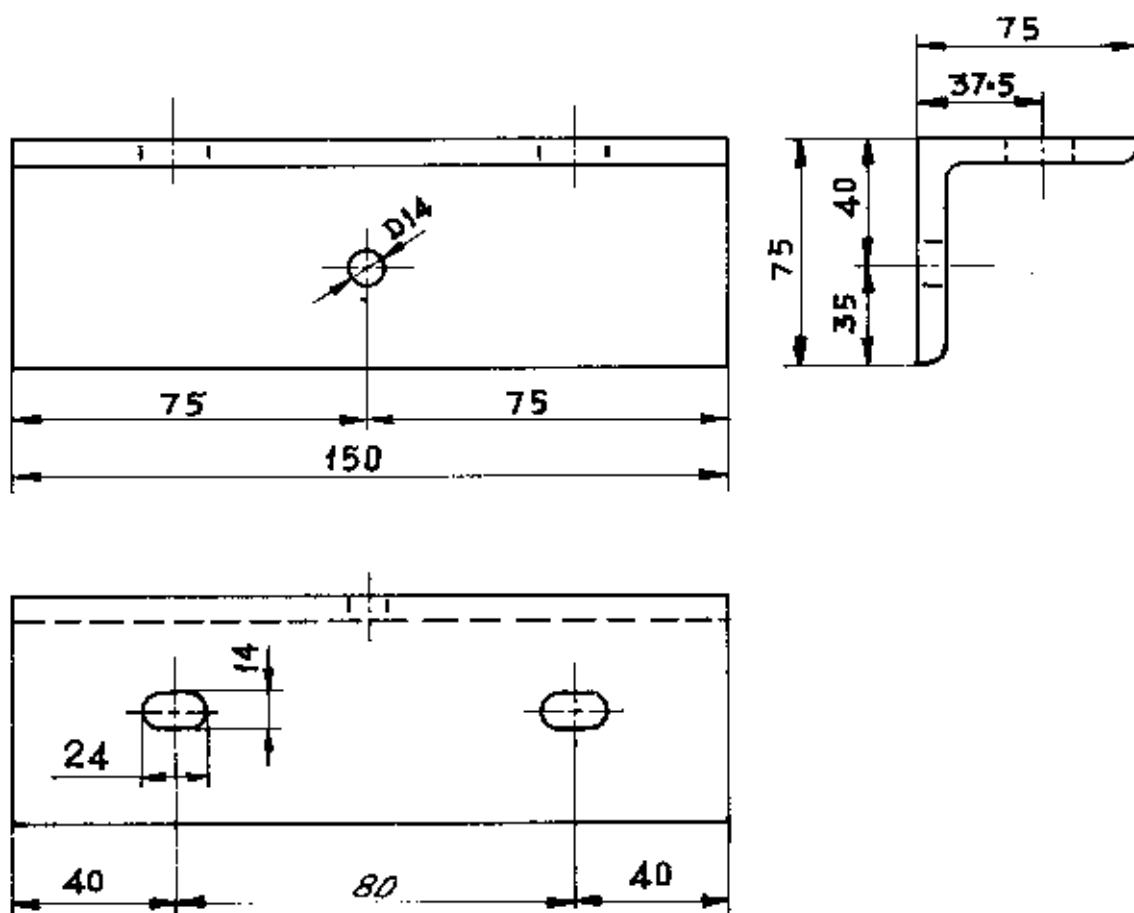
TITLE	CAND CODE	DRAWING NO	REV
FEED TUBE	U 01	4-04-114-80158	

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

05-249/C

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MF 9:55093

	ANGLE 75x75x6 ; L 160	15-013-005 BMC 20	1.088
VARIANT NO.	DESCRIPTION	MATL CODE	UNIT WT
		MATL SPEC	QTY



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
CHO	N. C. S. NAIR	<i>[Signature]</i>	7-10-86
APPD	B. OLAGAWATHAN	<i>[Signature]</i>	

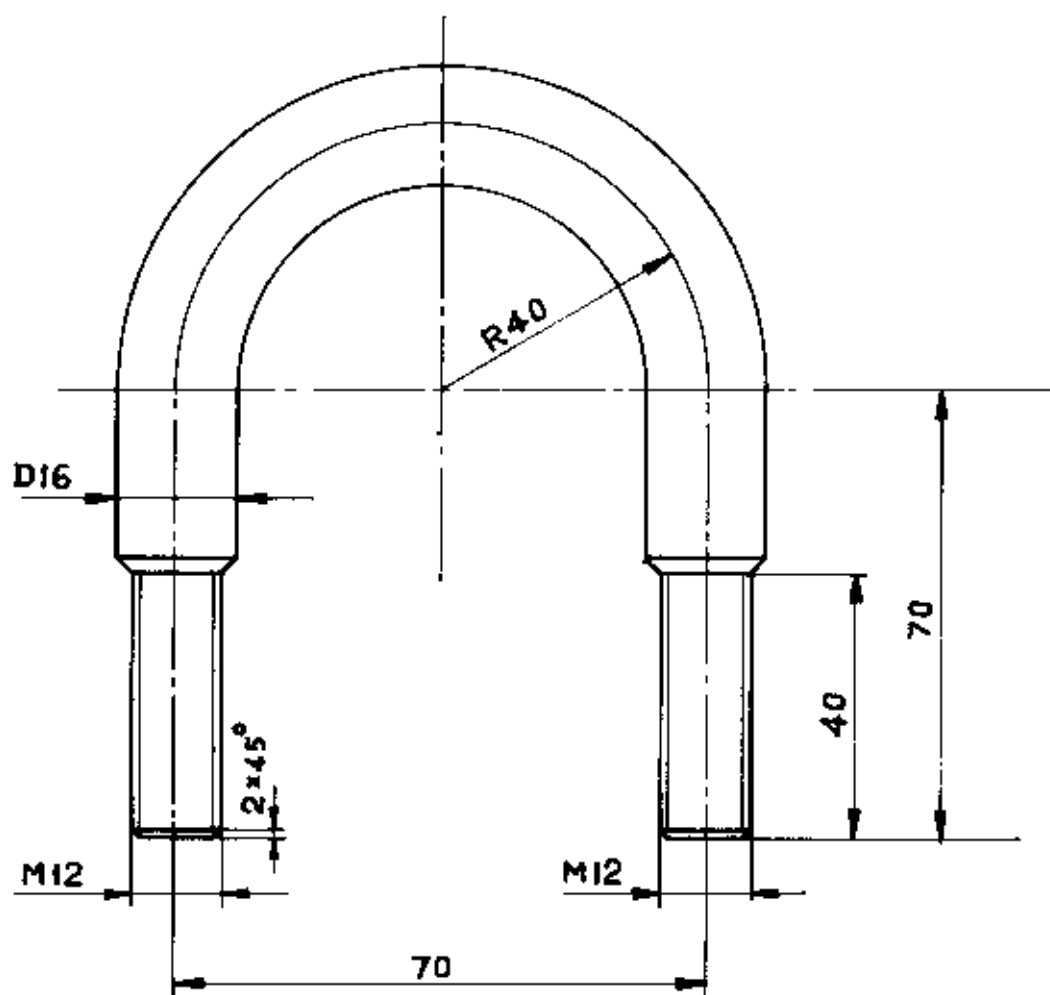
DEPT.	GRADE OF UNTOL DIM	SCALE	WEIGHT (kg)	REF TO ASSY / OLD DRG
CODE	C M F		1.088	
TITLE	ANGI F	CARD CODE	DRAWING NO	REV
		U 01	4-04-114-80159	

05-289/C

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN MILLIMETRES)

REV	DATE	ALTERED	REV	DATE	ALTERED
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MF 955052

	ROD D16 ; L 265	15-004-106		0.424
		BMC 20		1
VARIANT NO.	DESCRIPTION	MATL CODE	A	UNIT WT
		MATL SPEC	C	QTY



Bharat Heavy Electricals Ltd.,
BOILER PLANT UNIT
TIRUCHIRAPALLI-620 014

DRN	NAME	SIGN	DATE
CHD	N. C. S. NAIR	Heshe	7-10-86.
APPD	B. D. LAGANATHAN		

DEPT.	GRADE OF UNTOOL DIM	SCALE	WEIGHT (kg)	REF TO ABBY / ODD DRG.	ITEM NO.
CODE	C/M/F	1:1	0.424		
TITLE	CARD CODE	DRAWING NO.	REV		
U ROD	U 01	4-04-114-80160			

Size A4