

TENDER ENQUIRY NO.: X/6620/2024/0453/F

SUB: - TERMS & CONDITIONS FOR FABRICATION OF A G COVERS WITH COMBINED MATERIAL

NIT-Notice Inviting Tender

Salient Details of Notice Inviting Tender (NIT)		
Sl. No.	Issue	Description
1.	Item details	As per Enquiry Annexure X/6620/2024/0453/F/1
2.	Issue of Tender Documents	From BHEL eProcurement website https://eprocurebhel.co.in/nicgep/app (Tender documents will be available for downloading from BHEL e-Procurement website till due date of submission)
3.	Due Date Of Offer Submission	Date: -01.10.2024 Time: 13:45 hrs https://eprocurebhel.co.in/nicgep/app Offer to be submitted in online only through e-procurement Portal. (Bidders are requested to visit website to view corrigendum/ addenda/ amendments/ extension/ modification etc. before submitting offer).
4.	Opening of Tender (Techno-Commercial Bid)	Date: -01.10.2024 Time: 14.00 Hrs Notes: This tender being an e-tender, it shall be opened online only through the E-Procurement Portal. Participating bidders may witness the Opening online only.
5.	Cost of Tender	INR 2000/- (If hard copy of tender document is required from BHEL otherwise not applicable.)
6.	EMD (Earnest Money Deposit)	0
7.	Schedule Of Pre-Bid Discussion	Not Applicable
8.	Integrity Pact & Details of Independent External Monitor (IEM)	Not Applicable
9.	Latest Updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL e-tender portal https://eprocurebhel.co.in/nicgep/app and not in the newspapers. Bidders to keep themselves updated with all such information

Please submit your offer only for the above requirement subject to our **GENERAL INSTRUCTIONS AND STANDARD TERMS & CONDITIONS (Version: June-2021, Rev.07)**. Please visit our site www.hwr.bhel.com for General Instructions and Standard Terms & Conditions (GISTC) for Tender Enquiries. All the bidders/vendors must ensure compliance of these GISTC. GISTC can also be referred by login to B2B Portal for Registered Vendors.

Tender Fee & EMD (If Applicable) will be submitted in the form of Pay Order / Demand Draft (drawn in favor of 'BHEL HARIDWAR') only. It may be noted that if hard copy of any tender document is required, then the same may be collected against copy of Pay Order / Demand Draft of requisite tender fee (while original to be submitted with Part-I).

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If EMD is not submitted along with the offer, then the offer may not be considered.

For E-Payment, the RTGS details are mentioned as below:

Bank Details	SWIFT Details of bank
STATE BANK OF INDIA RANIPUR BRANCH, OPP: BHEL MAIN GATE, SECTOR-5, RANIPUR, HARIDWAR, UTTRAKHAND, INDIA PIN CODE : 249403	SWIFT NO.: SBININBB225 CC ACCOUNT NO.: 10667995458 IFSC CODE: SBIN0000586

As per notification reference no. NSIC/HO/GP/15(4)/2013-14 dated 07.07.2013 Micro & Small Enterprises (MSEs) are not required to submit Tender fees. A Valid MSE certificate such as Udyog Aadhar (UAN)/ Udyam Certificate/NSIC/EM (Part-II) etc. issued from competent authority shall be submitted in support of Micro & Small Enterprises (MSEs).

“As per the OM No. F. No. 1(2)(1)/2016-MA dated. 09.02.2017 issued from the Office of Development Commissioner (Micro, Small & Medium Enterprises), “Traders and agents should not be allowed to avail the benefits extended under the PP Policy.”

Central / State – PSUs / Government departments are exempted from submission of EMD subject to approval by BHEL management.

BHEL will forfeit the EMD if, the successful bidder / vendor refuses to honor the order after award of the same on him and / or withdraws his bid and / or unilaterally changes the offer and / or any of its terms & conditions within the validity period.

INSTRUCTIONS TO BIDDERS FOR SUBMITTING OFFER

TECHNICAL QUALIFICATION: Technical Requirement, Pre-Qualifying Requirements/PQR to be submitted. It is the mandatory requirement. Offer of vendors not meeting these requirements may not be considered.

ESSENTIAL INSTRUCTIONS

The tender shall be **submitted in two parts** in separate cover as described below on or before the due date:

Part I (Cover-1) - Containing the following:

1. Techno -Commercial Bid
2. Tender Fee & EMD (Earnest Money Deposit) Or Valid certificate/Document towards exemption of Tender fee and/or EMD (applicable for Micro and small Enterprises, Central / State – PSUs / Government departments, PMD vendors etc.)

Part II (Cover-2) - Containing Price Bid in attached Format

Bidders against tender will necessarily have to obtain class – III DSCs. Procedure for application available on www.bhel.com.

E-Procurement Portal Inputs

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Procedure for Submission of Offer for E – Tender-Procedure for Submission of Tender is available in the “Bidder Manual for BHEL Bidders” at E-tender portal <https://eprocurebhel.co.in/nicgep/app> . Terms and conditions mentioned therein shall form integral part of the NIT and bidders shall abide by the same.

Hardware and Software requirements for participating in e-tender

Please refer the website for the minimum system requirements and setting document for Bidders under the link: <https://eprocurebhel.co.in/nicgep/app>

Digital Signature

To know the procedure for obtaining Digital Signature Certificate (DSC), suppliers who are not having the DSC are advised to visit our website [http://www.bhel.com/home.php/Tender Notifications/Sample Checklist](http://www.bhel.com/home.php/Tender%20Notifications/Sample%20Checklist).

NIC portal Helpdesk Contacts

For any technical related queries please call at 24 x 7 Help Desk Number

0120-4001 002

0120-4200 462

0120-4001 005

0120-6277 787

International bidders are requested to prefix 91 as country code

Email Support

Address: A) For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority
Technical - support-eproc@nic.in

Note

Offers/tenders submitted in the E-tender portal shall only be considered for further evaluation. Offers sent by FAX / E-mail / any mode other than E-tender would not be entertained.

The Tenderers must submit their Tenders, as detailed below:

SPECIAL NOTE: All documents to be submitted should be uploaded in respective places in the E-Tender portal as per the list mentioned given in this NIT. BHEL shall not be responsible for incomplete documents.

SUB: - TERMS & CONDITIONS FOR FABRICATION OF A G COVERS WITH COMBINED MATERIAL

Online offers are invited through e-procurement portal <https://eprocurebhel.co.in/nicgep/app> from suppliers for the supply of the items.

The item name and drawing no. mentioned in the enquiry is for reference & will be available for ordering. A sample of Bill of Materials and all reference drawings are also enclosed for having a general idea of the tender.

1. **SCOPE OF WORK:** - This enquiry is for pre-fabrication machining & fabrication of following items with Combined Material as per drawing, QP & other specifications.

Sl. No.	Item Description	Drg. No.	Qty.	Party Material Weight	BHEL Material Weight	Total Weight (in kg.)
1	Air Guide Cover	0144040102800	1 No.	1241.51 Kg	0.03 Kg.	1241.54 Kg.
2.	Air Guide Cover(welded), Cover(welded), Cover (welded)	0144040103100, 1144040102300, 1144040103900	1 Set	798.35 Kg	5.18 Kg.	803.53 Kg.

Remark - Total load for the enquiry (Approximately) = 2045.07 Kg.

Technical requirement and instructions of the drawings are to be strictly followed.

The rate (s) should be quoted in Rupees/Kg for Combined material.

I) Instructions for AIR GUIDE COVERS:

- a. Pre-Fab. M/c & Fab. only
- b. Drawing technical requirements and instructions to be strictly followed.
- c. All party material to be procured from HEEP, BHEL, Haridwar approved sources only.
- d. Quality plan no. QP/QA/216544 rev. 00 dated: 17.08.2024 is attached, which is to be followed.
- e. Physical Inspection by BHEL / BHEL nominated inspection agency as per drawing and quality plan requirements.
- f. For drg.no.0144040102800: itemno.6 will be supplied by BHEL and rest items are in vendor scope.
- g. For Drg. No. 0144040103100: items No. 10,20,25,26,27 will be supplied by BHEL and rest items are in vendor scope.
- h. For drg.no.1144040103900: items No. 7-1, 7-2, 7-3 will be supplied by BHEL and rest items are in vendor scope.
- i. For Drg. No.1144040102300, all items are in vendor scope.
- j. Shot blasting/ painting if required will be done by BHEL.

- k. Quality plan (if any) to be followed for Material induction and CHP.
- l. Customer's seal (if Any on supplied Material) to be transferred.
- m. All special tests viz., UT, RT, HYDRAULIC & KEROSENE etc. are to be performed as per drg. requirements.
- n. Copies of the relevant certificates to be supplied to the receiving shop.
- o. Cleaning of parts, removal of mill scale from components prior to assy will be in scope of vendor.
- p. Final Assembly shall undergo cleaning to ensure that all parts are free from dents, mills, spatters.
- q. Aesthetic appearance shall also be ensured and inspected before delivery to BHEL.
- r. Supplier must furnish material test certificates for all the items.

2. VALIDITY: -

The validity of offers by vendors should be at least for a period of **90 days for this enquiry from the date of enquiry opening.**

3. SUBMISSION OF OFFERS: -

Open tender is hoisted on the <https://eprocurebhel.co.in/nicgep/app> and no hard copy of document is provided by BHEL, no tender fee shall be insisted upon from the bidders.

The offer is to be submitted in **two parts** on NIC portal only on website: <https://eprocurebhel.co.in/nicgep/app>

BHEL reserves the right to reject any or all the tenders either in full or part thereof without assigning any reasons thereof.

4. DELIVERY: -

F.O.R.: HEEP, BHEL Haridwar.

5. DELIVERY SCHEDULE: -

Sl. No.	Item Description	Drg. No.	Qty.	Delivery
1	Air Guide Cover	0144040102800	1 No.	45 Days from last BHEL material sent to vendors work
2	Air Guide Cover(welded), Cover(welded), Cover (welded)	0144040103100, 1144040102300, 1144040103900	1 set	45 Days from last BHEL material sent to vendors work

- 6. Bank Guarantee/Indemnity Bond: -** 10 % Bank Guarantee and 90% Indemnity Bond for the value of materials to be given by vendor for free issue materials. Material value will be calculated on PPMIV/Challan value basis. On intimation from BHEL regarding BG & IB, the same shall be provided by the vendor (s) within 15 Days. If suitable BG and IB are not submitted to BHEL within 15 days of intimation, then the amount of days delayed beyond 15 days after intimation will be deducted from delivery days of that item and consequent PO amendment will be issued.

For Example: If intimation for requirement of BG & IB of an item of a PO is given to vendor on 01.04.2023 from BHEL, then vendor should mandatorily provide required BG and IB by 15.04.2023. In case, the vendor provides the same by 30.04.2023, then the difference of 15 days (between 30.04.2023 & 15.04.2023) will be deducted from delivery days of that item and consequent PO amendment will be issued.

7. INSPECTION: -

- The inspection will be carried out by BHEL/BHEL nominated inspection agency at Party's works. All facilities and equipment's, calibrated instruments and standard gauges required for inspection shall be provided by the vendor during inspection. In some cases, inspection by customer's representatives like NTPC/RITES etc. may also be carried out at Party's works and CHP clearance may be obtained. No additional charges will be paid on this account.
- The party is to follow system for material control, if applicable, as per BHEL Quality Control system.
- Identification marks shall be punched on each item by the vendor i.e. Purchase Order No., Drawing No., IR No. etc.
- Aesthetic appearance is to be maintained as per drg. requirement.

8. GUARANTEE CERTIFICATE: -

The vendor shall warrant that the supplied fabricated assemblies/items comply fully with the drawings and other technical conditions. If the fabrications/items are found defective owing to faulty workmanship/incomplete work within a period of eighteen (18) months from the date of dispatch, the vendor shall make good of it/replace the same free of cost. Alternatively, the rework/replacement charges will be recovered.

9. PAYMENT TERMS: -

- 9.1 90% after acceptance & final clearance of SRIV. 10% after FTS and final accountal of material.
- 9.2 No packing and forwarding charges will be paid extra.
- 9.3 In case of rejection, total cost of material will be recovered in case of BHEL Material and no labour cost will be paid.
- 9.4 For MSEs (covered under MSME Act) which are registered and periodically renewed with BHEL, the payment will be made within 45 days or as prescribed in the relevant act.
- 9.5 Detailed terms at clause 10.0 of GISTC Rev. 07, June 2021.

10. LD CLAUSE: -

@ 0.5% per week subject to max 10% for the delayed portion of supply. The entry date mentioned by CISF on the challan at BHEL material gate will be taken as material receipt date.

11. GST: -

As per clause 11.0 of GISTC (attached). At present GST rate applicable for this enquiry will be 18%. However, it will be as applicable as per Govt. guidelines/circulars.

12. QUALITY REQUIREMENTS: -

Inspection by BHEL/BHEL nominated inspection agency as per drawing /Standard and quality plan requirements.

Quality plan No. QP/QA/216544 rev 00 dated 17.08.2024 is attached, which is to be followed.

13. REVERSE AUCTION: -

“BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno-commercially qualified bidders.

Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for 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.”
For detailed terms and conditions of RA guidelines, kindly refer www.bhel.com.

14. EVALUATION OF BIDS:

All vendors will be assessed on total cost to BHEL basis that includes freight, taxes, ITC etc. Item wise evaluation will be applicable for this enquiry. L1 vendor will provide the BM and PM per Kg rate after RA.

In the course of evaluation, if more than one bidder happens to occupy L1 status, L1 bidder shall be decided by toss/draw of lots, in the presence of respective L1 bidder(s) or their representative(s). Ranking will be done accordingly. BHEL’s decision in such situation shall be final and binding.

15. TRANSPORTATION: -

Transportation of PPMIV material (raw material) will be in scope of BHEL and the freight will be borne by BHEL. However, the same will be loaded into the cost quoted by vendor in RA sheet. Vendor to deliver fabricated/machined/formed items to BHEL Haridwar at their own cost.

16. SCRAP: -

- Generated scrap is to be retained by the sub-contractor. This scrap is chargeable. The scrap rate will be calculated based on the monthly market scrap price Published in JPC Bulletin (Govt. of India Constitution)/any other document under category of scrap MELTING SCRAP/any other similar category. The calculated monthly price for charging scrap will be rounded off to two decimal places of Rupee. GST charges on scrap shall also be applicable.
- BHEL would recover the amount of GST and Trade Tax as applicable from the sub-contractor’s account in lieu of scrap retained by them. The difference between raw material weight and finalized weight shall be considered for the calculation of scrap generation.
- A 3% invisible cutting allowance may be given on the finished weight.

17. RECTIFICATION: -

Any defect (noticed at Shop) arising out of the fabrication/machining/forming done by the Sub-Contractor, will have to be rectified or items replaced by the sub-contractor within 10 days at their own cost. Otherwise BHEL will be free to take necessary action as deemed fit and consequence/cost of the same will be to subcontractors-account.

18. Breach of Contract: In case of breach of contract, wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is atleast 10% of the contract value, the same be encashed. In case the value of the security instruments available is less than 10% of the contract value, the balance amount be recovered from other financial remedies (i.e. available bills of the contractor, retention amount, etc. with BHEL) or legal remedies be pursued. The balance scope shall

be got done independently without Risk & Cost of the failed supplier/ contractor. Further, levy of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract. Accordingly, recovery of an amount equivalent to 10% of the contract value may be made in case of breach of contract.”

19. DISTRIBUTION OF LOADS: -

Load will be placed on L1 Vendor.

20. GENERAL INSTRUCTIONS: -

20.1 No further sub-contracting to third party or sister concern by the sub-contractor is allowed Without prior permission of BHEL. If found guilty, will be debarred.

20.2 BHEL reserves the right to suspend/cancel the PO/Enquiry unilaterally without any financial repercussions, if Sub-contractor's performance is not found to be satisfactory.

20.2.1 BHEL reserves the right to revise the drawing after placement of purchase order. The prices in the purchase order will be amended according to revised drawing.

20.3 Please refer general instructions and standard terms & conditions (GISTC) for bidding against tender enquiry (version June-2021, Rev:07) the bidder/vendor must ensure compliance of these GISTC (version June-2021, Rev:07). Please refer <https://hwr.bhel.com>.

20.4 MSE suppliers are exempted for submission of EMD & Tender Fee.

20.5 Central / State – PSUs / Government departments are exempted from submission of EMD subject to approval by BHEL management.

20.6 Documents submitted with the offer/bid by the bidder should be signed and stamped in each page by authorized representative of the bidder.

20.6.1 PQR required documents is to be submitted along with the Techno- Commercial offer (PART-I).

Note: - Offer shall be entertained only after submission of duly filled, signed and stamped PQR and relevant documents. Offers of the vendor(s) not submitting this may be ignored.

20.7 Vendor Contract clause regarding GST ITC and provision for E-invoices:

(i) E-invoicing under GST is being implemented w.e.f. 01.04.2022 for all the taxable persons having turnover more than Rs. 10 Cr. It has been specified by the Govt. that it is mandatory to mention a valid unique Invoice Reference No. (IRN) and QR code as generated from Govt. portal on a Tax Invoice. Based on such information, GST ITC as claimed by BHEL in GST Returns shall be matched with the corresponding details uploaded by supplier in E-invoicing System.

(ii) In case the vendor /contractor delays or fails to provide all the documents as per the Purchase order / Work Order at the time of submitting Tax invoice to BHEL, any subsequent financial loss to BHEL on account of vendor/contractor shall be to vendor's / contractor's account. BHEL has further right to take necessary steps to protect its interest at the time of release of payment. This further requires inclusion of IRN and QR code on tax invoice as announced by Govt. of India w.e.f. 01.10.2020.

20.8 In case of ordering against the tender, vendor should submit their invoices against goods and services immediately after supply of goods & services but not later than 30 days from the invoice date. In case of delay, consequential losses like loss of input credit and non-availability of concessional forms etc. shall be to the vendor account.

20.9 The bidders against open tender will necessarily have to obtain class – III DSC (Digital signature). Procedure for application is available on hwr.bhel.com.

20.10 Following MSE conditions shall be followed: -

UDYAM Certificate.

Detailed MSE conditions is at clause no. 23.0 of GISTC Rev. 07, June 2021.

* Govt. guidelines will supersede all clauses of this tender for MSE benefits to vendor(s).

MSE Suppliers can avail the intended benefits only if they submit along with the offer, attested copies of UDYAM Certificate.

Detailed MSE conditions is at clause no. 23.0 of GISTC Rev. 07, June 2021. * Govt. guidelines will supersede all clauses of this tender for MSE benefits to vendor(s).

20.11 BHEL may load maximum penalty under LD Clause, to the extent the same is not agreed by the vendor, for the purpose of comparative statement. Where deliveries quoted by the vendor are not suiting, BHEL may also ignore the offer of the vendor.

21. "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 who 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 authorize only one agent/dealer. There can be only one bid from the following:

1. The principal manufacturer directly or through one Indian agent on his behalf; and

2. Indian/foreign agent on behalf of only one principal,
or

g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, or

h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. "

➤ **Against vendor's replies, BHEL reserves the right to ask for more information/ documents /**

clarifications. Vendor's offer shall not be considered if vendor fails to furnish the document / information / clarifications as mentioned above or doesn't meet the acceptance criteria.

Time period for technical/commercial clarification is 3 days.

- Amendments/Corrigendum, if any, will be hosted on designated web site/ GePNIC Portal only. Other terms and conditions will be as per tender documents.
Any vendor who is under hold (for the item)/ delisted/ banned with BHEL on date of opening of Part – 1 will not be allowed to quote for this tender. In case their offer is received, it may be outrightly rejected.
- The Tender Documents, Drawings, P.O copy etc. shall be sent by e-mails and shall not be sent in hard copies. Vendors to kindly note that the details sent by e-mail shall be considered for delivery against the finalized contract(s)/ P. O's placed.
- ****OFFERS SHALL BE ADMITTED THROUGH GePNIC PORTAL <https://eprocurebhel.co.in/nicgep/app> ONLY**

Annexure - A**SUB: - TERMS & CONDITIONS FOR FABRICATION OF AIR GUIDE COVER WITH COMBINED MATERIAL**

OpenTender Enquiry No.: X/6620/2024/0453/F/1

Sl. No.	Item Description	Drawing No.	Qty	Total weight	Rate Rupees/Kg (Tick the correct option)
1	Air Guide Cover	0144040102800	1 No.	1241.54 Kg.	Quoted/ Not Quoted
2	Air Guide Cover(welded), Cover(welded), Cover (welded)	0144040103100, 1144040102300, 1144040103900	1 set	803.53 Kg.	Quoted/ Not Quoted

Authorized Signature:

(with date & seal of company)

Name of Supplier: -

Annexure - B

Make in India Certificate

Certificate In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017 & P-45021/2/2017-PP (BE-II) dated 28.05.2018, we hereby certify that we M/s

_____ (supplier name) are local supplier meeting the requirement of minimum local content (50%) as defined in above orders for the material against Enquiry No. ____

X/6620/2024/0453/F/1. Details of location at which local value addition will be made is as follows:

_____ We also understand, false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Authorized Signature:

(with date & seal of company)

Name of Supplier: -

TERMS AND CONDITIONS FOR Enquiry No.X/6620/2024/00453/F/1

Sl. No.	TERMS	VENDOR'S ACCEPTANCE/ REMARKS
1	Scope of Work: - Complete PRE-FAB. M/C & FAB. ONLY is to be carried out by the vendor as per Drawing/Standard, QP and Technical requirements (as per clause 1 of terms & conditions).	
2	Quotation is valid for a minimum period of 90 days from date of opening of enquiry. (as per clause no. 2.0 of Terms and Conditions)	
3	Submission of offers (as per clause no. 3.0 of Terms and Conditions)	
4	Quoted rates are on F.O.R. sub-contract store, HEEP, Haridwar basis.(as per clause no. 4.0 of Terms and Conditions)	
5	Delivery as per clause 5.0 of T& C of enquiry.	
6	Bank Guarantee/Indemnity Bond: 10% BG & 90% Indemnity bond (as per clause 6.0 of T& C of enquiry)	
7	Inspection shall be done as per clause no. 7.0 of Terms and Conditions of Enquiry.	
8	Guarantee Certificate shall be valid for 18 months . (as per clause no. 8.0 of Terms and Conditions of Enquiry)	
9	Payment 90% after acceptance & final clearance of SRIV. 10% after FTS and final account of material (as per clause no. 9.0 of Terms and Conditions of Enquiry).	
10	LD clause is applicable@0.5% per week or part thereof with a maximum limit of 10% of the delayed portion of the PO (as per clause no. 10.0 of Terms and Conditions of Enquiry).	
11	GST shall be applicable against documentary proof. Input Tax Credit shall be applicable and BHEL can claim benefit (as per clause no. 11.0 of Terms and Conditions of Enquiry).	
12	Quality Requirements (as per clause no. 12.0 of Terms and Conditions of Enquiry).	
13	We accept Reverse Auction(RA) clause as per standard policy of BHEL (as per clause no. 13.0 of Terms and Conditions of Enquiry).	
14	Evaluation of bids (as per clause no. 14.0 of Terms and Conditions of Enquiry).	
15	Transportation:Confirm acceptance of clause 15.0 of T & C. Manufactured items shall be despatched by BHEL approved transporter only and Insurance shall be borne by BHEL.	
16	Scrap : Confirm acceptance of Clause 16.0 of T & C of Enq.	
17	Rectification:Confirm acceptance of Clause 17.0 of T & C of Enq.	
18	Breach of contract: Confirm acceptance of Clause 18.0 of T & C of Enq.	
19	Distribution of Load: Accept the Clause 19 of T & C	
20	We have read clause no. 20 of terms and conditions of Enquiry and confirm to abide the same. (Clause 20.1 -20.11)	
21	Conflict of Interest:Confirm acceptance of Clause 21.0 of T & C of Enq.	
22	Duly Filled Annexure A (Unpriced- Quoted / Not Quoted)	
23	We have submitted Make in India certificate (duly filled and signed as per Annexure-B).	
24	We accept all terms and conditions of GISTC Rev. 07	
25	Rates have been quoted in indian Rupees on per Kg basis.	
26	PQR : as per clause 20.6.1 of T&C of enquiry.(duly filled, signed and stamped PQR and relevant documents)	

I have read and agreed all the terms and conditions of enquiry in detail and agree.

Note: BHEL reserves the right to reject any or all the offers (on techno-commercial ground) without assigning any reason thereof.

(Vendor's signature with Stamp)

PQR

Item : AIR GUIDE COVER (WELDED) as per Drg No: 01440401028-00 & 01440401031-00
and COVER(WELDED) as per Drg No: 11440401023-00 & 11440401039-00

PRE-QUALIFICATION REQUIREMENT

01.00	TECHNICAL REQUIREMENT	Required	Vendor's Offer
01.01	Vendors should have experience of fabricating (cutting/bending/assembly/welding/pre-fabrication machining) and supplying of atleast 1 no. Air Guide Cover Fabricated assembly or equivalent having size 2000X1000mmX2000mm (LXBXH) and above and weight 1 Tons and above in last 7 years from the date of enquiry.	Vendor to Comply & submit suitable evidence	
01.02	Facilities Required: i) Lifting facility and capacity at vendor works should EOT crane 2 Tons and above. ii) Vendor must have levelled bed plate size : Length= 2,500mm and Breadth=2,500mm and above to fabricate the job (Note: Concrete floor not acceptable). (iii) Vendor must have suitable WPS/PQR and qualified welders for welding approved by Third Party and submit documentary evidence with offer. (iv) Vendor must have cutting facility to cut plate of thickness 10 mm and above. (v) Vendor must have rolling bending facility of plate thickness 10mm and above at width of 1000mm and above. (vi) Vendor must have drilling facility to drill holes of dia.30mm and above in plate thickness of 10mm and above	Vendor to Comply & submit suitable evidence including technical specifications, technical brochure, photographs etc. of the facilities.	
01.03	Vendor to furnish certificate against clause 01.01 from the customer / company or end user duly confirming that Air Guide Cover Fabricated assembly or equivalent having size 2000X1000mmX2000mm (LXBXH) and above and weight 1 Tons and above was supplied and used for Hydro Pump or turbine/power plant/capital goods/infrastructure application OR Vendor to submit documentary evidence as per clause 1.04.	Vendor to Comply & submit suitable documents	
01.04	Vendor to furnish name of customer/company with complete contact details and month /year of previous supply along with copy of PO, type of manufacturing facility used for fabrication (assembly/welding/pre-fabrication machining), supply documents, Payment details (invoice copy) and inspection documents of supplied Air Guide Cover Fabricated assembly or equivalent having size 2000X1000mmX2000mm (LXBXH) and above and weight 1 Tons and above.	Vendor to Comply & submit suitable documents	
01.05	All PQR documents are to be stamped and signed in original by Vendor. In case documents and official stamp is in language other than English, documents and details of official stamp are to be translated in English and duly certified by Government agency/approved agency of Government/Embassy.	Vendor to Comply & submit suitable documents	
01.06	BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/ incorrect, their offers shall be rejected.	Vendor to agree	

NOTE: PQR is not restrictive

[Mand Putaraya/PTX]



Sr. Engineer.

(Putaraya)
24/08/2024

24/08/24
Ravi Deshpande
Manager (PT)
27/08/24
V. V. S. SRIVASTAVA
DGM (BE-2/PT)

Manufacturer Name and Address		MANUFACTURING QUALITY PLAN										APPLICABILITIES TO		
BHEL Haridwar approved vendors/sub-contractors only		ITEM/ EQUIPM- ENTS	AIR GUIDE COVER (WELDED & COVER (WELDED) (ITEM NO. 1 TO 4 OF SIR)					Q.P. NO	QP/QA/216544					
								DATE	17.08.2024					
								REV. NO.	00		CONTRACTOR	BHEL (HEEP) HWR		
								PAGE NO.	1 of 2		Indent	SIR No: 2G20240010 rev. 00 dated 31.07.2024		
Sl. No.	COMPONENT OPERATION	CHARACTRISTIC CHECKED	CATEGORY	TYPE/ METHOD OF CHECKED	QUANT-UM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE DOCUMENT	FORMAT OF RECORD	D	AGENCY			REMARKS	
										M	B	C		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	


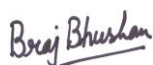
1	Material Receiving Inspection	Review of Supplier Test Certificate of Material for all the party materials	Major	Visual inspection	100 %	As per drg./ Standard	As per drg./ Standard	TC	√	P	V	-	All party material to be procured from BHEL, Haridwar approved sources with following condition: In all the cases a mill test certificate correlating with the component for verification of conformance of the material as per the requirement is essential.
2	IN PROCESS-INSPECTION												
2.1	WPS, PQR & WPQ Qualification	Scrutinizing	Major	Record check	100%	ASME SEC IX	ASME SEC IX	Test Report	-	P	V	-	BHEL /BHEL approved agency WPS/PQR/WPQ shall be used
2.2	Marking, Cutting & Edge Preparation	i) Marking	Major	Marking check	100 %	As per drg./ Standard	As per drg./ Standard	-	-	P	-	-	
		ii) Dimension	Major	Measurement	100%	As per drg./ Standard	As per drg./ Standard	-	-	P	-	-	
		iii) Edge preparation	Minor	Measurement	100%	As per drg./ Standard	As per drg./ Standard	-	-	P	-	-	

Manufacturer/Subcontractor 	Legends: P Perform by; W Witness by; V Record review; C Customer; B BHEL/BHEL Representative; M Manufacturer/ sub-contractor; D: Documents with tick mark shall be submitted by vendor to BHEL. 	For BHEL Use <div>  स्वाती जैन प्रबंधक गुणता आश्वासन </div> <div>  ब्रज भूषण त्रिपाठी वरिष्ठ प्रबंधक गुणता आश्वासन </div>
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Manufacturer Name and Address		MANUFACTURING QUALITY PLAN										APPLICABILITIES TO		
BHEL Haridwar approved vendors/sub-contractors only		ITEM/ EQUIPM- ENTS	AIR GUIDE COVER (WELDED & COVER (WELDED) (ITEM NO. 1 TO 4 OF SIR)					Q.P. NO	QP/QA/216544					
								DATE	17.08.2024					
								REV. NO.	00		CONTRACTOR	BHEL (HEEP) HWR		
								PAGE NO.	2 of 2		Indent	SIR No: 2G20240010 rev. 00 dated 31.07.2024		
SI. No.	COMPONENT OPERATION	CHARACTRISTIC CHECKED	CATEGORY	TYPE/ METHOD OF CHECKED	QUANT-UM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE DOCUMENT	FORMAT OF RECORD	D	AGENCY			REMARKS	
										M	B	C		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	

2.3	Welding Operation	i) Fit up	Major	Visual	100%	As per drg./ Standard	As per drg./ Standard	Obs. sheet	√	P	V	-	1) BHEL approved electrode shall be used during welding 2) Qualified welders by BHEL /BHEL approved agency in accordance with ASME Section IX will be deployed on the job.
		ii) Visual inspection of welds	Major	Visual	100%	As per drg./ Standard	As per drg./ Standard	Obs. sheet	√	P	V	-	
		iii) NDT, as applicable	Major	NDT	As per drg.	As per drg./ Standard	As per drg./ Standard	Report	√	P	W		
3	<u>FINAL INSPECTION</u>												
3.1		i) Verification of dimension & inspection	Major	Visual & measurement	100%	As per drg./ Standard	As per drg./ Standard	Obs. Sheet	√	P	W	-	
		ii) Completeness of Job, Documentation	Major	Visual	-	-	Drg./QP	Record	-	P	V	-	Item shall be dispatched to BHEL after acceptance by BHEL nominated agency after duly identifying by punching P.O. No., drg no. Plant Order No. and I.R. No.

Note: All requirements of P.O., drawing and standard shall be fulfilled.

Manufacturer/Subcontractor	Legends: P Perform by; W Witness by; V Record review; C Customer; B BHEL/BHEL Representative; M Manufacturer/ sub-contractor; D: Documents with tick mark shall be submitted by vendor to BHEL.	For BHEL Use <div>  स्वाती जैन प्रबंधक गुणता आश्वासन </div> <div>  ब्रज भुषण त्रिपाठी वरिष्ठ प्रबंधक गुणता आश्वासन </div>
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Detail of BHEL approved electrode

S.No.	Material Combination	Electrode/Wire	Process	WT PMD
1	MS-MS	E-7018	SMAW	WT003
2	MS-SS	E-309cb-15	SMAW	WT009
3	SS-SS	E-347-15	SMAW	WT010
4	MS-MS	ER-70S G	GMAW	WT034
5	MS-SS	ER-309L/309LSI	GMAW	WT029
6	SS-SS	ER-347	GMAW	WT028
7	MS-MS	ER-70S 6	GTAW	WT024
8	MS-SS	ER-309L/309LSI	GTAW	WT029
9	SS-SS	ER-347	GTAW	WT028

Category	Description	Desc2	Cleared	Purchase	cell	Pur type	It
WT003	Welding Electrode AWS: E-7018	Y					

Select and Other Categories in which regd. Dollar Details Insertion Details PO De

Select	Ven Code	Corp Supplier Id	Name	Prod Ctrl Check	Supp Ctrl Check
<input checked="" type="radio"/>	M01168	I0003457	ADOR WELDING LIMITED	16	7
<input type="radio"/>	M06147	I0001217	VARUN ELECTRODES PVT. LTD.	=	=
<input type="radio"/>	M06164	I0007234	SUPERON SCHWEISSTECHNIK (I) LT	16	7
<input type="radio"/>	M07080	I0007704	RAJ KESARI ELECTRODES PRIVATE	16	7
<input type="radio"/>	M16016	I0003296	D & H SECHERON ELECTRODES PVT.	16	7
<input type="radio"/>	M16113	I0000228	D & H INDIA LIMITED	16	7
<input type="radio"/>	M17023	I0004455	CALCUTTA ELECTRODES PVT LTD	=	=
<input type="radio"/>	M22729	I0003585	WELDWELL ELECTRODES	=	=
<input type="radio"/>	M29057	I0004138	MANTEK ELECTRODES PVT. LTD.	16	7
<input type="radio"/>	M40277	I0005036	ESAB INDIA LIMITED	16	7
<input type="radio"/>	M40648	I0000357	MARUTI WELD PRIVATE LIMITED	=	=
<input type="radio"/>	M41185	I0002971	MAILAM INDIA LIMITED.	=	=
<input type="radio"/>	M41590	I0005969	GEE LIMITED	=	=
<input type="radio"/>	M41596	I0000307	HONAVAR ELECTRODES PVT LTD	=	=

Select and Other Categories in which regd. Dollar Details Insertion Details PO De

Total Codes

Category	Description	Desc2	Cleared	Purchas
WT009	Welding Electrodes AWS: E-309cb-15		Y	

Select and Other Categories in which regd. Dollar Details Insertion Det

Select	Ven Code	CorpSupplierid	Name	Prod Ctrl Check	Supp Ctrl Check
<input checked="" type="radio"/>	<u>M01168</u>	I0003457	<u>ADOR WELDING LIMITED</u>	16	7
<input type="radio"/>	<u>M16016</u>	I0003296	<u>D & H SECHERON ELECTRODES PVT.</u>	16	7
<input type="radio"/>	<u>M80029</u>	F000566	<u>AIR LIQUIDE WELDING</u>	-	-
<input type="radio"/>	<u>M82053</u>	F002788	<u>VOESTALPINE BOHLER WELDING AUS</u>	16	7

Total Codes

Category	Description	Desc2	Cleared	Purchas
WT010	Welding Electrode AWS: E-347-15		Y	

Select and Other Categories in which regd. Dollar Details Insertion

Select	Ven Code	CorpSupplierid	Name	Prod Ctrl Check	Supp Ctrl Che
<input checked="" type="radio"/>	<u>M01168</u>	I0003457	<u>ADOR WELDING LIMITED</u>	16	7
<input type="radio"/>	<u>M16016</u>	I0003296	<u>D & H SECHERON ELECTRODES PVT.</u>	16	7
<input type="radio"/>	<u>M41185</u>	I0002971	<u>MAILAM INDIA LIMITED.</u>	-	-
<input type="radio"/>	<u>M72456</u>	F001947	<u>VOESTALPINE BOHLER WELDING GER</u>	16	7
<input type="radio"/>	<u>M80029</u>	F000566	<u>AIR LIQUIDE WELDING</u>	-	-

Total Codes

Category	Description	Desc2
WT029	GTAW AND GMAW FILLER WIRE AWS: ER 309L/309LSI	

Select and Other Categories in which regd. Dollar Details Insertion Detail

Select	Ven Code	CorpSupplierid	Name	Prod Ctrl Check	Supp Ctrl Check
<input checked="" type="radio"/>	<u>M01168</u>	I0003457	<u>ADOR WELDING LIMITED</u>	16	7
<input type="radio"/>	<u>M40277</u>	I0005036	<u>ESAB INDIA LIMITED</u>	16	7
<input type="radio"/>	<u>M41590</u>	I0005969	<u>GEE LIMITED</u>	16	7
<input type="radio"/>	<u>M72456</u>	F001947	<u>VOESTALPINE BOHLER WELDING GER</u>	16	7
<input type="radio"/>	<u>M80110</u>	F002500	<u>NOVAMETAL SA</u>	16	7

Total Codes

Category	Description	Desc2	Cleared	Purchase	cell	Pur type
WT034	GMAW Filler Wire ER 70S-G		Y			

Select and		Other Categories in which regd.		Dollar Details	Insertion Details
Select	Ven Code	Corp Supplier id	Name	Prod Ctrl Check	Supp C Check
<input checked="" type="radio"/>	<u>M01168</u>	I0003457	<u>ADOR WELDING LIMITED</u>	<u>16</u>	<u>7</u>
<input type="radio"/>	<u>M06147</u>	I0001217	<u>VARUN ELECTRODES PVT. LTD.</u>	<u>16</u>	<u>7</u>
<input type="radio"/>	<u>M11101</u>	I0002923	<u>MODI ARC ELECTRODES CO</u>	<u>16</u>	<u>7</u>
<input type="radio"/>	<u>M40277</u>	I0005036	<u>ESAB INDIA LIMITED</u>	<u>16</u>	<u>7</u>
<input type="radio"/>	<u>M40946</u>	I0007650	<u>MW WIRETEC PVT LTD</u>	-	-

Category	Description	Desc2	Cleared	Purchase	cell	Pur ty
WT024	GTAW Filler Wire AWS:ER 70S-6		Y			

Select and	Other Categories in which regd.		Dollar Details	Insertion Details	P
Select	Ven Code	Corp Supplier id	Name	Prod Ctrl Check	Supp C Check
<input checked="" type="radio"/>	<u>M01168</u>	I0003457	ADOR WELDING LIMITED	16	7
<input type="radio"/>	<u>M11101</u>	I0002923	MODI ARC ELECTRODES CO	16	7
<input type="radio"/>	<u>M16016</u>	I0003296	D & H SECHERON ELECTRODES PVT.	16	7
<input type="radio"/>	<u>M16113</u>	I0000228	D & H INDIA LIMITED	16	7
<input type="radio"/>	<u>M40277</u>	I0005036	ESAB INDIA LIMITED	16	7
<input type="radio"/>	<u>M40946</u>	I0007650	MW WIRETEC PVT LTD	-	-

Total Codes

Category	Description	Desc2	Cleared	Pur
WT028	GTAW AND GMAW FILLER WIRE AWS: ER 347		Y	

Select and		Other Categories in which regd.	Dollar Details	Insertion Details		
Select	Ven Code	CorpSupplierid	Name	Prod Ctrl Check	Supp Ctrl Check	App
<input checked="" type="radio"/>	<u>M01168</u>	I0003457	<u>ADOR WELDING LIMITED</u>	<u>16</u>	<u>7</u>	APF
<input type="radio"/>	<u>F06251</u>	I0014475	<u>KOBELCO WELDING INDIA PRIVATE</u>	<u>1</u>	<u>17</u>	APF
<input type="radio"/>	<u>M16016</u>	I0003296	<u>D & H SECHERON ELECTRODES PVT.</u>	<u>16</u>	<u>7</u>	APF
<input type="radio"/>	<u>M41590</u>	I0005969	<u>GEE LIMITED</u>	<u>16</u>	<u>7</u>	APF
<input type="radio"/>	<u>M41630</u>	I0001306	<u>HINDUSTAN INOX LTD.BLOCK NO.7.</u>	<u>6</u>	<u>7</u>	APF
<input type="radio"/>	<u>M72456</u>	F001947	<u>VOESTALPINE BOHLER WELDING GER</u>	<u>16</u>	<u>7</u>	APF
<input type="radio"/>	<u>M80029</u>	F000566	<u>AIR LIQUIDE WELDING</u>	<u>-</u>	<u>-</u>	APF
<input type="radio"/>	<u>M96001</u>	F002429	<u>LINCOLN SMITWELD BV</u>	<u>16</u>	<u>7</u>	APF

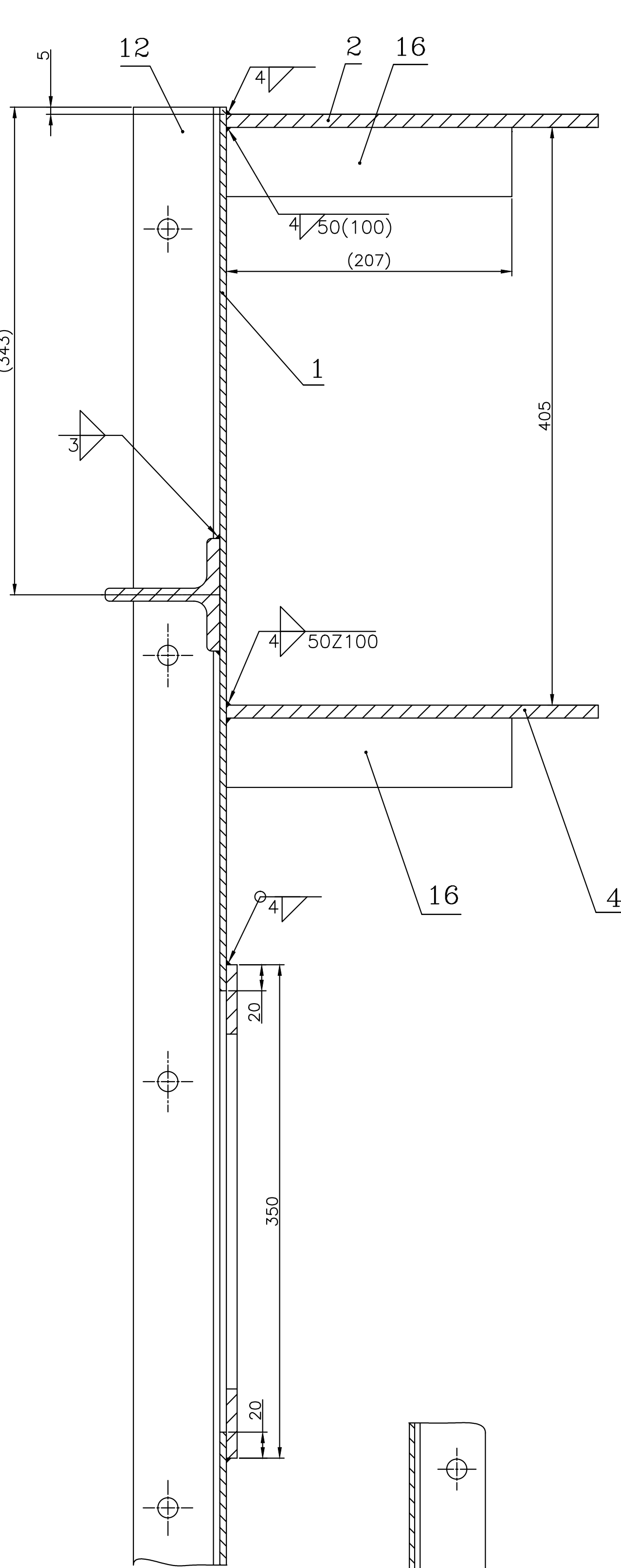
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DRAWING NO. 01440401028

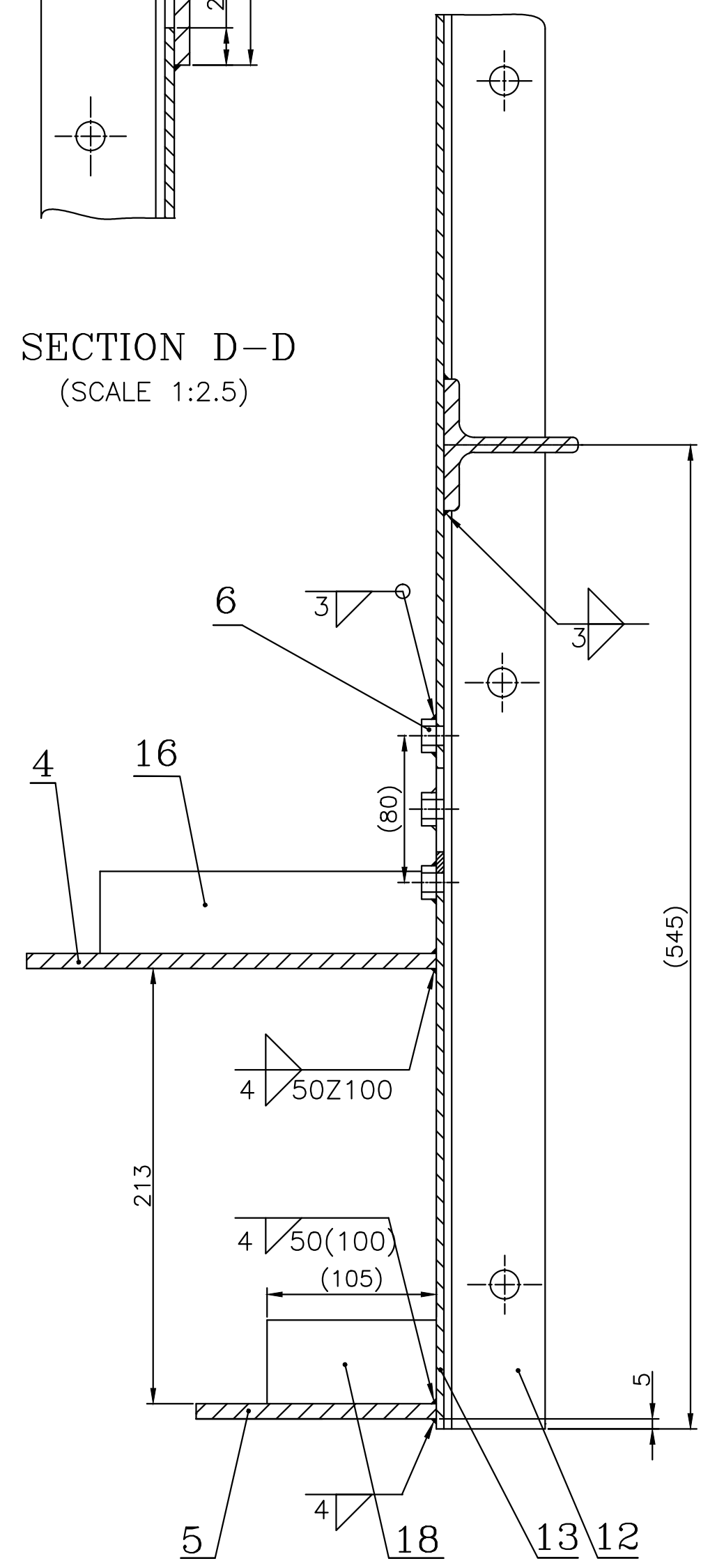
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INVENTORY NO. 18-5605-114441 (NVL)

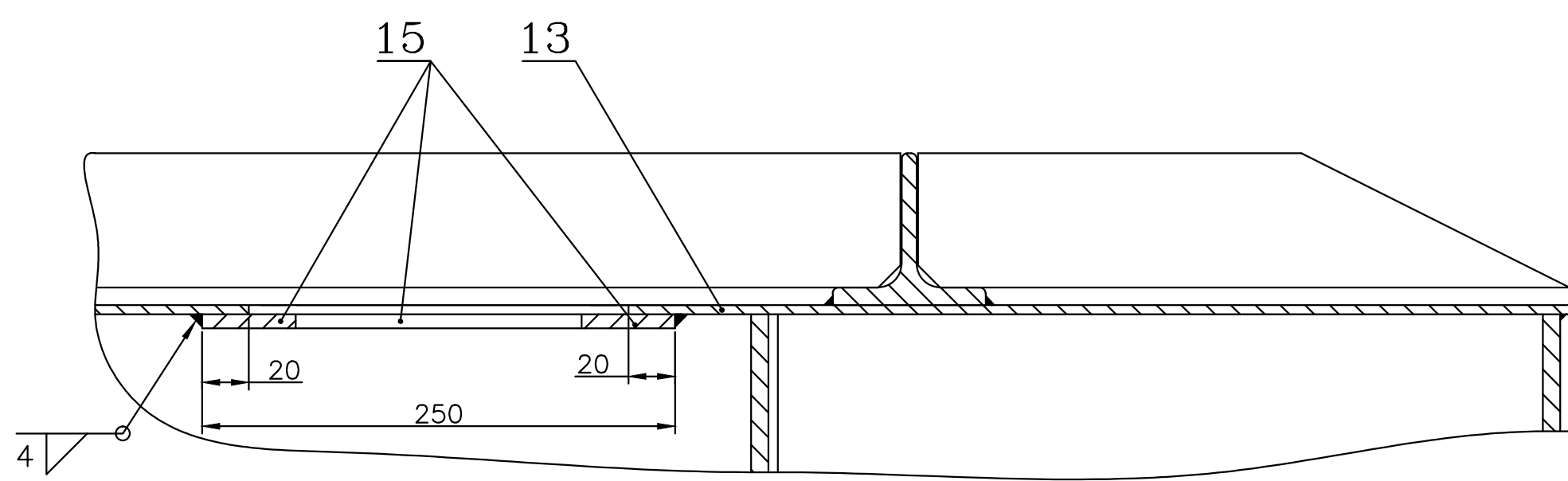
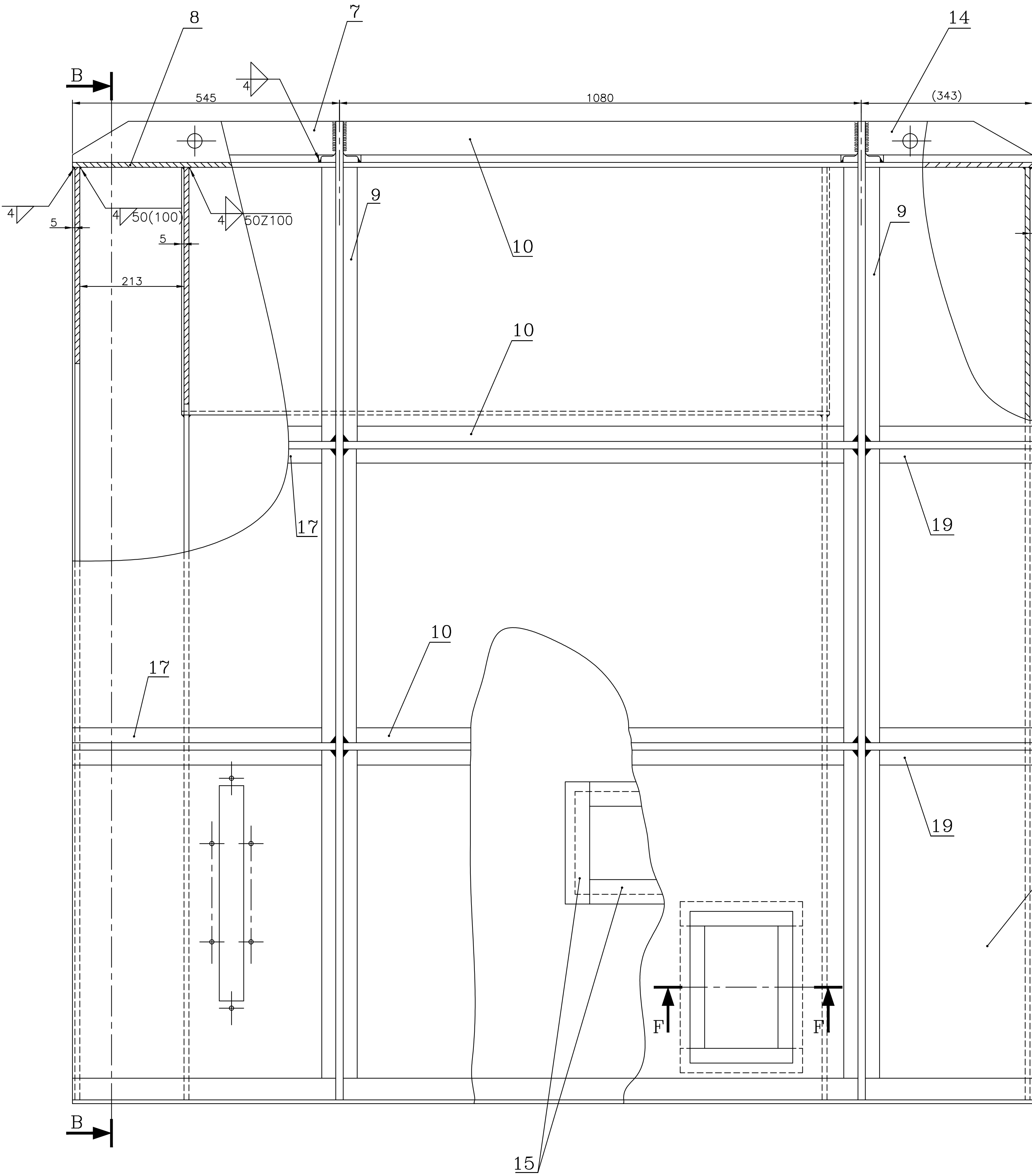
SIGN & DATE



SECTION D-D
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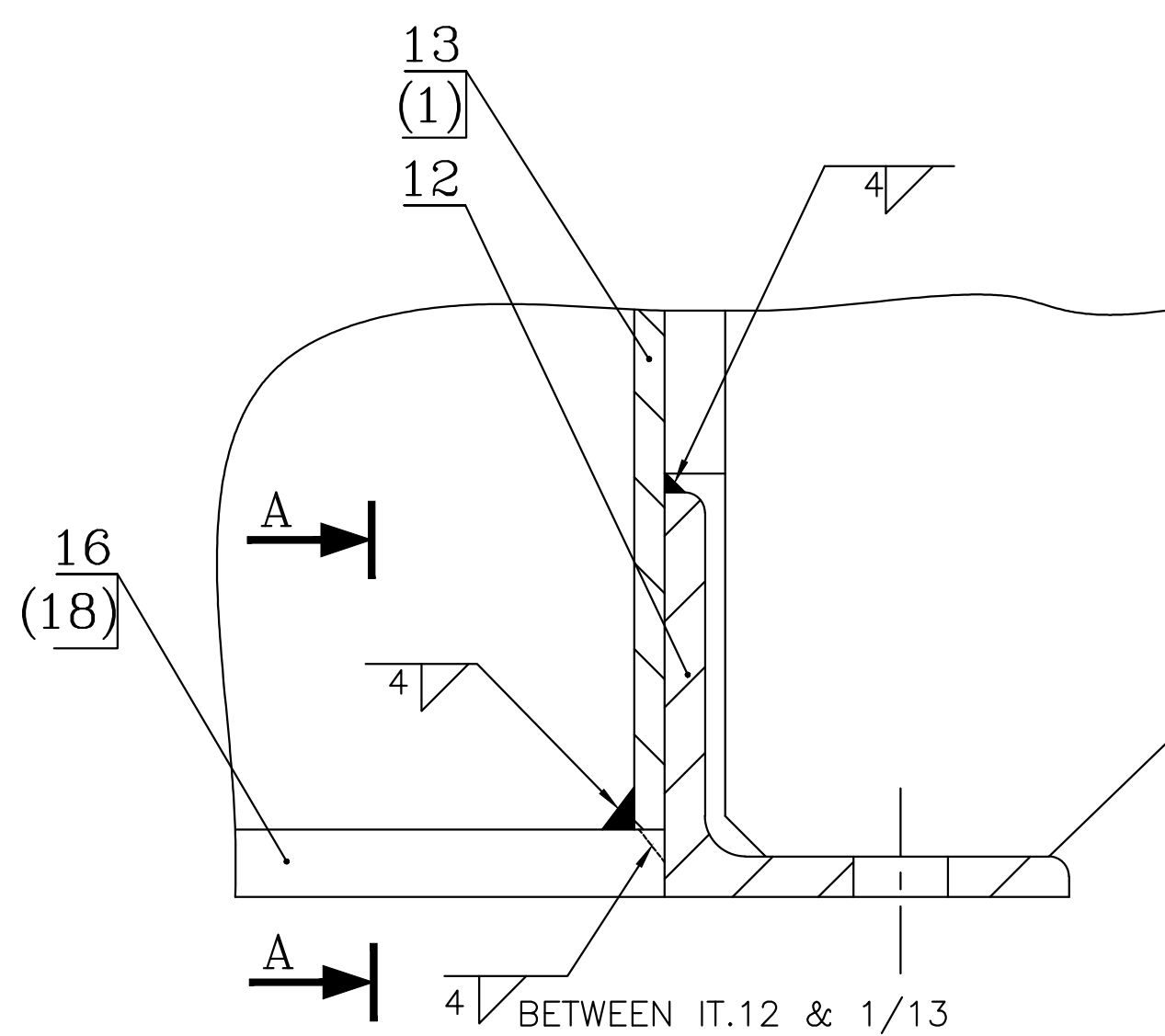


SECTION C-C
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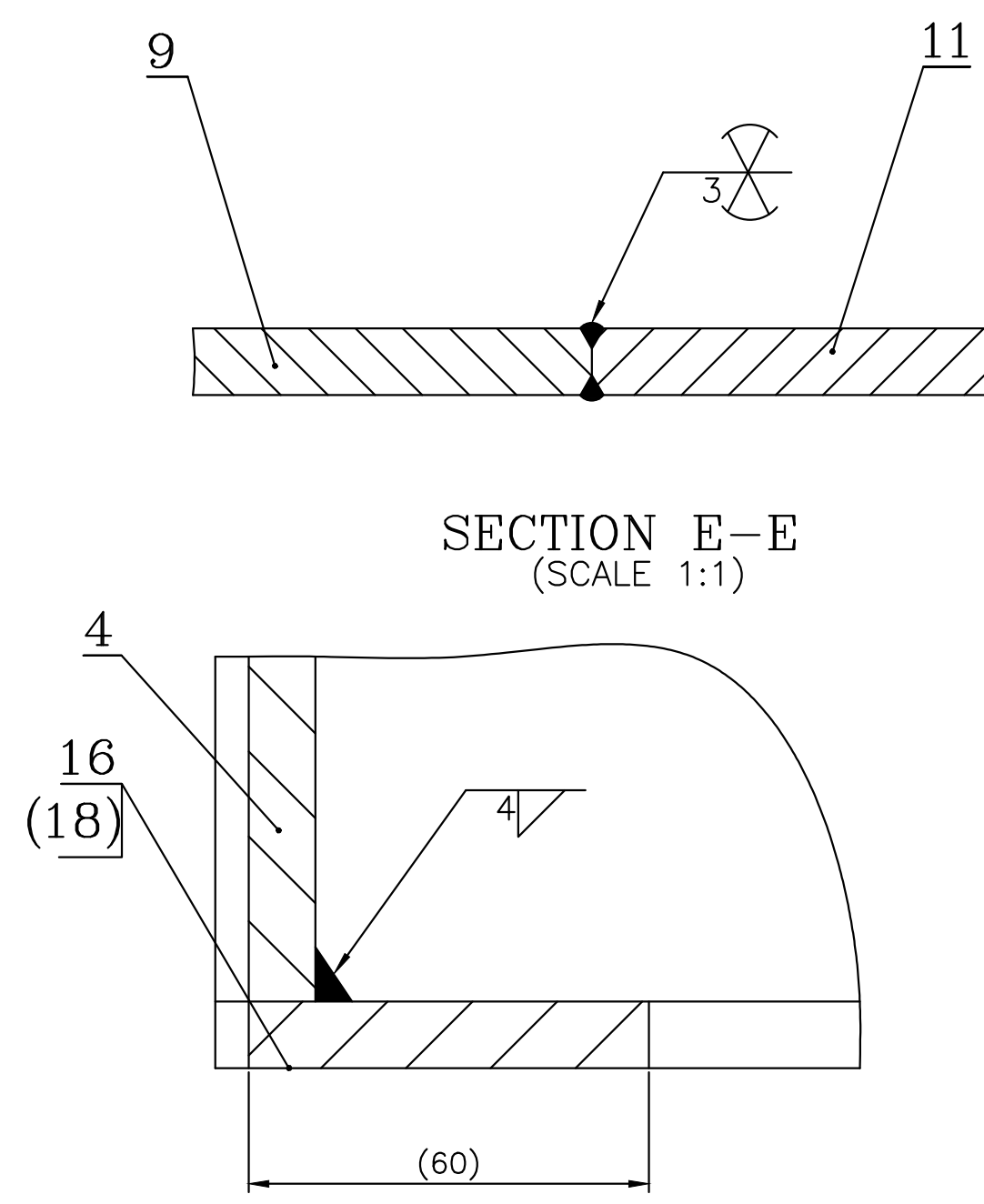


SECTION F-F
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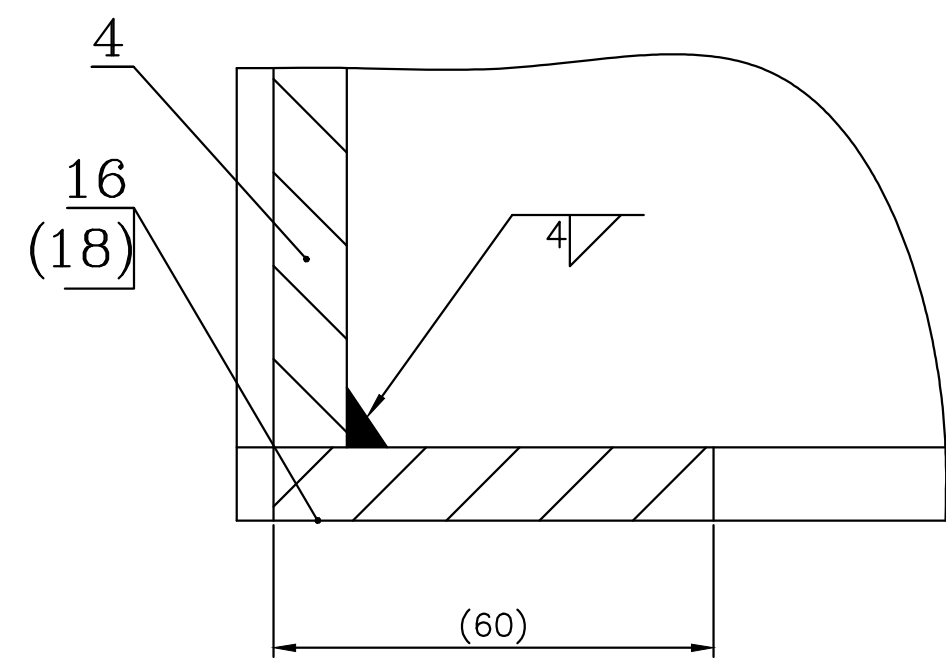
SYMBOL & SIZE OF SEAM	4	3	4
SEAM LENGTH M	85.500	0.740	0.250
WT. OF DEPOSITED METAL Kg.	5.370	0.500	0.150
TYPE OF ELECTRODE	E-7018		



DETAIL-Z
(SCALE 1:1)



SECTION E-E
(SCALE 1:1)



SECTION A-A
(SCALE 1:1)

SECTION B-B

TECHNICAL REQUIREMENTS

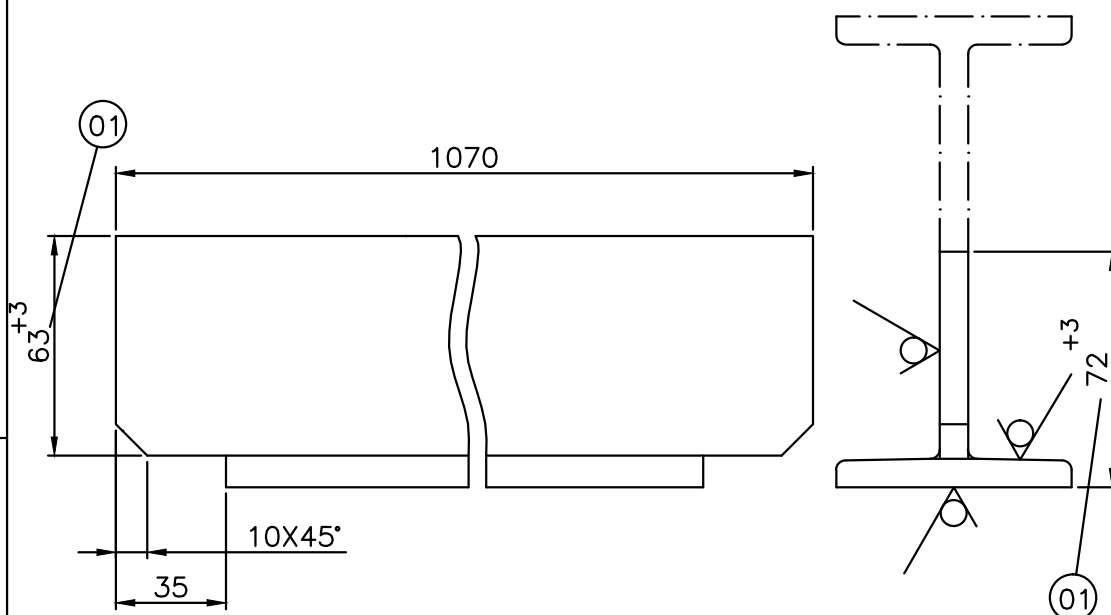
- MARK IDENTIFICATION ACCORDING TO HW0400397.
- QUALITY GRADES OF WELDS AS PER HW0620099 CK/CS. TEST SCOPES ACCORDING TO HW0850199, CATEGORY OF SERVICE REQUIREMENTS 4.
- MAINTAIN FEET PARALLEL TO HORIZONTAL AXIS AND ALL VERTICAL MEMBERS PERPENDICULAR TO HORIZONTAL AXIS. THIS IS ESSENTIAL AS THIS GROUP FORMS A CLOSED AND SEALED HOOD AROUND MAIN EXCITER OPERATING AT 3000RPM, GENERATING HEAVY CURRENT FOR 800MW TO ROTOR. A SHAFT MOUNTED FAN BLOWS AIR INTO THE AIR GUIDE COVERS & HOT AIR IS DISCHARGED AT THE BOTTOM OF COVERS.
- DIMENSIONS IN BRACKETS ARE FOR REFERENCE ONLY.
- SURFACE TREATMENT ACCORDING TO TECHNOLOGICAL INSTRUCTION NO. 0912.015.

CBOM NO. 01440401028		STATUS OF DRG. 24/07/2020		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 800MW TG	
GRADE OF UNTOL. DIM:-	M/CG- W/EP/AF/AA 0230208	WELDING- A/B/G/P- AA621104	GAS CUTTING- T3AA0621101	REV. DATE	17/9/18	ALTERED	17/9/18
REV. DATE	17/9/18	ALTERED	17/9/18	DEPT. TGE	CODE 4133	SCALE	1:5
CHANGES AS PER C/A NO. TGE-18-F0200.				WEIGHT(Kg.)		1241.5	
TITLE				DRAWING NO.		01440401028	
AIR GUIDE COVER (WELDED)				SHEET NO. 1		NO. OF SHEETS 001	

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	STGEPA	CBDM No.		STATUS	
		CHECKED	01	7.2.20	CHECKED	STGERY	01440401028			OF DRG
			CHANGES AS PER C/A NO TGE-20-FO026				AGREED	NAME	SIGN	DATE
							DEPT.			
							WTX	AWTXTSC	AWTXTSC	24/07/2010
GRADE OF UNTO			DIM.M/CGC/M/F.AA0230208			WELDING A/B/C/D AA0621104		GAS CUTTING-T3 AA0621101		

50/
THE REST

TECHNICAL REQUIREMENTS


1. MARK IDENTIFICATION ACCORDING TO HW0400397

26-5605-114441/031
REF.DRG.No.

SIGN & DATE

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	23/07/2010	
CHD	STGESSM	STGESSM	23/07/2010	
APD	ATGEVK	ATGEVK	26/07/2010	

INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS
	CODE 4133		1:2	7.8	01440401028	010	
	TITLE <div>PROFILE</div> <div>(B'LESS EXCITER FOR 800MW TG)</div>				DRAWING No. <div>41440401304</div>		
					SHEET No.1 No.OF SHEETS1		

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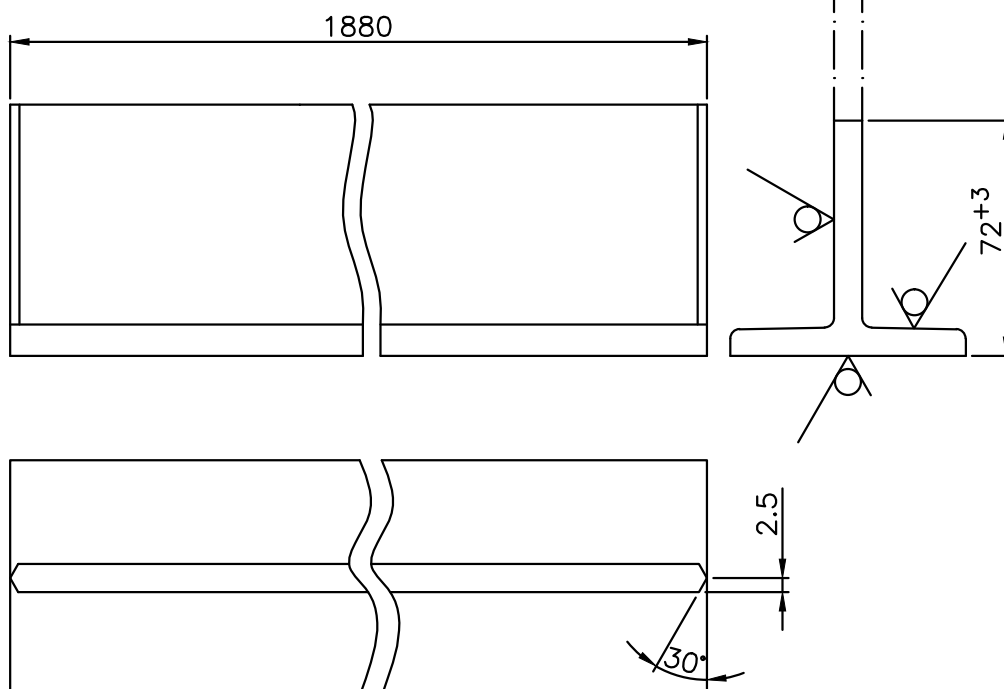
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	CBOM No.		STATUS	
		CHECKED			CHECKED	01440401028		OF DRG	
						AGREED	NAME	SIGN	DATE
						DEPT.	AWTXAS	AWTXAS	24/08/2021
						WTX			

GRADE OF UNTOL.DIM.M/CG/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101

50/ THE REST




TECHNICAL REQUIREMENT:

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEPA	STGEPA	24/08/2021	
CHD	STGESSM	STGESSM	24/08/2021	
APD	STGESSM	STGESSM	24/08/2021	

INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.		ITEM No.	No OF ITEMS	
	C00DE 4133		1:2	13.80	01440401028		011		
	TITLE				DRAWING No.				
	PROFILE				41440401352				
	(B'LESS EXCITER FOR 800MW TG)				SHEET No.1		No.OF SHEETS1		

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REF.DRG.No.

SIGN & DATE

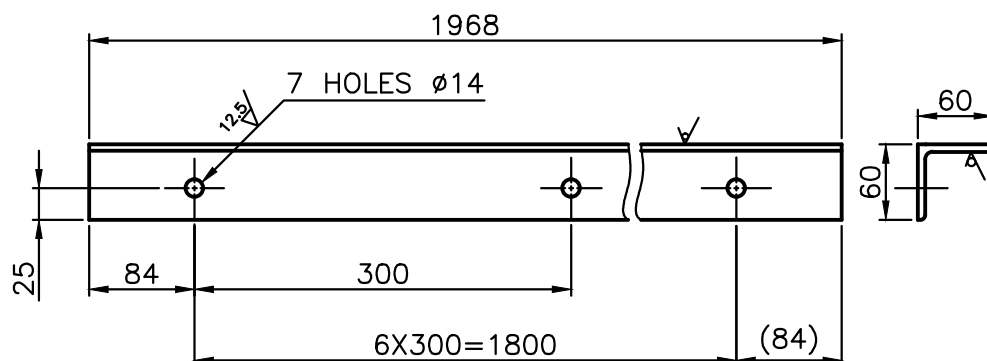
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	CBOM No.		STATUS	
		CHECKED			CHECKED	01440401028		OF DRG	
						AGREED	NAME	SIGN	DATE
						DEPT.			
						WTX	AWT	TSC	24/07/2010

GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101

50° THE REST



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW 0400397

26-5605-114441/038
REF.DRG.No.

SIGN & DATE

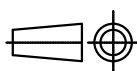
BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	23/07/2010	
CHD	STGESSM	STGESSM	23/07/2010	
APD	ATGEVK	ATGEVK	26/07/2010	

INVENTORY No.

DEPT.TGE

CODE 4133



SCALE

1:5

WEIGHT(Kg)

10.8

REF.TO ASSY.DRG.

01440401028

ITEM

No. 012

No OF

ITEMS

TITLE

PROFILE

DRAWING No.

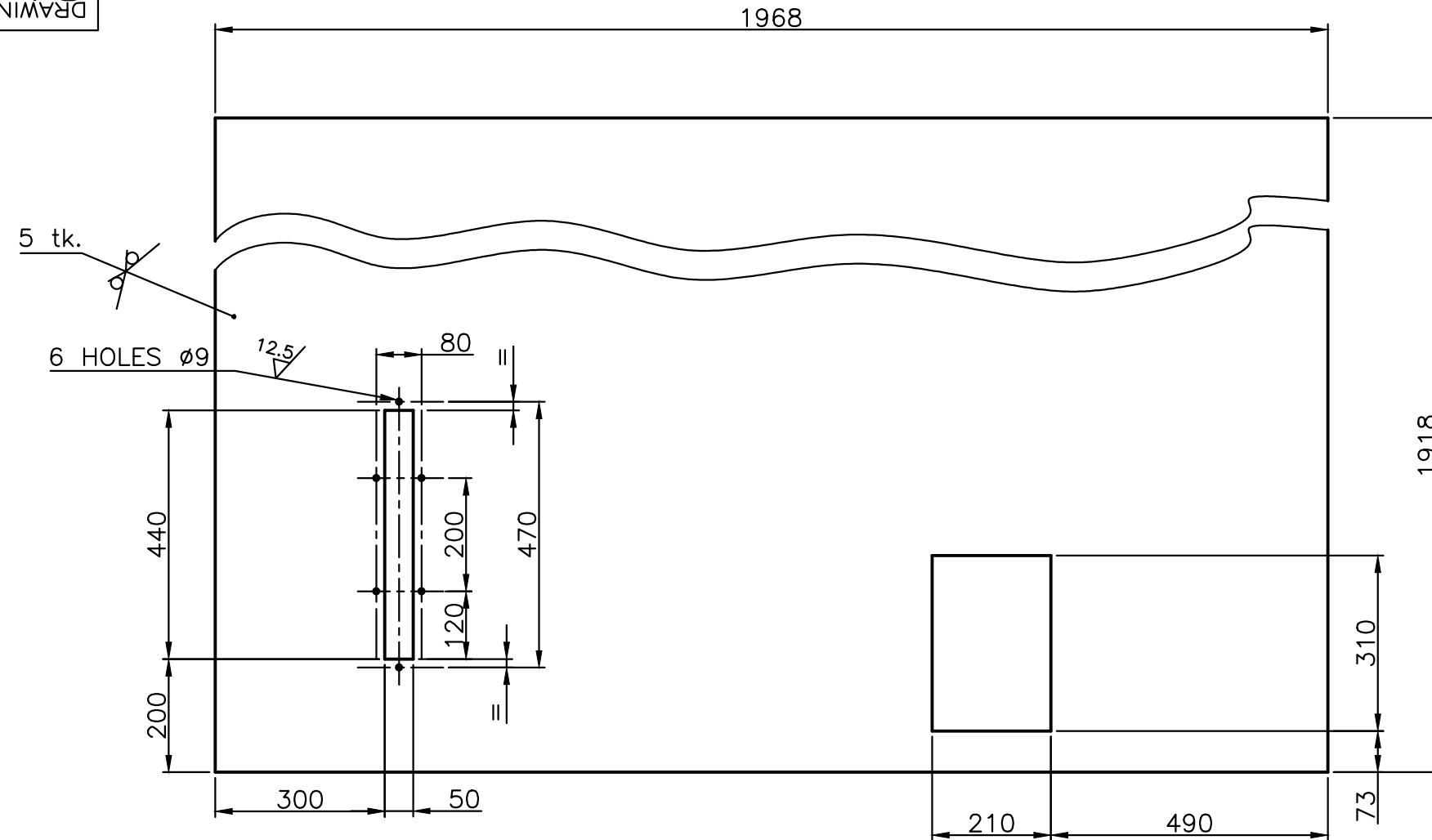
41440401305

SHEET No.1


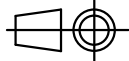
No.OF SHEETS1

FORM: DG-38(B)

50
THE REST



1. MARK IDENTIFICATION ACCORDING TO HW 0400397
2. ALLOWED TO BE MADE IN PARTS WITH WELD SEAM ∇ 5MM.

				CBOM NO. 01440401028		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT				B'LESS EXCITER FOR 800MW TG				
GRADE OF UNTOL. DIM.:—				AGREED DEPT.	NAME	SIGN	DATE	<div>BHARAT HEAVY ELECTRICALS LTD. HARDWAR</div>				DRN	NAME	SIGN	DATE	NO.OF VAR.
M/CG— V/C/M/F AA 0230208				WTX	AWTXTSC	AWTXTSC	24/07/2010					CHD	STGEVK	STGEVK	23/07/2010	
WELDING—A/B/C/D—AA621104												APD	STGEVSM	STGEVSM	23/07/2010	
GAS CUTTING—'T3'AA0621101													ATGEVK	ATGEVK	26/07/2010	
REV.	DATE	ALTERED CHECKED		REV.	DATE	ALTERED CHECKED		DEPT. TGE		SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.		ITEM NO.	NO.OF ITEMS	
								CODE 4133		1:10	144.7	01440401028		013		75, 77
								TITLE PLATE			13	DRAWING NO.				
												31440401143				
											SHEET NO.1		NO.OF SHEETS 1			

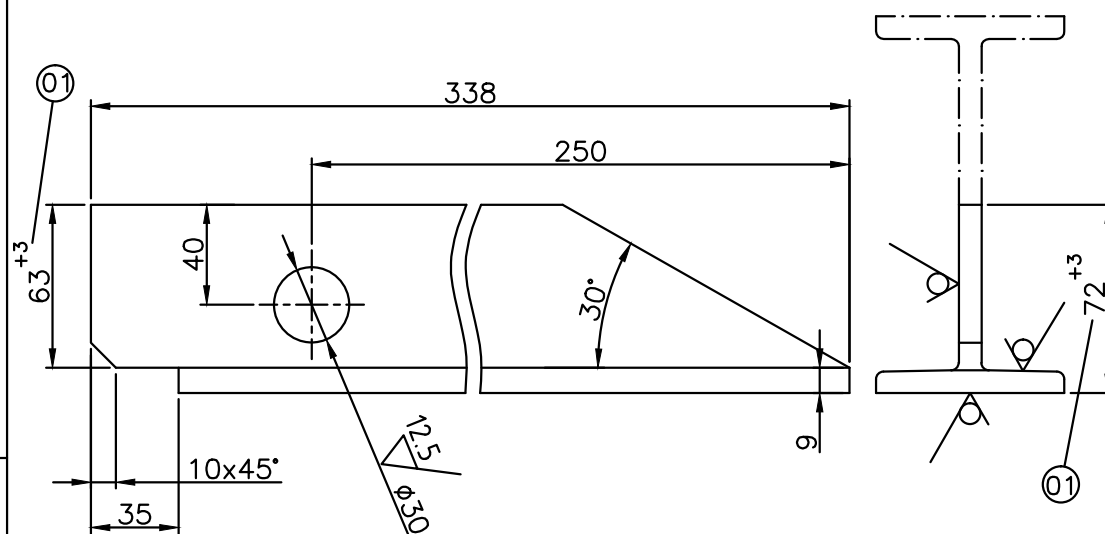
SIZE A3

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED STGEPA CHECKED STGERY	CBOM No. 01440401028		STATUS OF DRG	
			01	7.2.20		AGREED DEPT.	NAME	SIGN	DATE
					CHANGES AS PER C/A NO TGE-20-F0026	WTX	AWTXTSC	AWTXTSC	24/07/2010
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208			WELDING A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101			

50/ THE REST



TECHNICAL REQUIREMENTS


- MARK IDENTIFICATION ACCORDING TO HW 0400397.

26-5605-114441/033
REF.DRG.No.

SIGN & DATE

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	23/07/2010	
CHD	STGESSM	STGESSM	23/07/2010	
APD	ATGEVK	ATGEVK	26/07/2010	

INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS
	CODE 4133		1:2.5	2.4	01440401028	014	
	TITLE				DRAWING No.		
	PROFILE				41440401306		
	(B'LESS EXCITER FOR 800MW TG)				SHEET No.1		No.OF SHEETS1

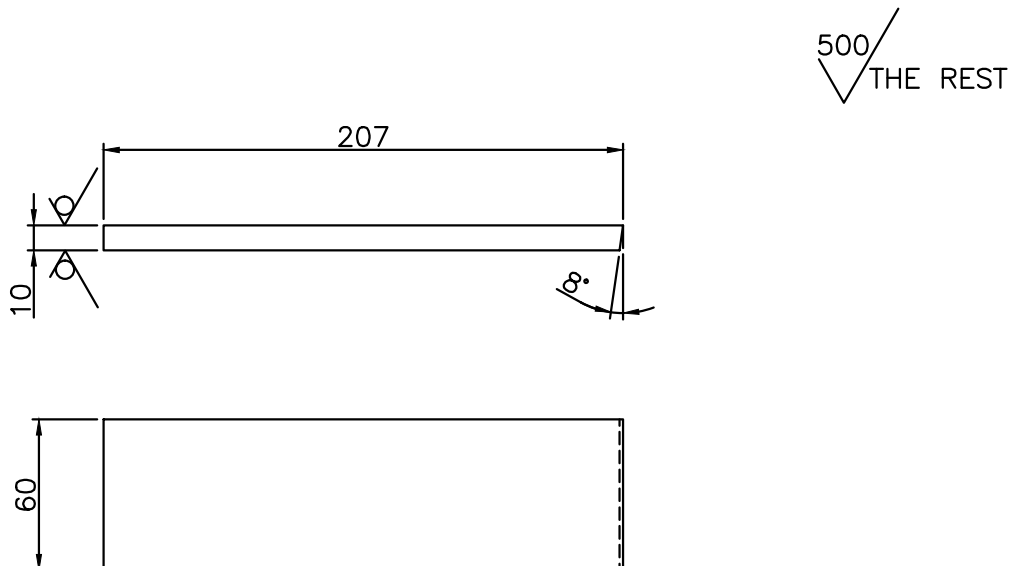
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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	P.A.	-S/D-	CBOM No.	STATUS
		CHECKED	01	10.12.13	CHECKED	SSM	-S/D-	9-144-04-01002	OF DRG
			CHANGES ACCORDING TO			AGREED		NAME	SIGN
			CH. AD. NO.-			DEPT.		S.K.K.	-SD-
			TGE-13-F0383			WT			26.2.83

GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

01


SUPERSEDES THE OLD
DRG. UNDER THE SAME NO.
TGE-13-F0383

26-5605-86399g/KWU
REF.DRG.No.1T. 25

SIGN & DATE

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO.
DRN	Y.C.GARG	-SD-	31.5.81	OF
CHD	SM/KNW	-SD-	26.2.83	VAR
APD	N.P.GUPTA	-SD-	28.2.83	

INVENTORY No.	DEPT. TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS	
	CODE 4133		1:2.5	1.000	9-144-04-01002	016		
	TITLE				DRAWING No.			
	STRIP				4-144-04-01062			
	BRUSHLESS EXCITER FOR 500MW TG.				SHEET No. 1			No.OF SHEETS 1

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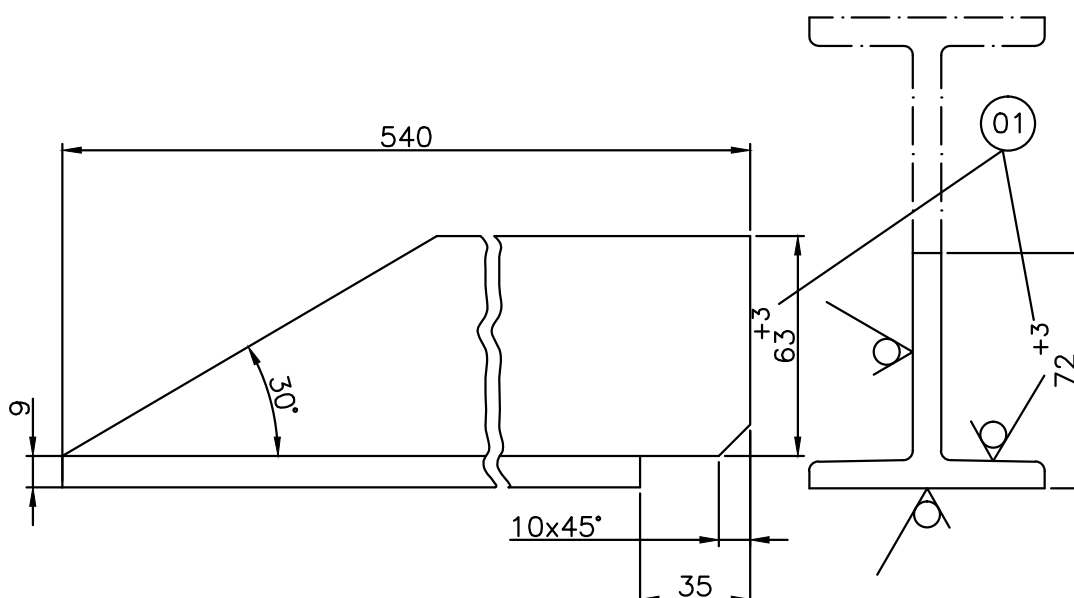
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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	STGEPA	CBDM No.			STATUS
		CHECKED	01	7.2.20	CHECKED	STGERY	01440401028			
			CHANGES AS PER C/A NO TGE-20-FO026				AGREED	NAME	SIGN	DATE
							DEPT.			
							WTX	AWTXTSC	AWTXTSC	24/07/2010
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208					WELDING A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101		

50/ THE REST



TECHNICAL REQUIREMENTS

- MARK IDENTIFICATION ACCORDING TO HW 0400397.

26-5605-114441/034
REF.DRG.No.

SIGN & DATE

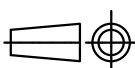
BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	23/07/2010	
CHD	STGESSM	STGESSM	23/07/2010	
APD	ATGEVK	ATGEVK	26/07/2010	

INVENTORY No.

DEPT.TGE

CODE 4133



SCALE

1:2

WEIGHT(Kg)

3.9

REF.TO ASSY.DRG.

01440401028

ITEM
No.

017

No OF
ITEMS

TITLE

PROFILE

(B'LESS EXCITER FOR 800MW TG)

DRAWING No.

41440401303

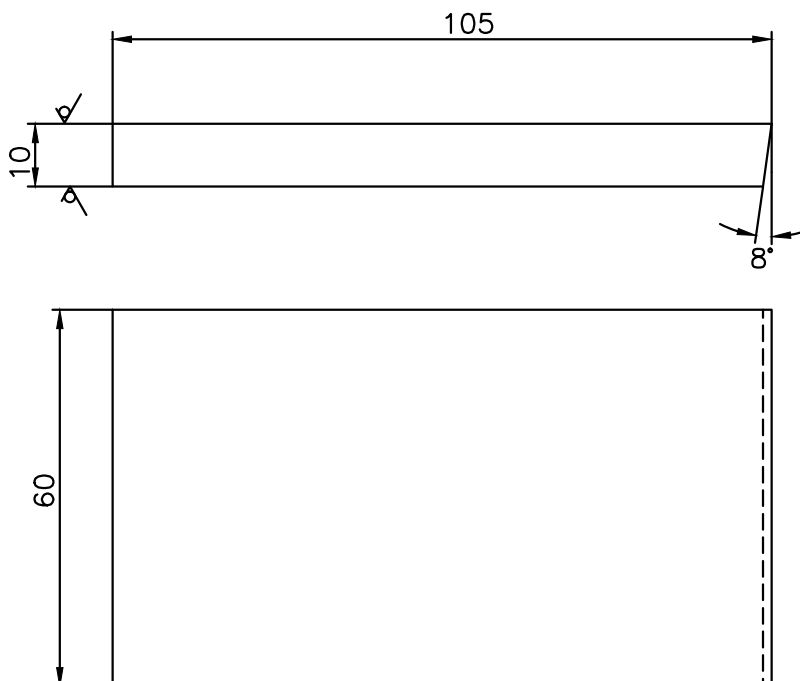
SHEET No.1

No.OF SHEETS1

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

GRADE OF UNTOL.DIM.M/ C/C /M/F	AA0230208	WELDING A/B/C/D	AA0621104	GAS CUTTING-T3	AA0621101
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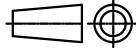
500
✓ THE REST



TECHNICAL REQUIREMENT

1- MARK IDENTIFICATION ACCORDING TO HW 0400.397.

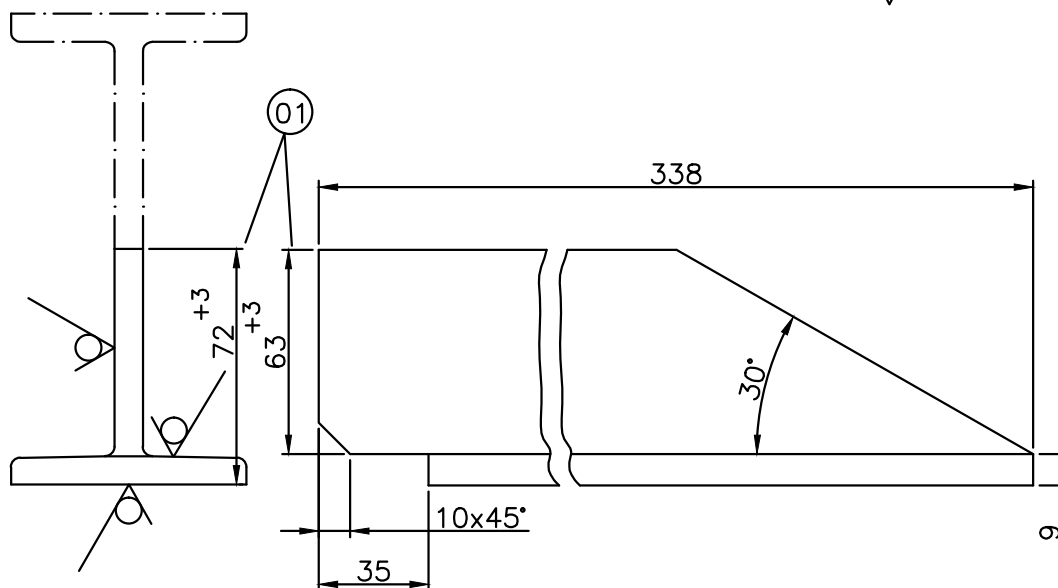
SUPERSEDES THE OLD
DRG. UNDER THE SAME NO.
TGE-13-F0359

SIGN & DATE	<div>BHARAT HEAVY ELECTRICALS LTD HARDWAR</div>					NAME	SIGN	DATE	NO.
					DRN	Y.C.GARG	SD/-	31/5/81	DF
					CHD	SM/KNW	SD/-	26/2/83	VAR
					APD	N.P.GUPTA	SD/-	28/02/83	00
INVENTORY No.	DEPT. TGE		SCALE	WEIGHT(Kg) 0.500	REF.TD ASSY.DRG. 91440401002			ITEM	No. OF ITEMS
	CODE 4133		1:1					No.	
	TITLE STRIP				DRAWING No. 41440401061			1	
	BRUSHLESS EXCITER FOR 500MW TG.								
					SHEET No. 1		No. OF SHEETS		1

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	STGEPA STGERY	CBDM No. 01440401028		STATUS OF DRG	
			01	7.2.20						
			CHANGES AS PER C/A NO TGE-20-FO026				AGREED DEPT.	NAME	SIGN	DATE
							WTX	AWTXTSC	AWTXTSC	24/07/2010
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208					WELDING A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101		

50/
THE REST

TECHNICAL REQUIREMENTS

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

26-5605-114441/035
REF.DRG.No.

SIGN & DATE

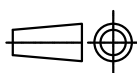
BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	23/07/2010	
CHD	STGESSM	STGESSM	23/07/2010	
APD	ATGEVK	ATGEVK	26/07/2010	

INVENTORY No.

DEPT.TGE

CODE 4133



SCALE

1:2

WEIGHT(Kg)

2.4

REF.TD ASSY.DRG.

01440401028

ITEM
No.
019No OF
ITEMS

TITLE

PROFILE

(B'LESS EXCITER FOR 800MW TG)

DRAWING No.

41440401307

SHEET No.1

No.OF SHEETS1

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26-5605-114441/015
REF. DRG NO.
SIGN & DATE
INVENTORY NO.

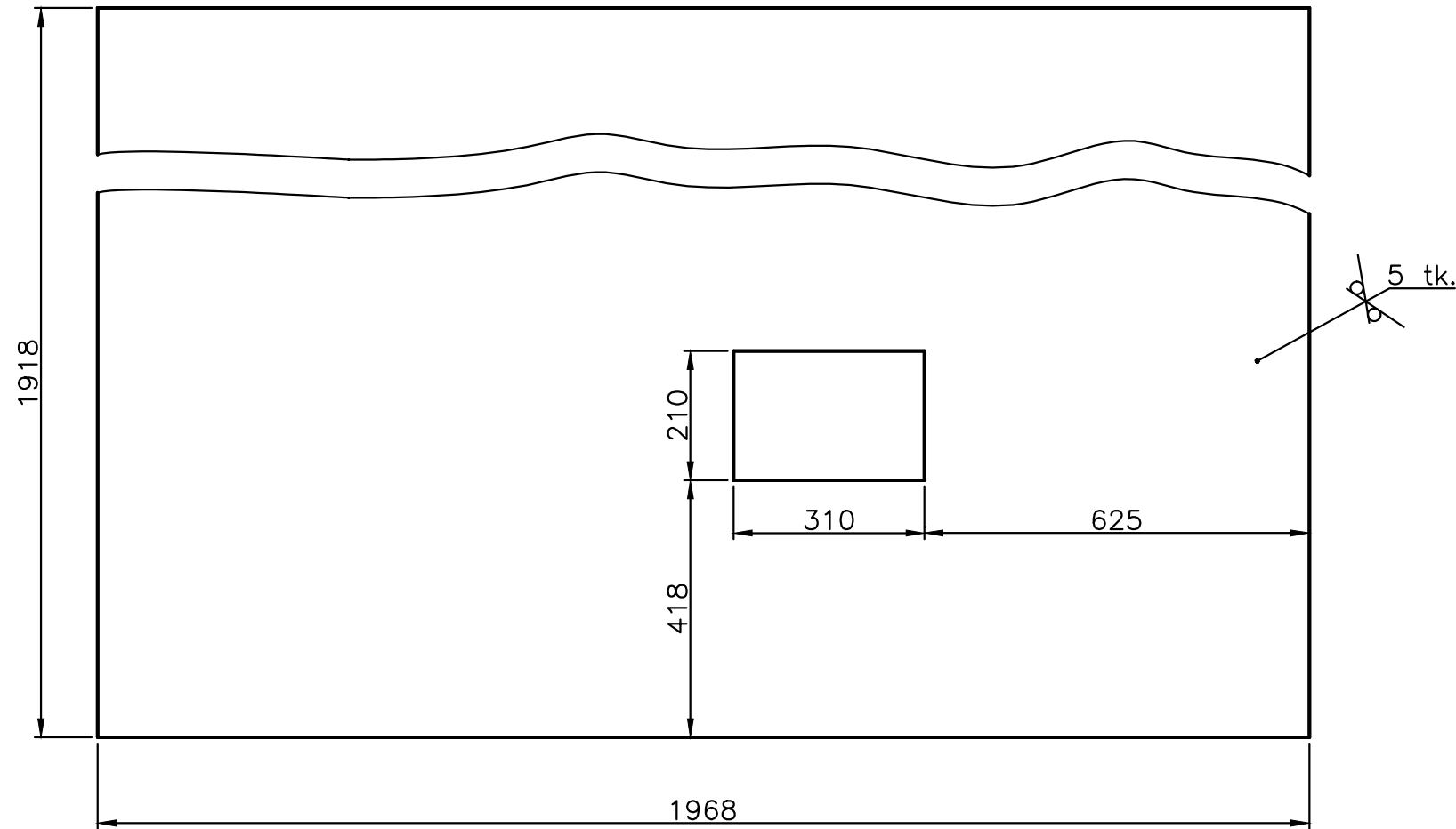
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

DRAWING NO.
31440401141

50/
THE REST



TECHNICAL REQUIREMENTS

1. MARK IDENTIFICATION ACCORDING TO HW 0400397
2. ALLOWED TO BE MADE IN PARTS WITH WELD SEAM ∇ 5MM.

CBOM NO. 01440401028		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 800MW TG						
AGREED DEPT.	NAME	SIGN	DATE	BHARAT HEAVY ELECTRICALS LTD. HARDWAR		DRN	NAME	SIGN	DATE	NO.OF VAR.		
WTX	AWTXTSC	AWTXTSC	24/07/2010			CHD	STGEVK	STGEVK	23/07/2010			
						APD	STGEVSM	STGEVSM	23/07/2010			
						ATGEVK		ATGEVK	26/07/2010	73, 74		
GRADE OF UNTOL. DIM.:—	REV.	DATE	ALTERED CHECKED	REV.	DATE	ALTERED CHECKED	DEPT. TGE	SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
M/CG- V/C/M/F AA 0230208							CODE 4133	1:10	145.6	01440401028	001	75, 77
WELDING-A/B/C/D-AA621104							TITLE		DRAWING NO.			
GAS CUTTING-'T3'AA0621101							PLATE		31440401141			
								1 3		7 22 23 24		
								SHEET NO.1		NO.OF SHEETS 1		

SIZE A3

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INVENTORY NO. SIGN & DATE 26-5605-114441/013 REF. DRG NO.

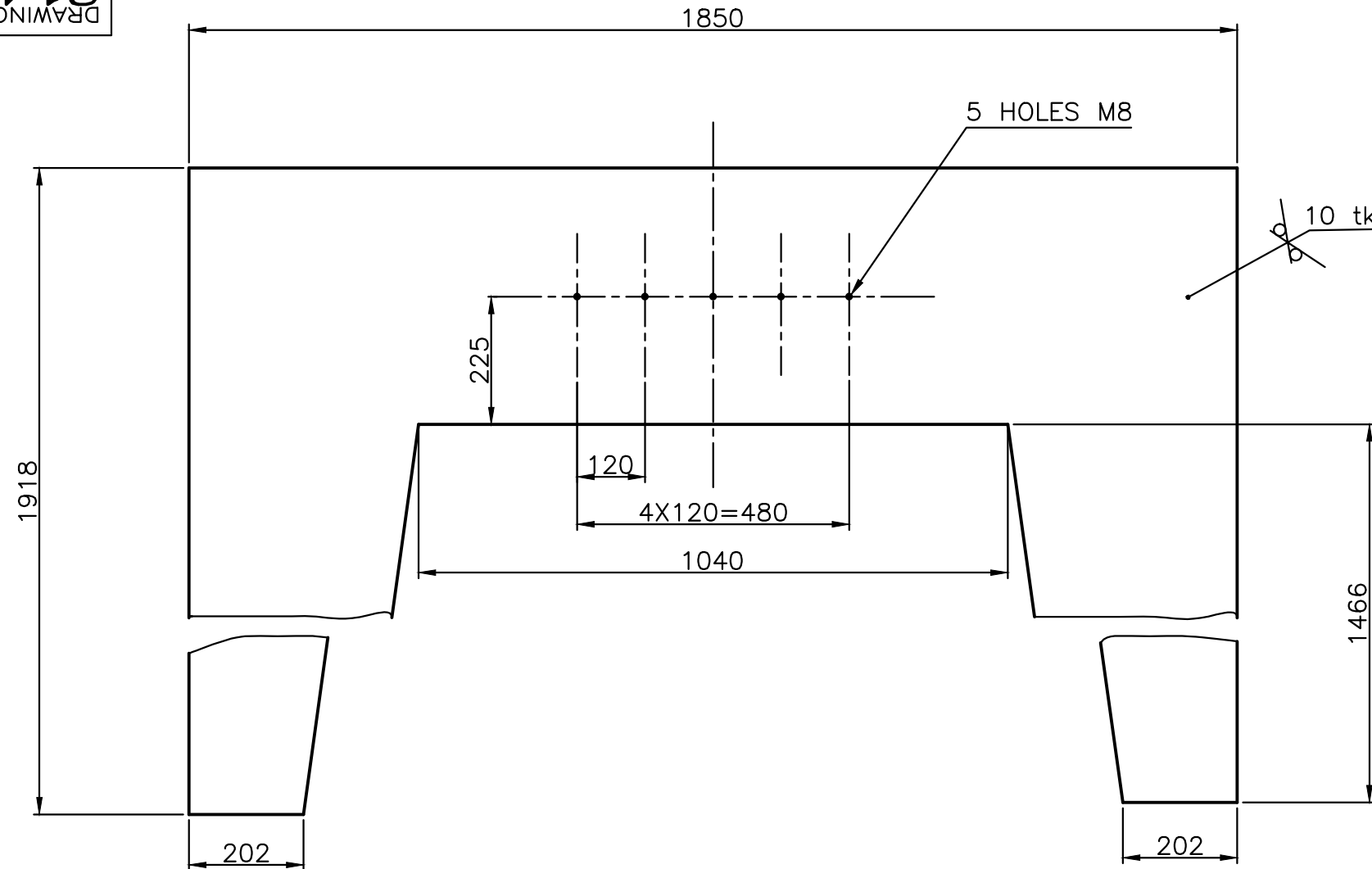
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

31440401142
DRAWING NO.

50 THE REST



TECHNICAL REQUIREMENTS

1. MARK IDENTIFICATION ACCORDING TO HW0400397

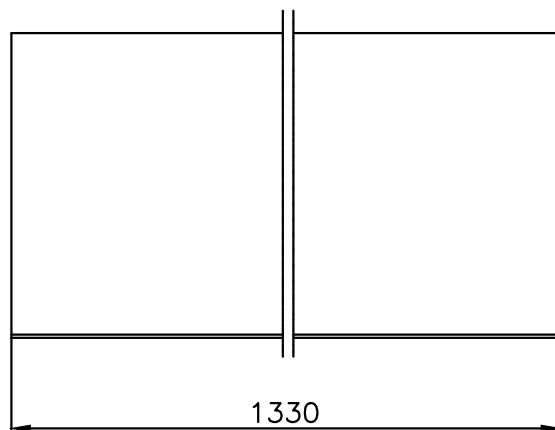
CBOM NO. 01440401028		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 800MW TG						
AGREED DEPT.	NAME	SIGN	DATE	BHARAT HEAVY ELECTRICALS LTD. HARDWAR		DRN	NAME	SIGN	DATE	NO.OF VAR.		
WTX	AWTXTSC	AWTXTSC	24/07/2010			CHD	STGEVK	STGEVK	23/07/2010			
						APD	STGEVSM	STGEVSM	23/07/2010			
						ATGEVK		ATGEVK	26/07/2010	73, 74		
GRADE OF UNTOL. DIM.:—	REV.	DATE	ALTERED CHECKED	REV.	DATE	ALTERED CHECKED	DEPT. TGE	SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
M/CG- V/C/M/F AA 0230208							CODE 4133	1:10	135	01440401028	002	75, 77
WELDING-A/B/C/D-AA621104							TITLE		DRAWING NO.			
GAS CUTTING-'T3'AA0621101							PLATE		31440401142			
								1 3		7 22 23 24		
								SHEET NO.1		NO.OF SHEETS 1		

SIZE A3

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	RM	-S/D-	CBDM No.	STATUS
		CHECKED	01	15.11.13	CHECKED	SSM	-S/D-	91440401002	OF DRG
			CHANGES ACCORDING TO			AGREED	NAME	SIGN	DATE
			CH. AD. NO. -			DEPT.	WT	SKC	SD/-
			TGE-13-F0359						15/02/83
GRADE OF UNTOL.DIM.M/C			C/C/M/F.AA0230208			WELDING A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101


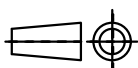
500
✓ THE REST

01

SUPERSEDES THE OLD
DRG. UNDER THE SAME NO.
TGE-13-F0359

TECHNICAL REQUIREMENT

- 1- MARK IDENTIFICATION ACCORDING TO HW 0400397.
- 2- MEAN DEVELOPED LENGTH=766.

SIGN & DATE	<div>BHARAT HEAVY ELECTRICALS LTD HARDWAR</div>					NAME	SIGN	DATE	NO.	
					DRN	Y.C.GARG	SD/-	23/5/81	OF	
					CHD	SM/KNW	SD/-	26/2/83	VAR	
					APD	N.P.GUPTA	SD/-	28/02/83	00	
INVENTORY No.	DEPT. TGE		SCALE	WEIGHT(Kg)	REF.TD ASSY.DRG.			ITEM	No OF ITEMS	
	CODE 4133		1:10	40.000	91440401002			No. 003		
	TITLE				DRAWING No.					
	PLATE				41440401052					
BRUSHLESS EXCITER FOR 500MW TG.					SHEET No. 1				No.OF SHEETS	1

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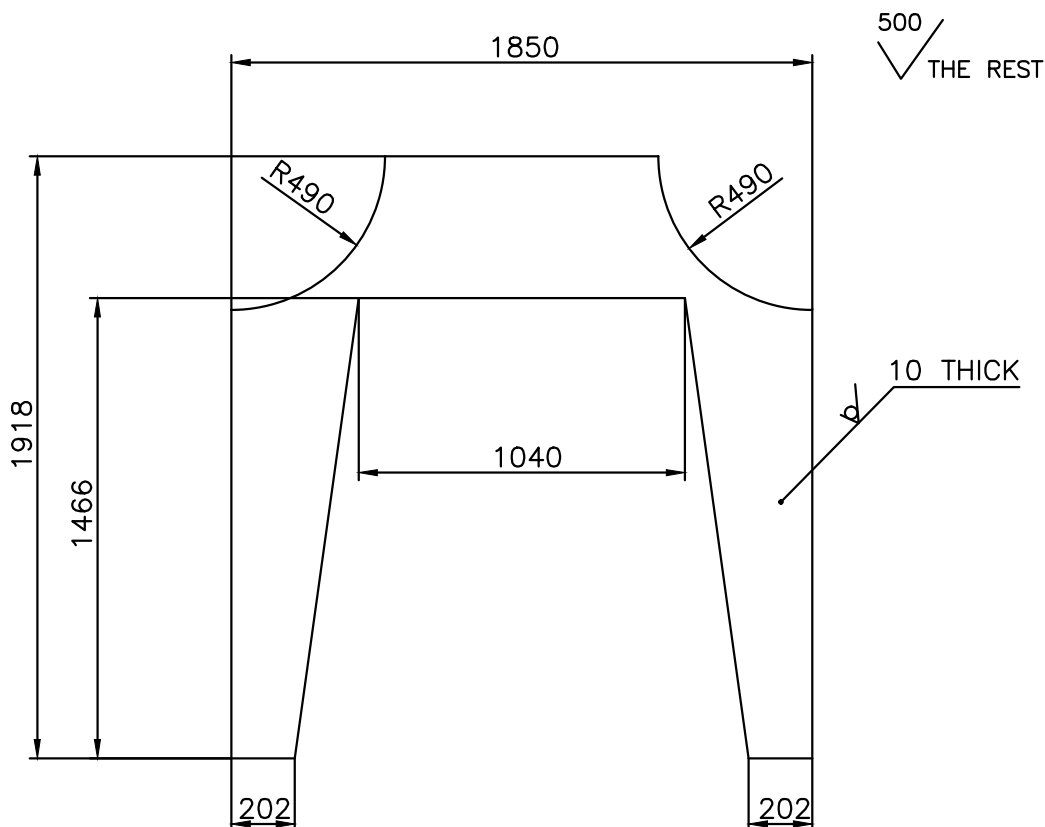
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26-5605-86399a/KWU
REF.DRG.No. IT.9

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	RM	-S/D-	CBDN No.	STATUS
		CHECKED	01	15.11.13	CHECKED	SSM	-S/D-	91440401002	OF DRG
				CHANGES ACCORDING TO				AGREED	
				CH. AD. NO. -				NAME	SIGN
				TGE-13-F0359				WT	SD/-
									15/02/83
GRADE OF UNTOL.DIM.M/C/C/M/F.AA0230208				WELDING A/B/C/D AA0621104				GAS CUTTING-T3 AA0621101	



TECHNICAL REQUIREMENT

1- MARK IDENTIFICATION ACCORDING TO HW 0400.397.

SUPERSEDES THE OLD
DRG. UNDER THE SAME NO.
TGE-13-F0359

26-5605-86399a/KWU
REF.DRG.No. IT.2

SIGN & DATE



BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	Y.C.GARG	SD/-	12/5/81	00
CHD	SM/KNW	SD/-	26/2/83	
APD	N.P.GUPTA	SD/-	28/02/83	

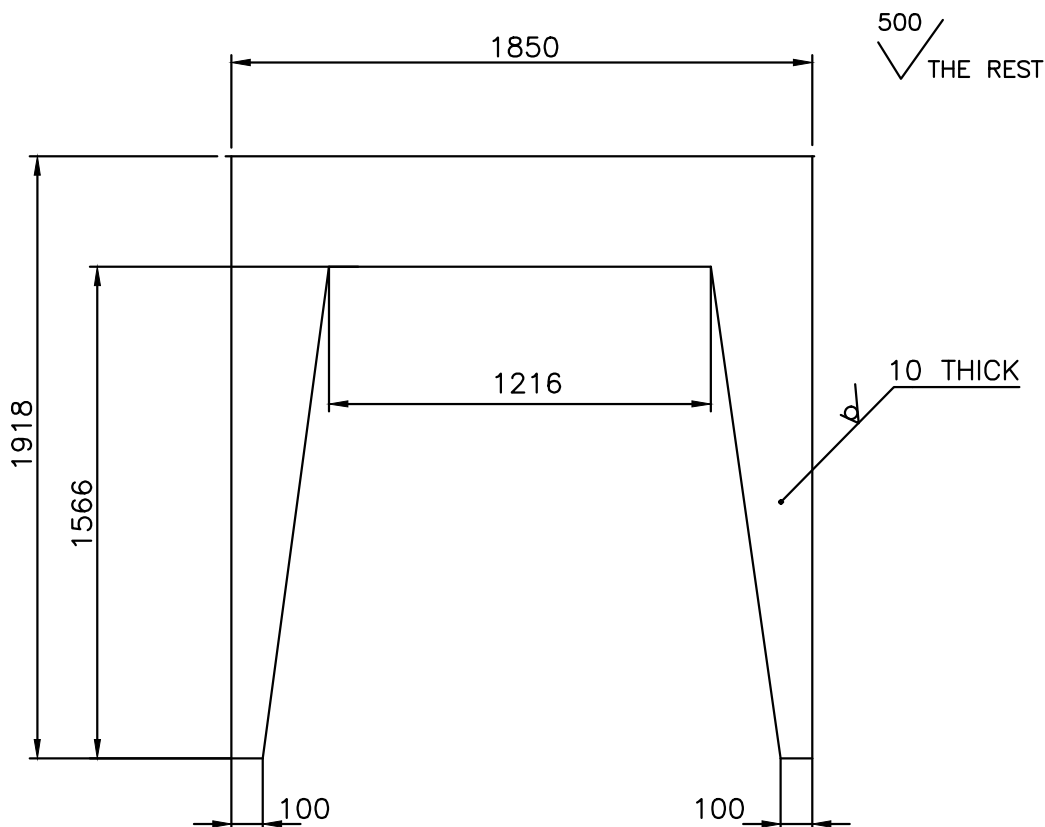
INVENTORY No.	DEPT. TGE	SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS
	CODE 4133	1:20	105.90	91440401002	004	-
TITLE				DRAWING No.		
PLATE				41440401047		
BRUSHLESS EXCITER FOR 500MW TG.				SHEET No. 1	No.OF SHEETS	1

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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	RM	-S/D-	CBDM No.	STATUS
		CHECKED	01	15.11.13	CHECKED	SSM	-S/D-	91440401002	OF DRG
				CHANGES ACCORDING TO				APPROVED	
				CH. AD. NO. -				DEPT.	NAME
				TGE-13-F0359				WT	SKC
								SD/-	DATE
									15/02/83
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208					WELDING A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101	



TECHNICAL REQUIREMENTS

1- MARK IDENTIFICATION ACCORDING TO HW 0400.397.

SUPERSEDES THE OLD
DRG. UNDER THE SAME NO.
TGE-13-F0359


26-5605-86399a/KWU
REF.DRG.No. IT.1

SIGN & DATE



BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	Y.C.GARG	SD/-	11/5/81	
CHD	SM/KNW	SD/-	26/2/83	
APD	N.P.GUPTA	SD/-	28/02/83	

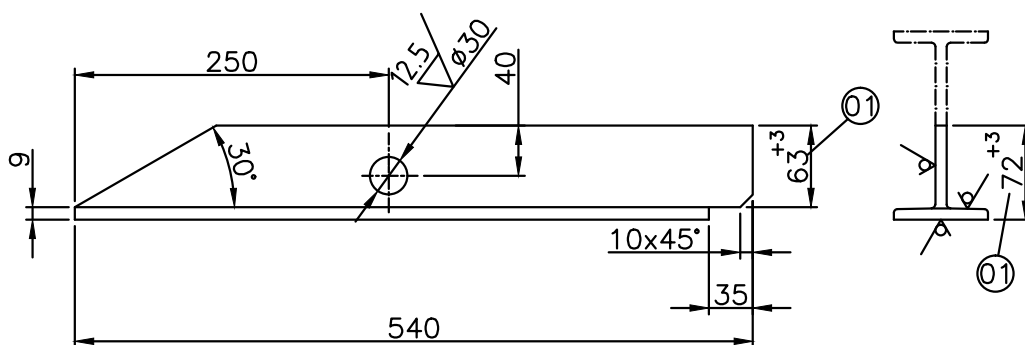
INVENTORY No.	DEPT. TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No. OF ITEMS	
	CODE 4133		1:20	102.40	91440401002	005	—	
	TITLE				DRAWING No.			
	PLATE				41440401046			
BRUSHLESS EXCITER FOR 500MW TG.					SHEET No. 1			No. OF SHEETS 1

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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED STGEPA CHECKED STGERY	CBOM No. 01440401028		STATUS OF DRG	
			01	7.2.20		AGREED DEPT.	NAME	SIGN	DATE
					CHANGES AS PER C/A NO TGE-20-FO026	WTX	AWTXTSC	AWTXTSC	24/07/2010
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208			WELDING A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101			

50/
THE REST

TECHNICAL REQUIREMENTS


1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

26-5605-114441/032
REF.DRG.No.

SIGN & DATE

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	23/07/2010	
CHD	STGESSM	STGESSM	23/07/2010	
APD	ATGEVK	ATGEVK	26/07/2010	

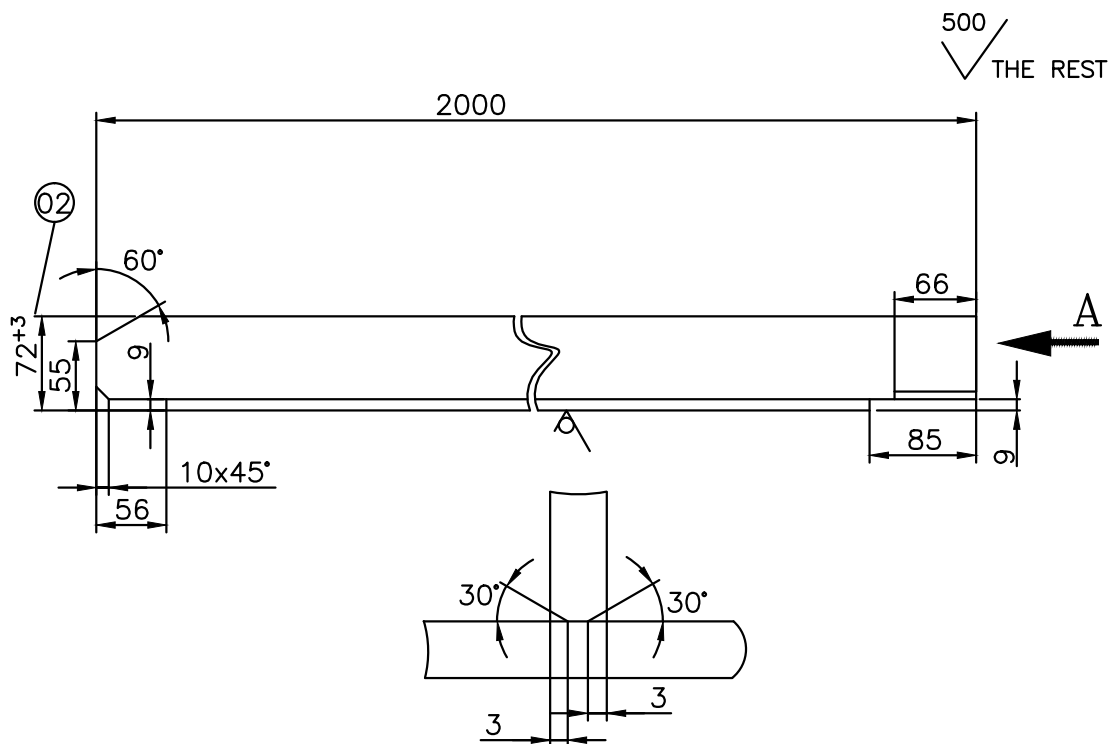
INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.			ITEM No.	No OF ITEMS	
	C0DE 4133		1:5	3.8	01440401028			007		
	TITLE				DRAWING No.					
	PROFILE				41440401302					
	(B'LESS EXCITER FOR 800MW TG)				SHEET No.1		No.OF SHEETS1			

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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	STGEPA	REV	DATE	ALTERED	RM	-S/D-	CBOM No.			STATUS OF DRG
02	7.2.20	CHECKED	STGERY	01	15.11.13	CHECKED	SSM	-S/D-	91440401002			
CHANGES AS PER C/A NO TGE-20-F0028				CHANGES ACCORDING TO CH. AD. NO.- TGE-13-F0359					APPROVED DEPT.	NAME	SIGN	DATE
									WT	SKC	SD/-	15/02/83
GRADE OF UNTOL.DIM.M/C/C/M/F.AA0230208				WELDING A/B/C/D AA0621104				GAS CUTTING-T3 AA0621101				



VIEW-A
SCALE 1:1

TECHNICAL REQUIREMENT

1- MARK IDENTIFICATION ACCORDING TO HW 0400397.

SUPERSEDES THE OLD
DRG. UNDER THE SAME NO.
TGE-13-F0359


26-5605-86399a/KWU
REF.DRG.No. IT.32

SIGN & DATE



BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	Y.C.GARG	SD/-	06/6/81	00
CHD	SM/KNW	SD/-	26/2/83	
APD	N.P.GUPTA	SD/-	28/02/83	

INVENTORY No.	DEPT. TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS
	CODE 4133		1:5	14.5	91440401002	009	—
	TITLE				DRAWING No.		
	BRUSHLESS EXCITER FOR 500MW TG.				41440401068		
				SHEET No. 1		No.OF SHEETS	1

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ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.



BILL OF MATERIAL

Printed
On:27.08.2024

BOM No: 01440401028

Var: 00

Revno: 2

Rev Date: 11.01.2020

Printed By:

Description: AIR GUIDE COVER (WELDED)

Tot wt: 1241.54

Item No	Qty(Total)	Drawingno Var Mvar	Mat Code	Mat Spec	Weight
Typ	Cat	Zone	Description	Assy. Remarks	Fab Wt
0			01440401028 00		1241.54
1(1)			AIR GUIDE COVER (WELDED)		
MF	DR		800MW B'LESS EXCITER	Y	1241.54
1			31440401141 00 00	AA1011808013	145.6
1(1)			PLATE		
MF	DR				
2			31440401142 00 00	AA1011819074	135.0
1(1)			PLATE	AA10119	
MF	DR				
3			41440401052 00 00	AA1011808013	40.0
2(2)			PLATE	AA10108	
MF	DR			CBOM91440401002	
4			41440401047 00 00	AA1011819074	105.9
2(2)			PLATE	AA10119	
MF	DR			CBOM91440401002	
5			41440401046 00 00	AA1011819074	102.4
1(1)			PLATE	AA10119	
MF	DR			CBOM91440401002	
6				AA7151115024	0.005
6(6)			NUT HEX. A-8	AA7151115	
SI	DR		M8		
7			41440401302 00	HW1012808980	3.8
3(3)			PROFILE	AA10108	
MF	DR			CUT TO SIZE	
8				AA1011808013	145.2
1(1)			PLATE 5X1874X1968	AA10108	
MF	DR		ST-A(FE410 WA)PLATE		
9			41440401068 00 00	HW1012808980	14.5
4(4)			PROFILE	AA10108	
MF	DR			CBOM91440401002	
10			41440401304 00	HW1012808980	7.8
7(7)			PROFILE	AA10108	
MF	DR			CUT TO SIZE	
11			41440401352 00	HW1012808980	13.8
2(2)			PROFILE	AA10108	
MF	DR			CUT TO SIZE	
12			41440401305 00 00	AA1012508099	10.8
2(2)			PROFILE	AA10108	
MF	DR			CUT TO SIZE	
13			31440401143 00 00	AA1011808013	144.7
1(1)			PLATE	AA10108	
MF	DR				
14			41440401306 00	HW1012808980	2.4
4(4)			PROFILE	AA10108	
MF	DR			CUT TO SIZE	
15				AA1010308050	0.8
8(8)			FLAT 50X8 , L=250	AA10108	
MF	DR		ST-A(FE410 WA)FLAT		

ENGG

Initial Date

Worked By tgeessm 23.06.2010

Checked By tgeessm 28.06.2010

Approved By tgevk 21.07.2010



BILL OF MATERIAL

Printed
On: 27.08.2024

BOM No: 01440401028

Var: 00

Revno: 2

Rev Date: 11.01.2020

Printed By:

Description: AIR GUIDE COVER (WELDED)

Tot wt: 1241.54

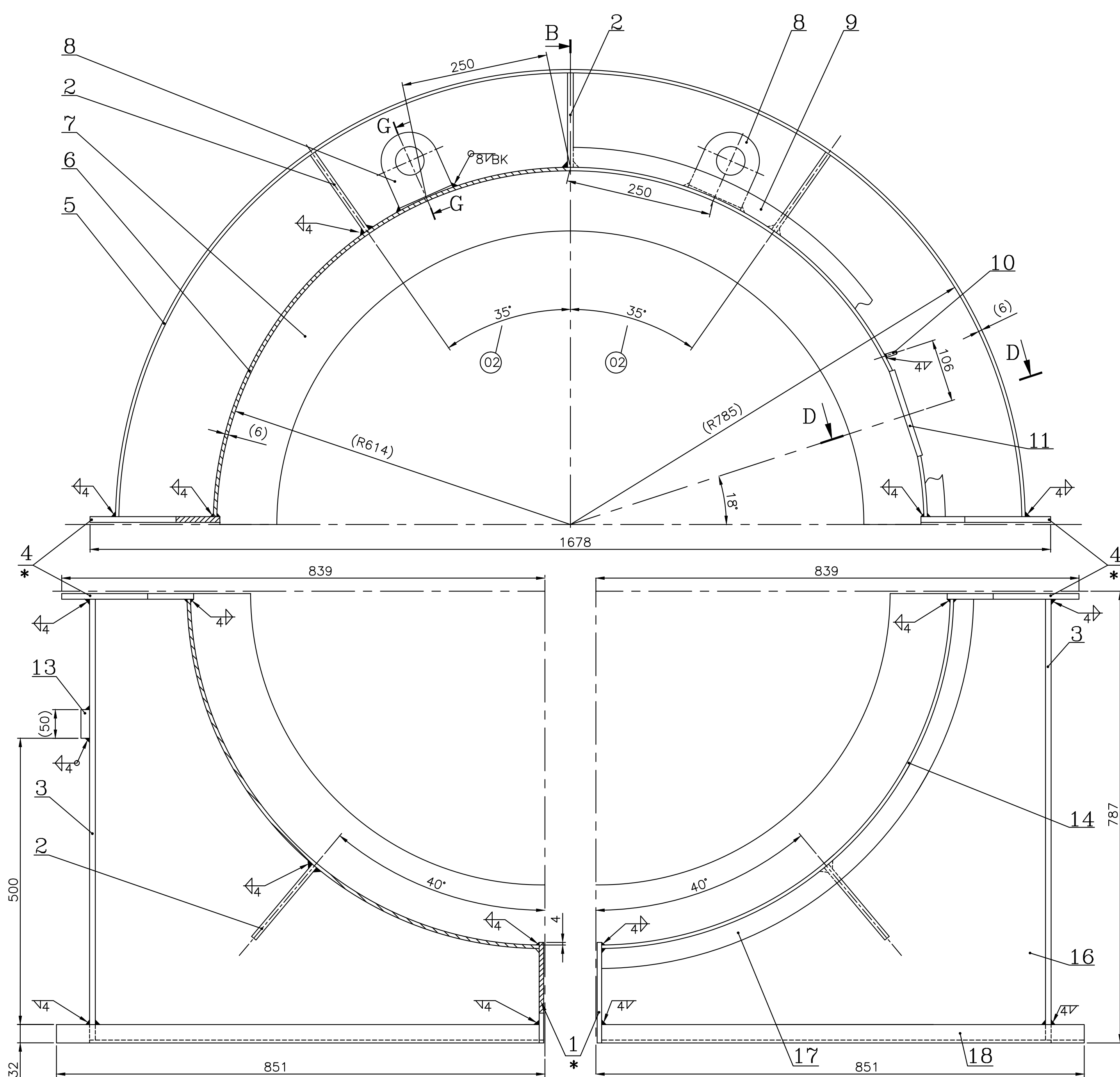
Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
16			41440401062 00 00	AA1011819074	AA10119	1.0
6(6)			STRIP		CBOM91440401002	
MF	DR					
17			41440401303 00	HW1012808980	AA10108	3.9
4(4)			PROFILE		CUT TO SIZE	
MF	DR					
18			41440401061 00 00	AA1011819074	AA10119	0.5
2(2)			STRIP		CBOM91440401002	
MF	DR					
19			41440401307 00	HW1012808980	AA10108	2.4
4(4)			PROFILE		CUT TO SIZE	
MF	DR					

BOM - 01440401028 00

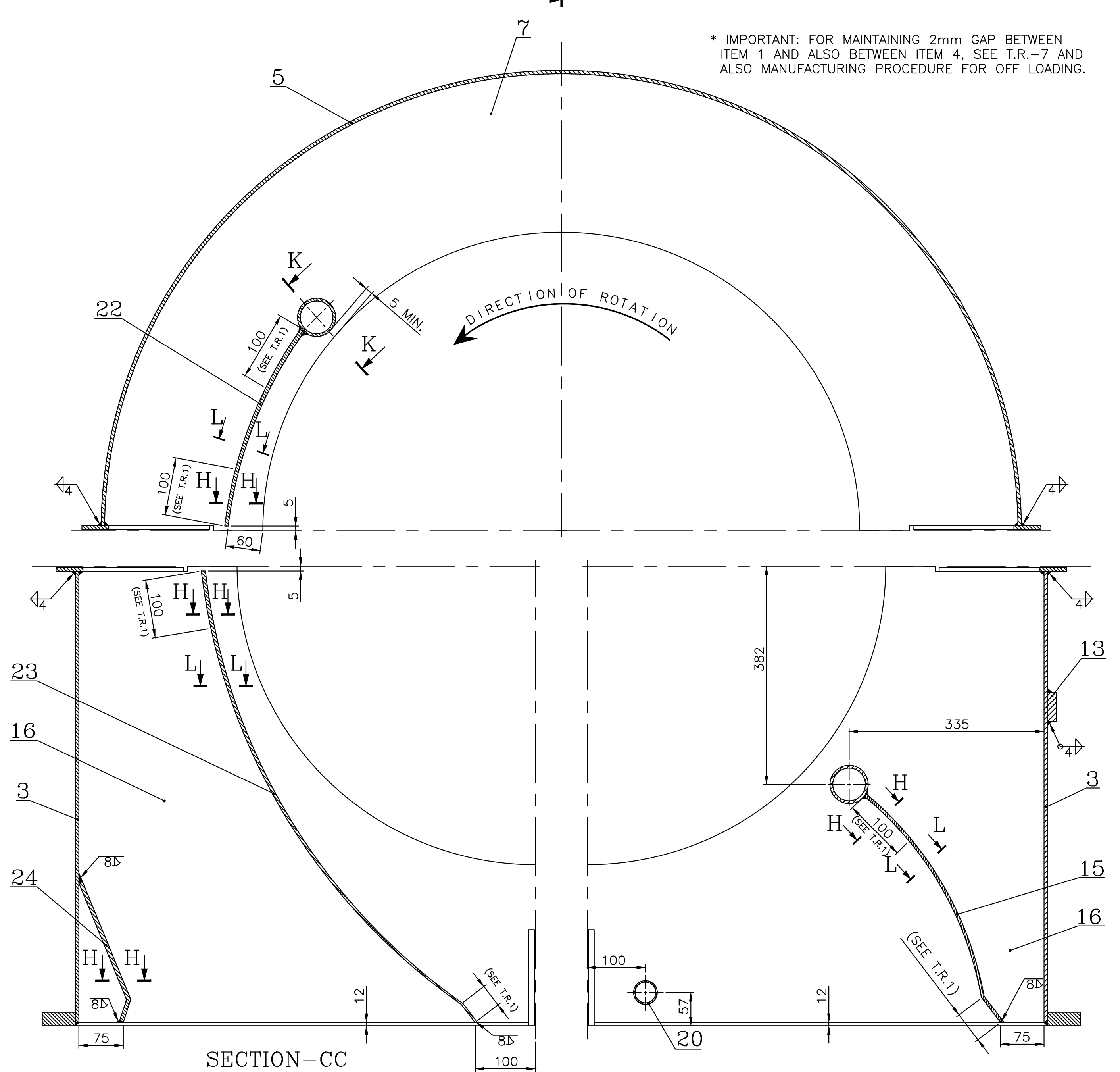
ENGG

Initial Date

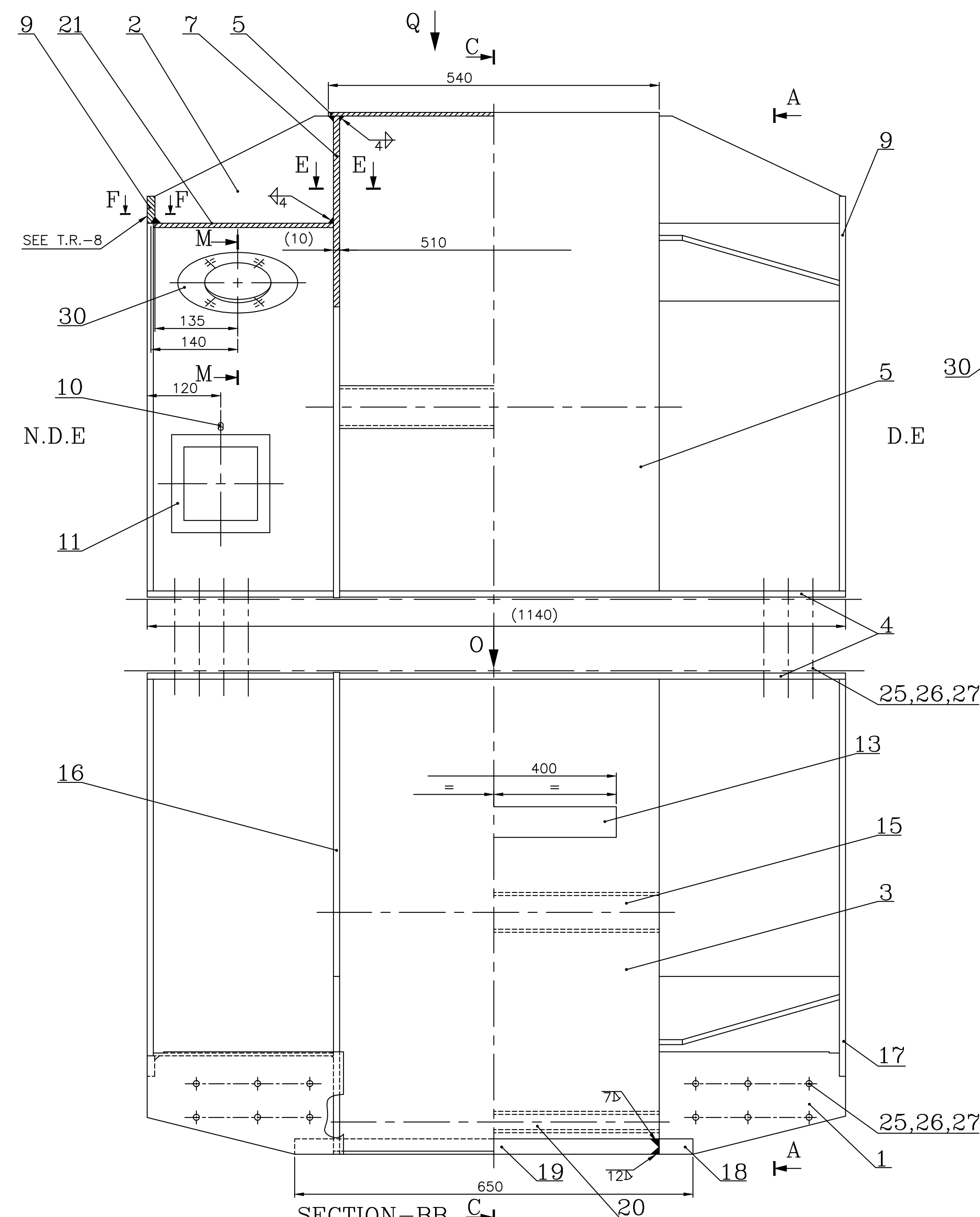
Worked By tgeessm 23.06.2010
Checked By tgeessm 28.06.2010
Approved By tgevk 21.07.2010

101440401031
DRAWING NO.

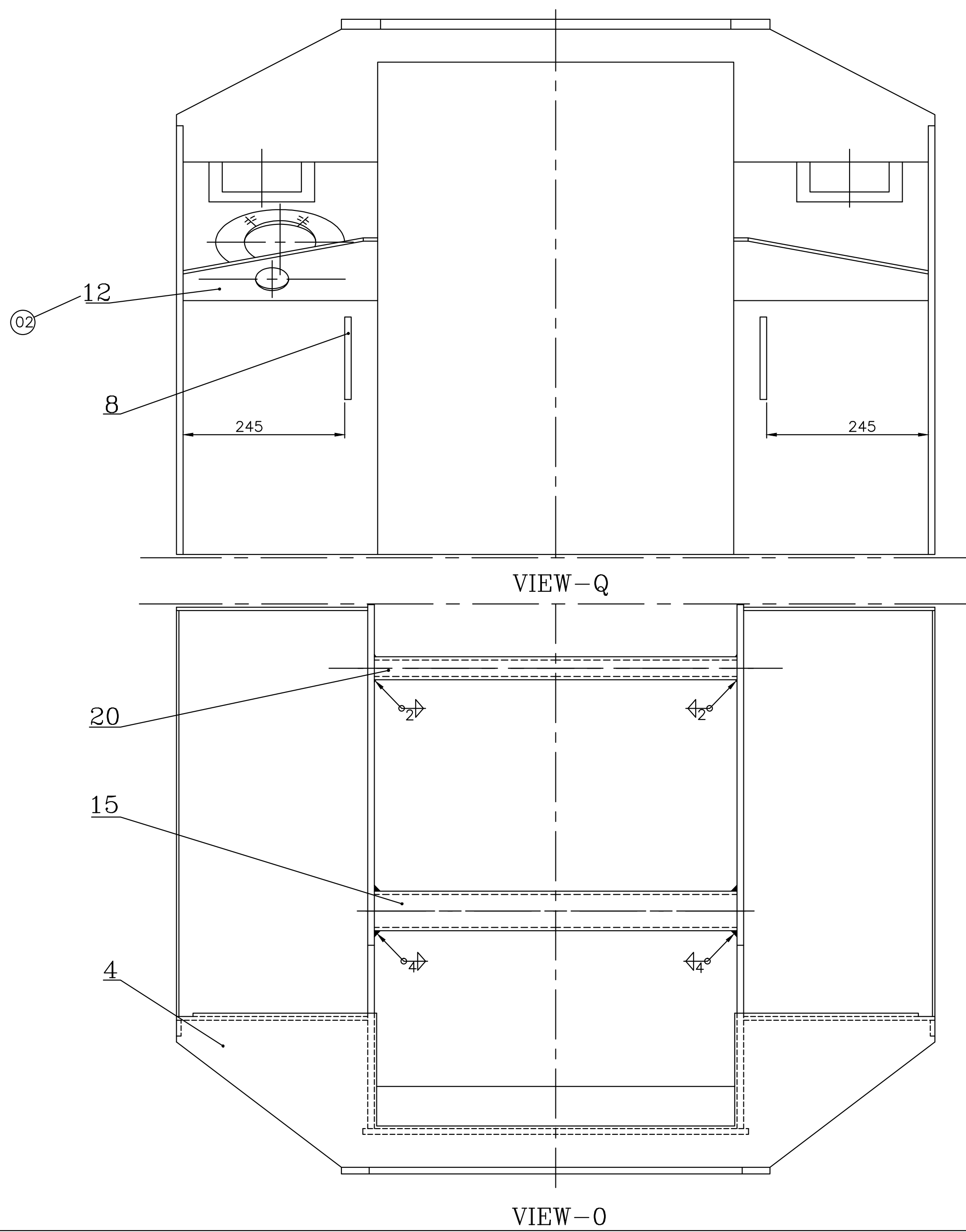
SECTION-AA



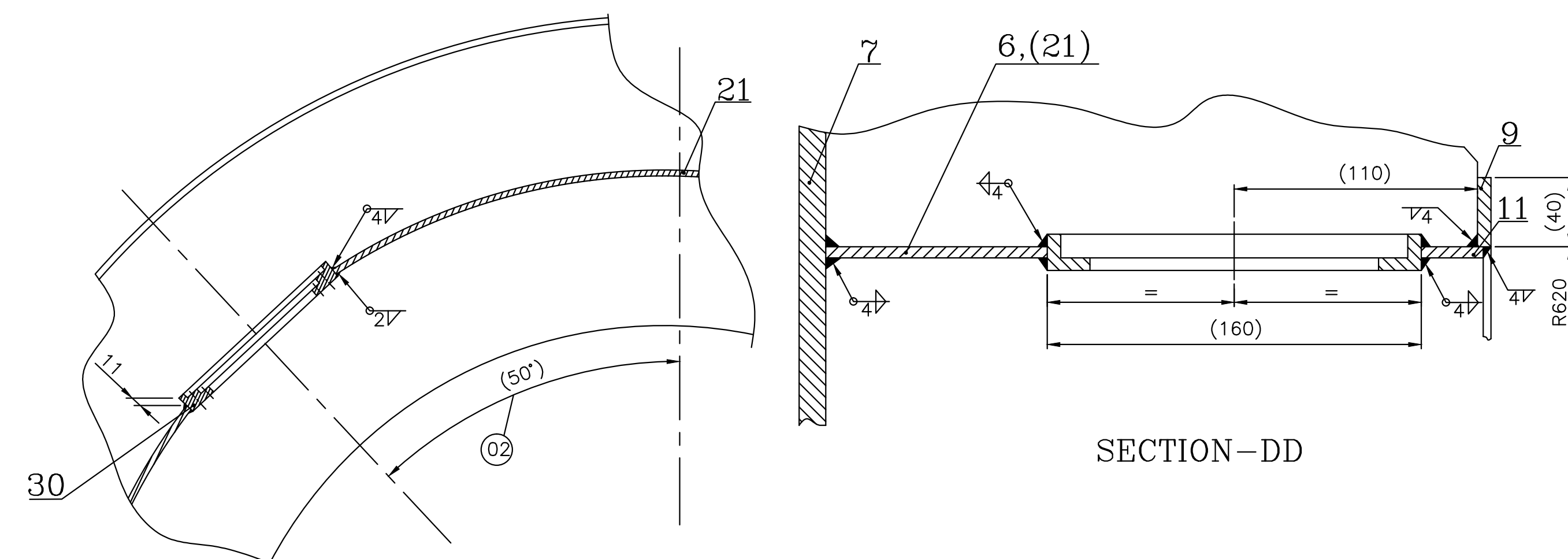
SECTION-CC



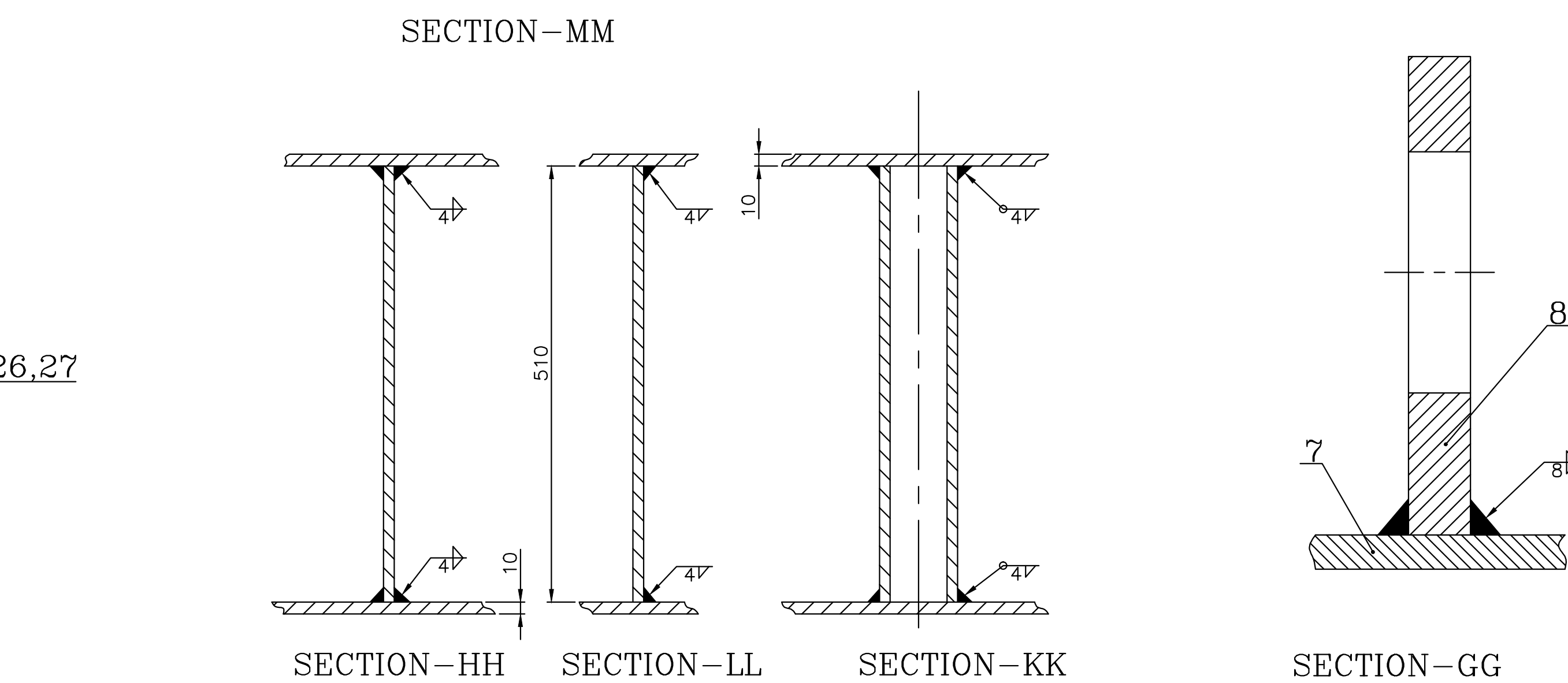
SECTION-BB



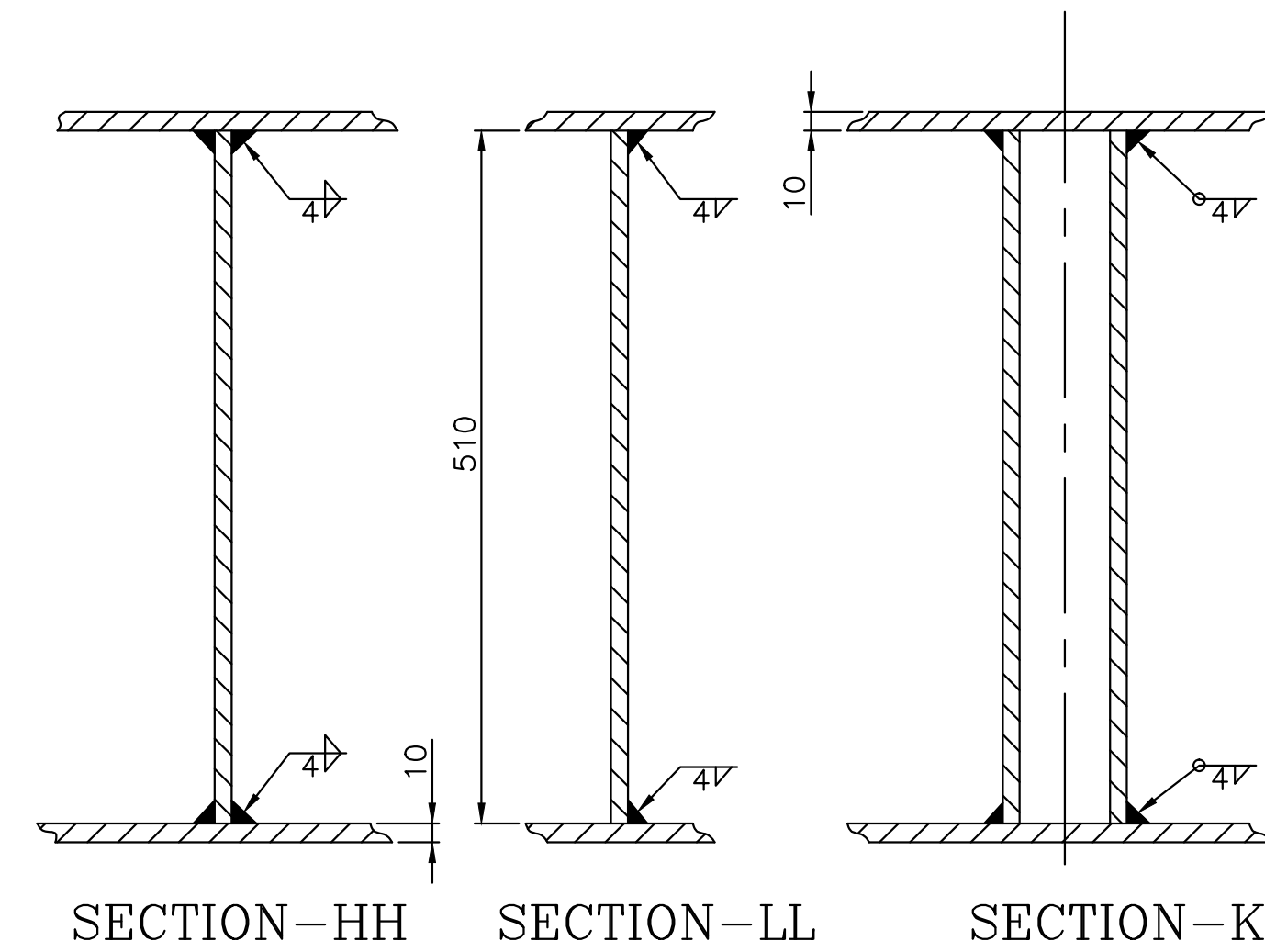
VIEW-Q



SECTION-DD



SECTION-MM



SECTION-HH

SECTION-LL

SECTION-KK

SECTION-GG

SYMBOL AND SIZE OF SEAM	2L	4L	8L	7b	8b	12b
SEAM LENGTH M.	0.872	81.388	0.880	0.120	2.040	0.120
WEIGHT OF DEPOSITED METAL KG.	0.025	7.650	0.296	0.045	0.515	0.103
TYPE OF ELECTRODE	E-7018					

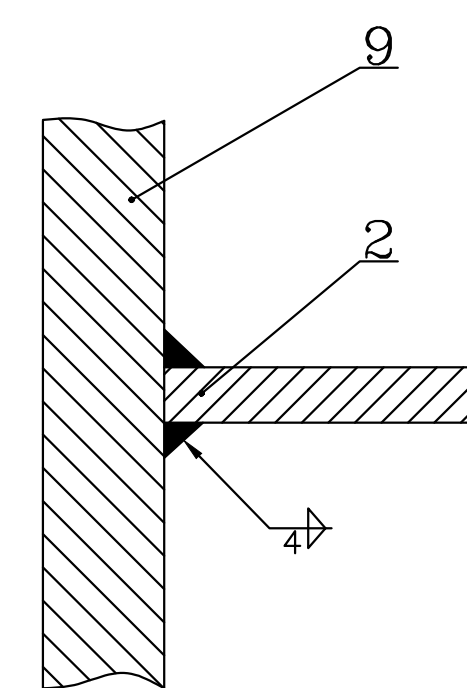
* IMPORTANT: FOR MAINTAINING 2mm GAP BETWEEN ITEM 1 AND ALSO BETWEEN ITEM 4. SEE T.R.-7 AND ALSO MANUFACTURING PROCEDURE FOR OFF LOADING.

MANUFACTURING PROCEDURE FOR OFF LOADING

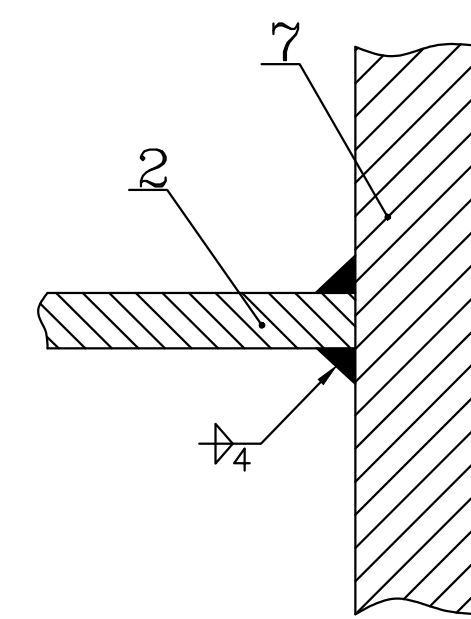
- BEFORE STARTING WELDING CLAMP ALL JOINT FLANGES USING ITEMS 25 TO 29. TACK WELD ALL ITEMS. WELD FIRST AT JOINT FLANGES.
- ACHIEVE PROPER MATCHING AT JOINT FLANGES BY MARGINAL GRINDING IF NECESSARY.

TECHNICAL REQUIREMENTS

- THE WELD SEAM IS 4b FOR THE LOCATIONS SPECIFIED BY THIS T.R. & FOR UNSPECIFIED.
- CLASSIFICATION GROUPS ACCORDING TO HW 0620099: CK,CS,(BK).
- TEST SCOPE ACCORDING TO HW 0850199 : CATEGORY OF SERVICE REQUIREMENTS 4,(1).
- SURFACE TREATMENT (i.e.SHOT BLASTING,PAINTING ETC) AS PER TECHNOLOGICAL INSTRUCTION NO. 0912.015
- DIMENSIONS IN BRACKETS ARE FOR REFERENCE ONLY.
- MARK IDENTIFICATION ACCORDING TO HW 0400397.
- ITEM 7 IN TOP HALF SHOULD REST ON ITEM 16 OF BOTTOM HALVES AT THE HORIZONTAL CENTER LINE. LIKEWISE ITEM 16 IN BOTH BOTTOM HALVES SHOULD COINCIDE AT THE VERTICAL CENTER LINE. MAXIMUM ALLOWABLE GAP 1mm. A UNIFORM GAP OF 2mm IS TO BE ENSURED BETWEEN ITEM 4, AND BETWEEN ITEM 1. FOR THIS PURPOSE USE ITEMS 28 & 29.
- THE OUTER FACE OF ITEM 9 SHOULD BE PERPENDICULAR TO THE HORIZONTAL CENTER LINE.
- THIS JOB SHOULD BE OFF LOADED IN CONJUNCTION WITH COVER (WELDED) DRG. 1-144-04-01023 & 1-144-04-01039(IF OFF LOADED ONLY.)



SECTION-FF



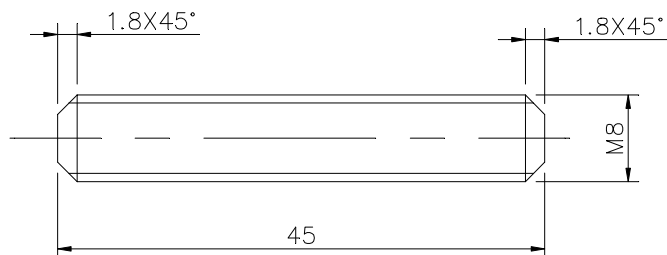
SECTION-EE

CBOM NO. 01440401029	STATUS OF DRG. APPROVED	TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT	B'LESS EXCITER FOR 800MW TG.	
GRADE OF UNTOL. DIM:- M/CG- V/E/M/F AA 0230208 WELDING-A/B/C/D-AA621104 GAS CUTTING-T3AA0621101	WTX AWTXIS	NAME AWTXIS	SIGN AWTXIS	DATE 26/06/2010
REV. DATE 02/7/3.17	ALTERED/ANAND -SD CHECKED/SSM -SD	REV. DATE 01/13.1.12	ALTERED AV -SD CHECKED/SSM -SD	DEPT. TGE CODE 4133
CHANGES AS PER C/A NO. TGE-17-F0057.		CHANGES AS PER C/A NO. TGE-12-F0014		SCALE 1:5
TITLE AIR GUIDE COVER (WELDED)		WEIGHT(Kg.) 674.25		REF. TO ASSY. DRG. 01440401030
DRAWING NO. 01440401031		SHEET NO.1		NO.OF SHEETS 001

01
SUPERSEDES THE OLD
DRG. UNDER THE SAME
NO. TGE-12-F0014

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	PA -SD-	CBDM No.	STATUS
		CHECKED	01	26.02.22	CHECKED	DRM -SD-	01440401003	OF DRG
			CHANGES AS PER C/A NO. TGE-22-F0039			AGREED DEPT.	NAME	SIGN
							WT	CHHABRA -SD- 23.9.81
GRADE OF UNTOL.DIM.M/CG/M/F.AA0230208			WELDING A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101		

12.5
ALL OVER

TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

01
SUPERSEDES26-5607-86545aK.W.U.
IT.45REF.DRG.No. (DIN976)

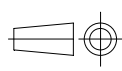
SIGN & DATE

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	TNG	-SD-	25.4.81	
CHD	KSR/KNW	-SD-	22.9.81	
APD	NPG	-SD-	28.9.81	

INVENTORY No.

DEPT.TGE



SCALE

2:1

WEIGHT(Kg)

0.013

REF.TO ASSY.DRG.

01440401001

ITEM

No. 010

No. OF

ITEMS -

CODE 4133

TITLE

STUD

(B'LESS EXCITER FOR 500MW TG)

DRAWING No.

41440401045

SHEET No.1

No.OF SHEETS1

DRAWING NO.
21440401002TACK WELD
ALL JOINTS

2

B

1

160

A

B

160

A

2

1

15

2V

2V

SECTION A-A

SYMBOL & SIZE OF SEAM	2△
SEAM LENGTH M.	0.607
WT. OF DEPOSITED METAL KG.	0.018
TYPE OF ELECTRODE	E-42



SECTION B-B

01
SUPERSEDES

TECHNICAL REQUIREMENTS

1. CLASSIFICATION GROUPS ACCORDING TO HW0620099 : CK.
2. TEST SCOPE ACCORDING TO HW0850199: CATEGORY OF SERVICE REQUIREMENTS 4.
3. IDENTIFICATION ACCORDING TO HW0400397.

GRADE OF UNTOL. DIM.: -

M/CG-~~W/C/M/P~~ AA 0230208WELDING-~~A/B/C/D~~-AA0621104

GAS CUTTING-T3'AA0621101

REV. DATE ALTERED
CHECKEDCBOM NO.
01440401003STATUS
OF DRG.

AGREED DEPT.	NAME	SIGN	DATE
WT	CHHABRA	-SD-	23.9.81

 TYPE OF PRODUCT OR
 NAME OF CUSTOMER/ PROJECT
 BRUSHLESS EXCITER FOR
 500MW TG

DRN	NAME	SIGN	DATE	NO. OF VAR.
TNG	TNG	-SD-	25.4.81	-
CHD	KSR/KNW	-SD-	22.9.81	-
APD	NPG	-SD-	28.9.81	13, 24

DEPT. TGE	SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
CODE 4133	1:1	0.422	01440401001	011	75, 77

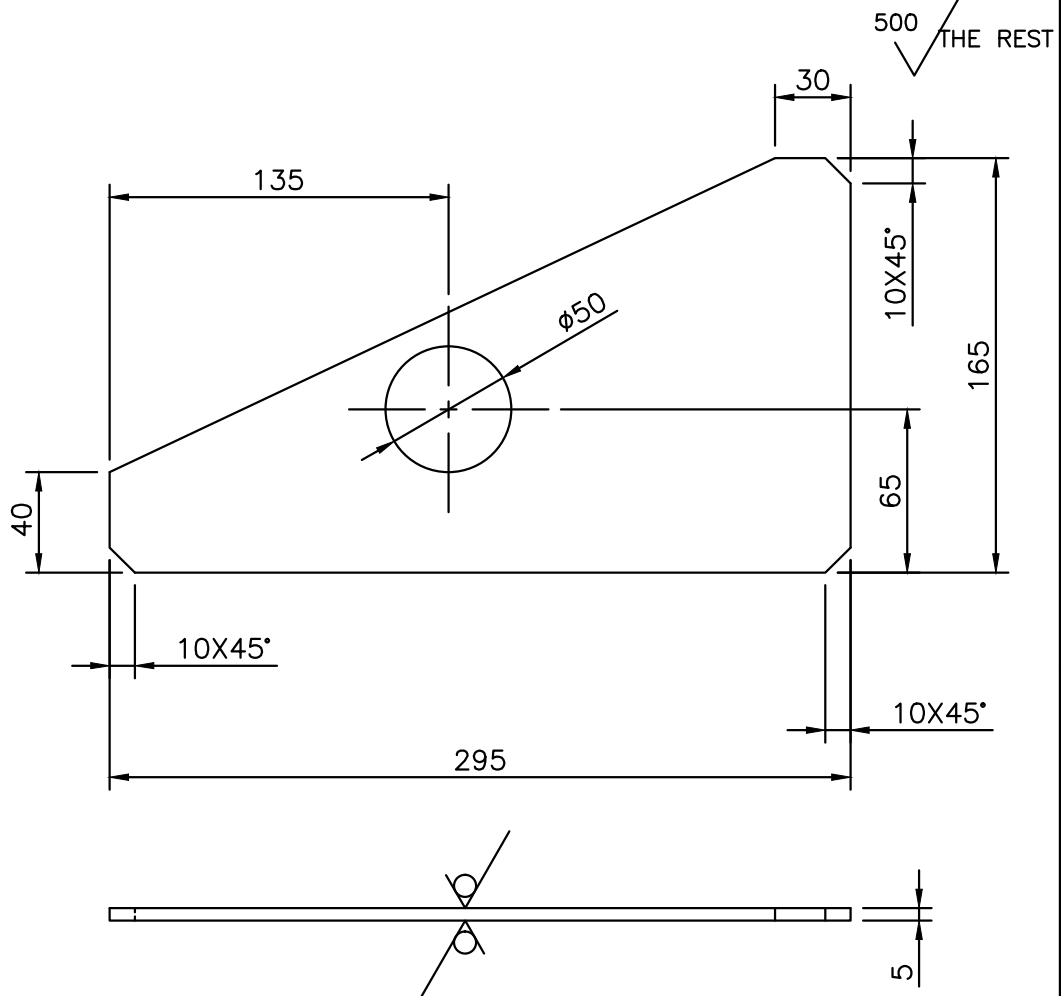
TITLE	DRAWING NO.
FRAME	21440401002
SHEET NO. 1	NO. OF SHEETS 1

SIZE A2

FIRST ANGLE PROJECTION


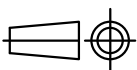
(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	CBOM No.			STATUS OF DRG
		CHECKED			CHECKED	01440401029			
						AGREED DEPT.	NAME	SIGN	DATE
						WTX	AWTXBLM	AWTXBLM	28/07/2020
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208 WELDING A7B/C/D AA0621104 GAS CUTTING-T3 AA0621101									



TECHNICAL REQUIREMENT

1. IDENTIFICATION ACCORDING TO HW0400397.

3-436749/KWU REF.DRG.No.		SIGN & DATE		 BHARAT HEAVY ELECTRICALS LTD HARDWAR		NAME STGEPA STGEPA STGESSM STGESSM		SIGN STGEPA STGEPA STGESSM STGESSM		DATE 07/03/2017 07/03/2017		NO. OF VAR	
INVENTORY No.		DEPT.TGE CODE 4133		 SCALE 1:2.5		WEIGHT(Kg) 1.18		REF.TO ASSY.DRG. O1440401031		ITEM No. 012		No OF ITEMS	
		TITLE SHEET						DRAWING No. 41440401338				REV	
								SHEET No.1		No.OF SHEETS1			

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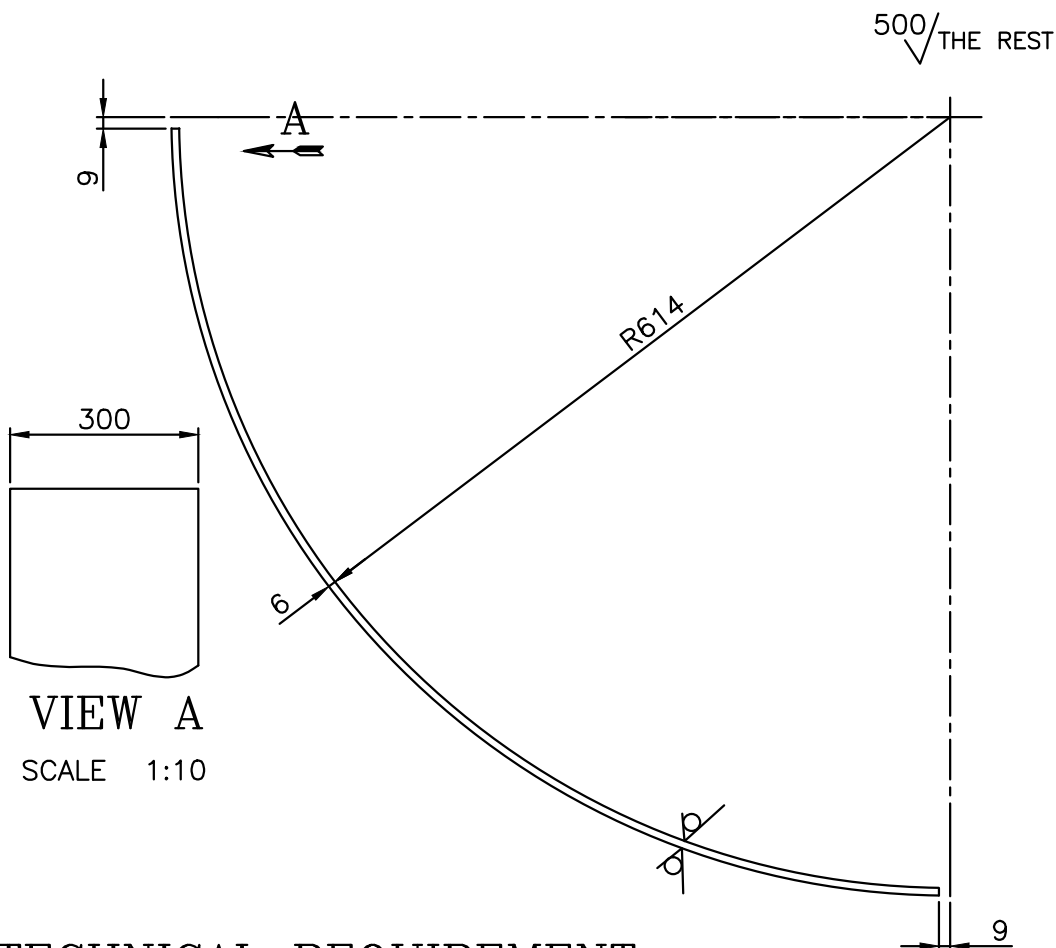
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	CBOM No.		STATUS	
		CHECKED			CHECKED	01440401029		OF DRG	
						AGREED	NAME	SIGN	DATE
						DEPT.	AWTXRR	AWTXRR	3/11/2013 12:00:00 AM
						WTX			

GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101

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TECHNICAL REQUIREMENT

1. IDENTIFICATION ACCORDING TO HW 0400397.

26-5607-122988/K.W.U
(ITEM NO. 6)
REF.DRG.No.


SIGN & DATE

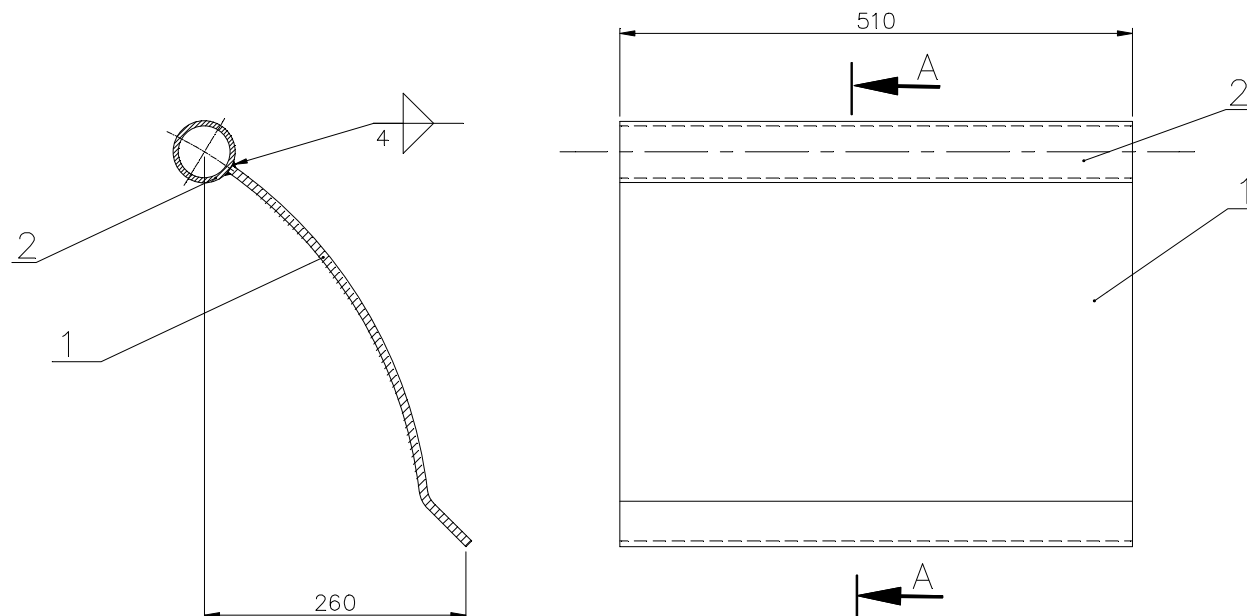


BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGERM2	STGERM2	3/9/2013 12:00:00 AM	
CHD	STGESSM	STGESSM	3/11/2013 12:00:00 AM	
APD	ATGEVK	ATGEVK	3/20/2013 12:00:00 AM	

DEVELOPED LENGTH=951

INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS
	CODE 4133		1:5	13.3790	01440401031	014	
	TITLE				DRAWING No.		REV.
	SHEET				41440401324		00
(BRUSHLESS EXCITER FOR 800 MW TG.)				SHEET No.1		No.OF SHEETS1	

DRAWING NO.
31440401015

SECTION A-A


SYMBOL & SIZE OF WELD SEAM	4
SEAM LENGTH IN METER	1.020
WT. OF DEPOSITED METAL IN KG.	0.096
TYPE OF ELECTRODE	E-42

TECHNICAL REQUIREMENTS: -

1. CLASSIFICATION GROUPS ACCORDING TO HW0620099: CK.
2. TEST SCOPE ACCORDING TO HW0850199: CATEGORY OF SERVICE REQUIREMENTS 4.
3. MARK IDENTIFICATION ACCORDING TO HW0400397.

02
SUPERSEDES

				CBOM NO. 01440401003		STATUS OF DRG.	
				AGREED DEPT.	NAME	SIGN	DATE
GRADE OF UNTOL. DIM.: –				WT	CHHABRA	–SD–	23.9.81
M/CG– V/C/M/F AA 0230208							
WELDING– A/B/C/D –AA621104							
GAS CUTTING–'T3'AA0621101							
REV.	DATE	ALTERED		REV.	DATE	ALTERED PA	–SD–
		CHECKED		02	26.02.22	CHECKED RM	–SD–
				CHANGES AS PER C/A NO. TGE–22–F0039			

TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 500MW TG.			
 BHARAT HEAVY ELECTRICALS LTD. HARDWAR		DRN	TNG	SIGN	DATE
		CHD	KSR/KNW	-SD-	18.4.81
		APD	NPG	-SD-	22.9.81
DEPT. TGE	SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
CODE 4133	1:5	18.036	01440401001	015	73, 74 75, 77
TITLE		DRAWING NO. 31440401015			
SUPPORT		SHEET NO.1 NO.OF SHEETS 1			

SIZE A3

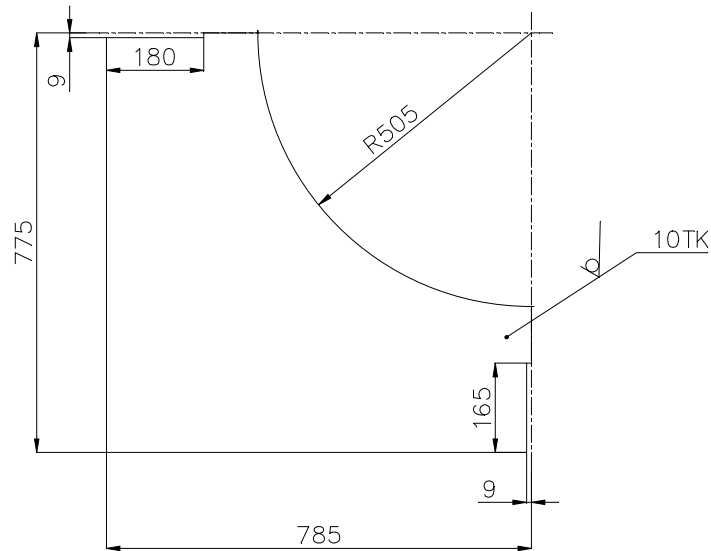
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	PA -SD-	CBDM No.	STATUS
		CHECKED	01	26.02.22	CHECKED	DRM -SD-	01440401003	OF DRG
			CHANGES AS PER C/A NO.			AGREED	NAME	SIGN
			TGE-22-F0039			DEPT.	CHHABRA	-SD-
						WT		DATE
								23.9.81

GRADE OF UNTOL.DIM.M/CG/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101

500/ THE REST



TECHNICAL REQUIREMENTS: -

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

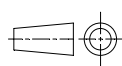
SUPERSEDES

01

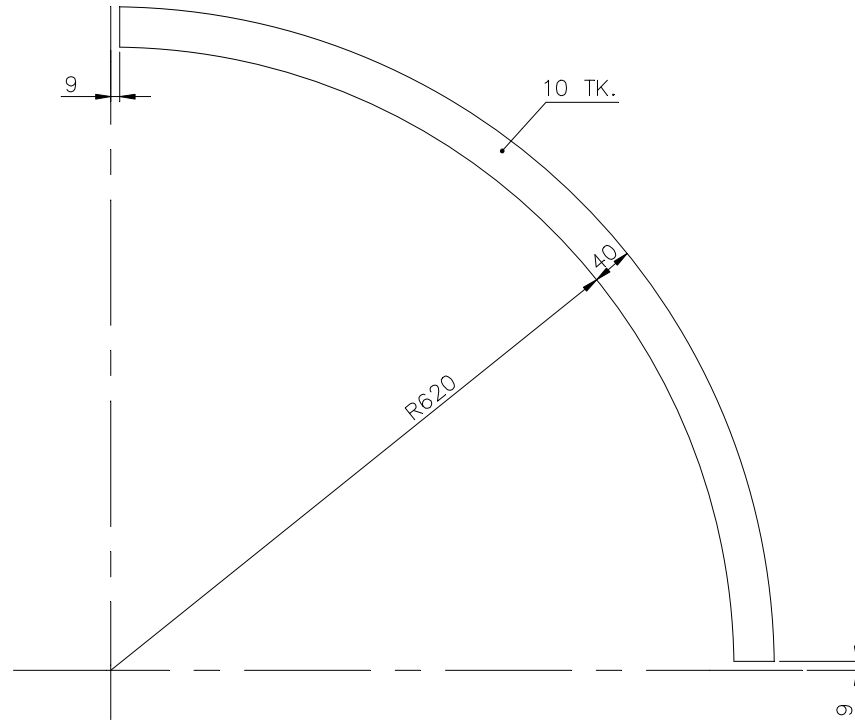
SIGN & DATE		INVENTORY No.		SCALE		WEIGHT(Kg)		REF.TD ASSY.DRG.		ITEM No.		No. OF ITEMS	
26-5607-86545 a/kwu REF.DRG.No. IT. 4		BHARAT HEAVY ELECTRICALS LTD HARDWAR		1:10		32.00		01440401001		016		-	
SIGN & DATE		DEPT.TGE		CODE 4133		TITLE		DRAWING No.		SHEET No.1		No. OF SHEETS1	
SIGN & DATE		SHEET		(B'LESS EXCITER FOR 500MW TG)									

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	YC GARG	-SD-	6.2.81	
CHD	KSR/KNW	-SD-	22.9.81	
APD	NP GUPTA	-SD-	28.9.81	

SCALE
1:10WEIGHT(Kg)
32.00REF.TD ASSY.DRG.
01440401001ITEM No.
016No. OF ITEMS
-DRAWING No.
41440401012

SHEET No.1 No. OF SHEETS1

DRAWING NO.
31440401012

DEVELOPED LENGTH=988

TECHNICAL REQUIREMENTS: -

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

SUPERSEDES
01

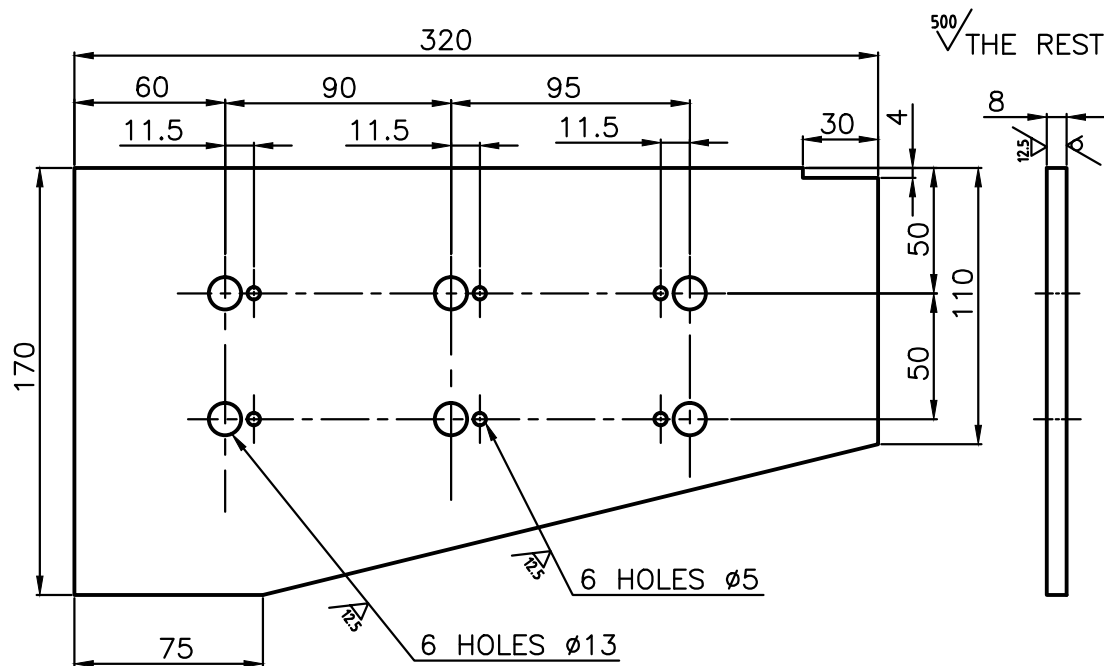
GRADE OF UNTOL. DIM.: -				CBOM NO. 01440401003		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT				B'LESS EXCITER FOR 500MW TG.													
M/CG- <u>V/C/M/F</u> AA 0230208				WT		CHHABRA		-SD-		23.9.81															
WELDING- <u>A/B/C/D</u> -AA621104																									
GAS CUTTING- 'T3' AA0621101																									
REV.		DATE		ALTERED		REV.		DATE		ALTERED PA		-SD-		DEPT. TGE		SCALE		WEIGHT(Kg.)		REF. TO ASSY. DRG.		ITEM NO.		NO.OF ITEMS	
01		26.02.22		CHECKED		01		26.02.22		CHECKED RM		-SD-		4133		1:5		3.125		01440401001		017		75, 77	
CHANGES AS PER C/A NO. TGE-22-F0039														TITLE FLAT		1		3		DRAWING NO. 31440401012		7		23, 24	
																				SHEET NO.1		NO.OF SHEETS 1			

SIZE A3

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)


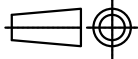
REV	DATE	ALTERED	REV	DATE	ALTERED	CBDM No.		STATUS
		CHECKED			CHECKED	01440401029		OF DRG
						AGREED	NAME	SIGN
						DEPT.		
						WTX	AWTXIS	AWTXIS
								28/08/2010
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208						WELDING A/B/C/D AA0621104		GAS CUTTING-T3 AA0621101

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TECHNICAL REQUIREMENT :

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

SIGN & DATE	<div>BHARAT HEAVY ELECTRICALS LTD HARDWAR</div>					NAME	SIGN	DATE	NO. OF VAR	
					DRN	STGEVK	STGEVK	05/08/2010		
					CHD	STGESSM	STGESSM	05/08/2010		
					APD	ATGEVK	ATGEVK	01/10/2010		
INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.			ITEM	No OF ITEMS	
	CODE 4133		1:2.5	2.87	O 1 4 4 O 4 O 1 O 3 1			No. 001		
	TITLE				DRAWING No.					
	SHEET				41440401311					
	(B'LESS EXCITER FOR 800MW TG)				SHEET No.1				No.OF SHEETS1	

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OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

26-5607-122988 b/kwu
REF. DRG NO.

SIGN & DATE

INVENTORY NO.

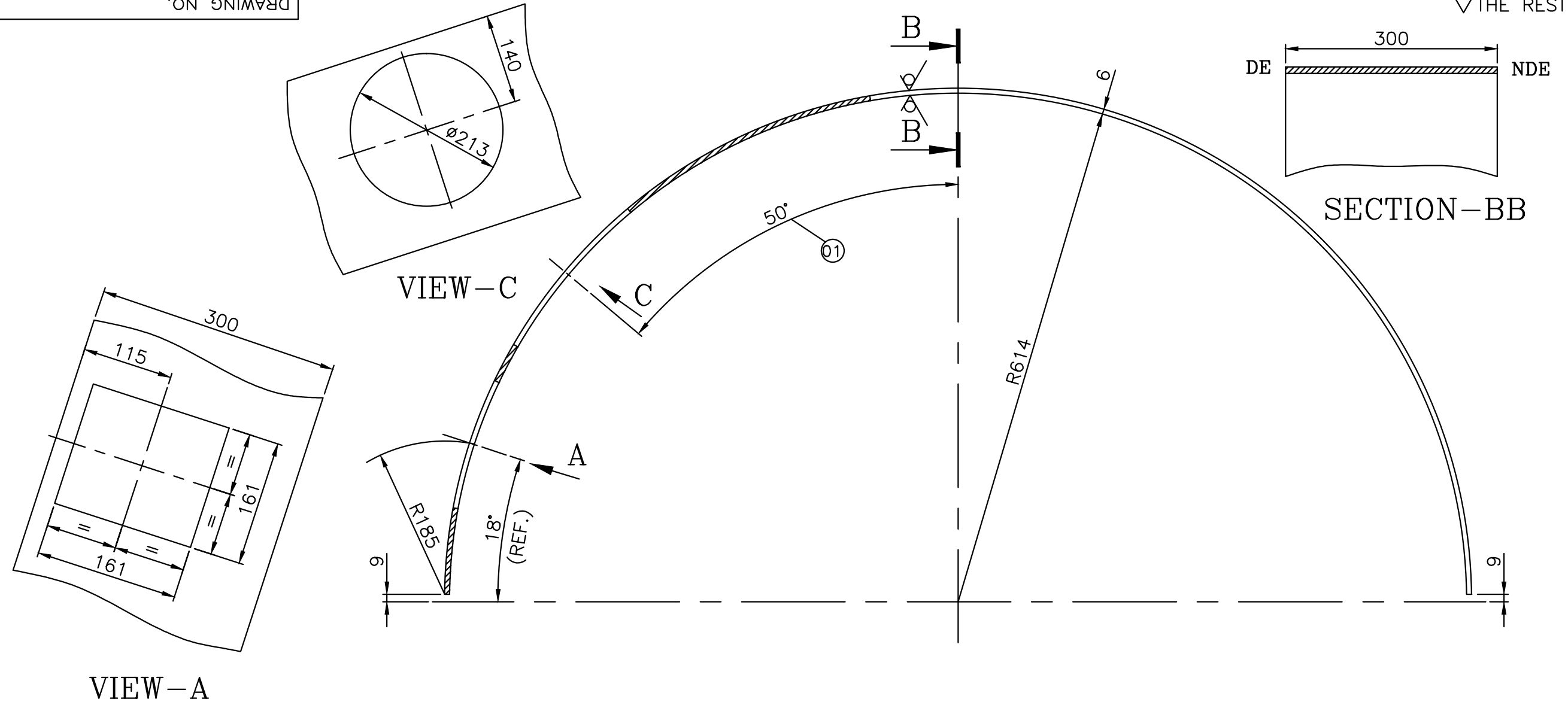
31440401144
DRAWING NO.

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

500/
THE REST



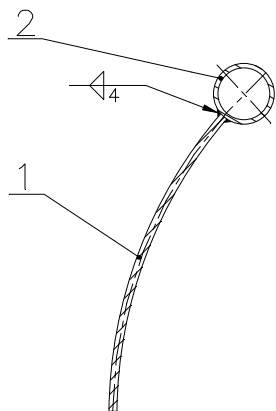
TECHNICAL REQUIREMENTS

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

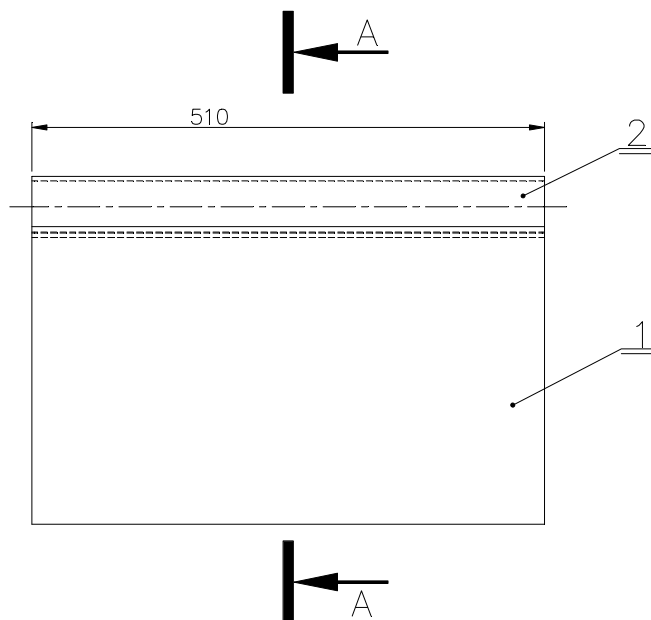
CBOM NO. 01440401029		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 800MW TG.						
AGREED DEPT.	NAME	SIGN	DATE	Bharat Heavy Electricals Ltd. HARDWAR		DRN	NAME	SIGN	DATE	NO.OF VAR.		
WTX	AWTXIS	AWTXIS	28/08/2010			CHD	STGEVK	STGEVK	05/08/2010			
						APD	STGEVSM	STGEVSM	05/08/2010			
								ATGEVK	ATGEVK	01/10/2010	73, 74	
GRADE OF UNTOL. DIM.:—	REV.	DATE	ALTERED	REV.	DATE	ALTERED	DEPT. TGE	SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
M/CG- V/C/M/X AA 0230208	01	7.3.17	CHECKED	01	7.3.17	CHECKED	CODE 4133	1:5	24.353	01440401031	021	75, 77
WELDING-A/B/C/D-AA621104							TITLE		DRAWING NO.			
GAS CUTTING-T3'AA0621101							SHEET		31440401144			
CHANGE AS PER C/A NO. TGE-17-F0057.								SHEET NO.1		NO.OF SHEETS 1		

SIZE A3

DRAWING NO. 31440401016



SECTION A-A



SYMBOL & SIZE OF WELD SEAM	4
SEAM LENGTH M.	1.020
WT. OF DEPOSITED METAL KG.	0.096
TYPE OF ELECTRODE	E-42

TECHNICAL REQUIREMENTS: -

1. CLASSIFICATION GROUPS ACCORDING TO HW0620099: CK.
2. TEST SCOPE ACCORDING TO HW0850199: CATEGORY OF SERVICE REQUIREMENTS 4.
3. IDENTIFICATION ACCORDING TO HW0400397.

02
SUPERSEDES

GRADE OF UNTOL. DIM.: -

M/CG- ~~4/C/M/F~~ AA 0230208WELDING- ~~A/B/C/D~~ -AA0621104

GAS CUTTING- 'T3' AA0621101

REV.	DATE	ALTERED
		CHECKED

CBOM NO.		STATUS OF DRG.	
01440401003			
AGREED DEPT.	NAME	SIGN	DATE
WT	CHHABRA	-SD-	23.09.81

REV.	DATE	ALTERED PA	-SD-
02	26.02.22	CHECKED RM	-SD-

CHANGES AS PER C/A NO.
TGE-22-F0039TYPE OF PRODUCT BRUSHLESS EXCITER FOR
OR
NAME OF CUSTOMER/ PROJECT 500MW TGBHARAT HEAVY ELECTRICALS LTD.
HARDWAR

DEPT. TGE

CODE 4133



SCALE

1:5

WEIGHT(Kg.)

13.847

TITLE

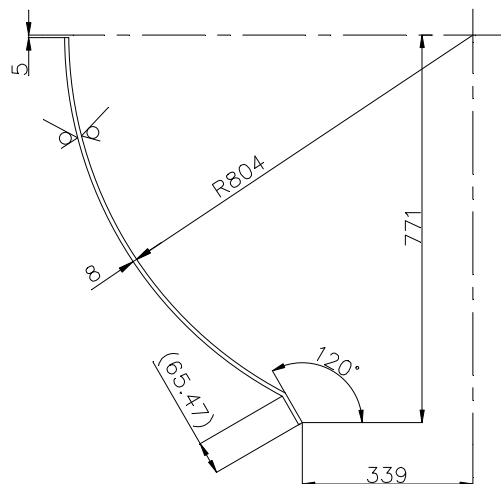
SUPPORT

	NAME	SIGN	DATE	NO.OF VAR.
DRN	T.N.G.	-SD-	18.4.81	-
CHD	K.S.R./K.N.W.	-SD-	22.9.81	-
APD	N.P.G.	-SD-	28.9.81	73, 74
REF. TO ASSY. DRG.				ITEM NO. NO.OF ITEMS
01440401001				022 - 75, 77

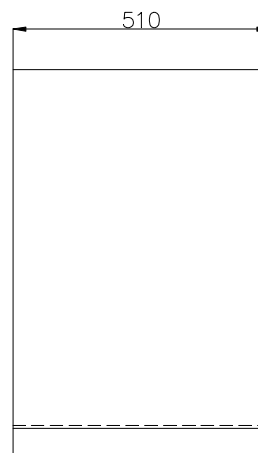
DRAWING NO.
31440401016

SHEET NO. 1 NO.OF SHEETS 1

SIZE A3

DRAWING NO.
31440401017500/
THE REST

DEVELOPED LENGTH= 945



TECHNICAL REQUIREMENTS: -

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

02
SUPERSEDES

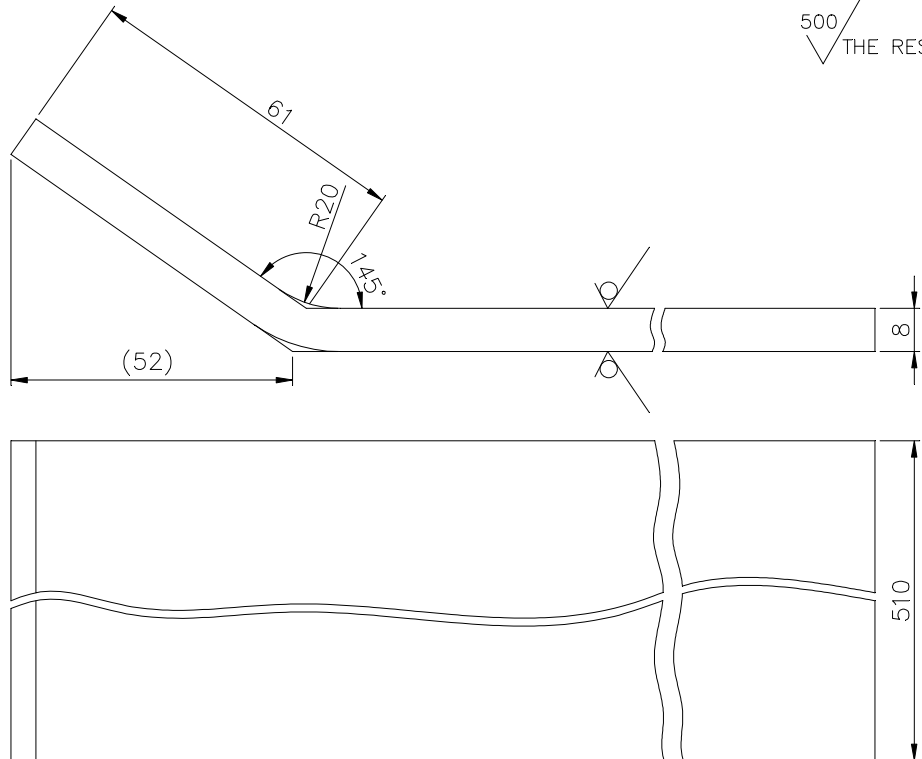
GRADE OF UNTOL. DIM.: -				CBOM NO. 01440401003		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT				B'LESS EXCITER FOR 500MW TG.			
M/CG- <u>V/C/M/F</u> AA 0230208				AGREED DEPT.		NAME		SIGN		DATE		NO.OF VAR.			
WELDING- <u>A/B/C/D</u> -AA621104				WT		CHHABRA		-SD-		23.9.81		-			
GAS CUTTING- 'T3' AA0621101												73, 74			
REV.		DATE		ALTERED		REV.		DATE		ALtered PA		-SD-			
				CHECKED		02		26.02.22		CHECKED RM		-SD-			
CHANGES AS PER C/A NO. TGE-22-F0039				REV.		DATE		REV.		DATE		NO.OF ITEMS			
												75, 77			
				DEPT.		TGE		SCALE		WEIGHT(Kg.)		REF. TO ASSY. DRG.			
				CODE		4133		1:10		30.420		01440401001			
				TITLE		SHEET		1		3		DRAWING NO. 31440401017			
				SHEET NO.1		NO.OF SHEETS 1									

SIZE A3

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	PA -SD-	CBOM No.	STATUS
		CHECKED	02	26.02.22	CHECKED	DRM -SD-	01440401003	OF DRG
CHANGES AS PER C/A NO. TGE-22-F0039			AGREED	NAME	SIGN	DATE		
			DEPT.	WT	CHHABRA	-SD-	23.9.81	
GRADE OF UNTOL.DIM/M/CG/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101								

500
✓ THE REST

TECHNICAL REQUIREMENTS: —


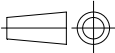
1. MARK IDENTIFICATION ACCORDING TO HW0400397.

02
SUPERSEDES

DEVELOPED LENGTH=420

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

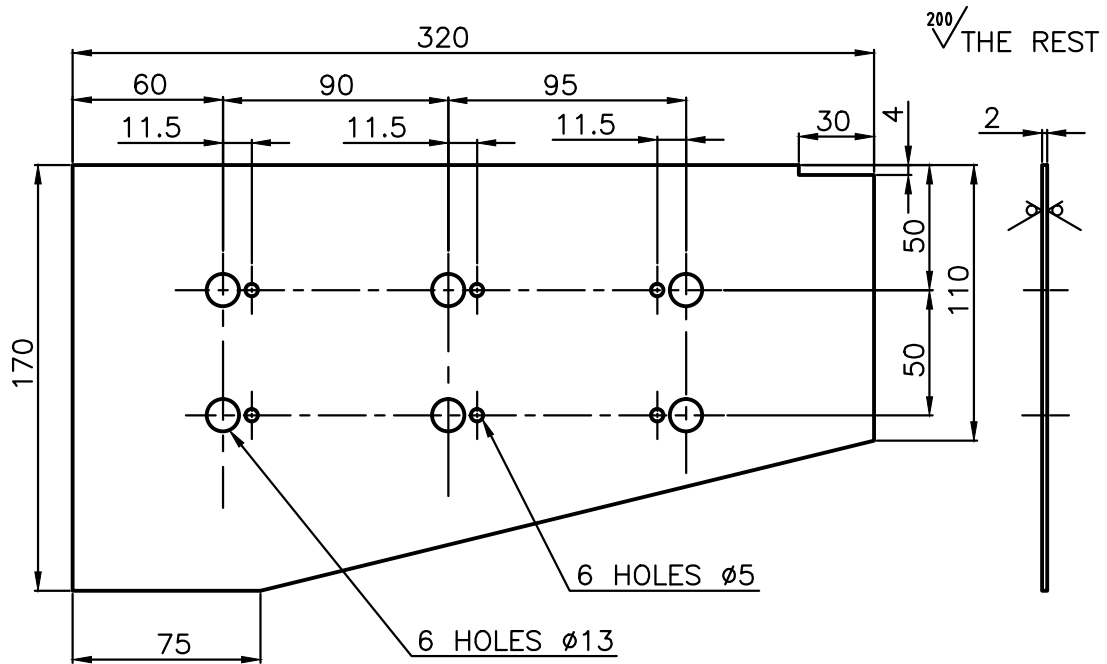
	NAME	SIGN	DATE	NO. OF VAR
DRN	TNG	—SD—	18.4.81	—
CHD	KSR/KNW	—SD—	22.9.81	—
APD	NPG	—SD—	28.9.81	—

SIGN & DATE	<div></div> <div>BHARAT HEAVY ELECTRICALS LTD HARDWAR</div>					DEVELOPED LENGTH=420				
						DRN	NAME	SIGN	DATE	NO. OF VAR
						CHD	TNG	—SD—	18.4.81	—
						APD	KSR/KNW	—SD—	22.9.81	—
INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TD ASSY.DRG.		ITEM No.	No OF ITEMS		
	CODE 4133		1:1	13.520	01440401001		024	—		
	TITLE				DRAWING No.					
	SHEET				41440401040					
	(B'LESS EXCITER FOR 500MW TG)				SHEET No.1 No.OF SHEETS1					

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	CBDM No.		STATUS		
		CHECKED			CHECKED	01440401029		OF DRG		
						AGREED	NAME	SIGN	DATE	
						DEPT.	WTX	AWTXIS	AWTXIS	28/08/2010
GRADE OF UNTOOL.DIM.M/CGC/M/F.AA0230208				WELDING A/B/C/D AA0621104		GAS CUTTING-T3 AA0621101				



TECHNICAL REQUIREMENT :

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.


26-5607-122988 b/kwu
REF.DRG.No.

SIGN & DATE



BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	05/08/2010	
CHD	STGESSM	STGESSM	05/08/2010	
APD	ATGEVK	ATGEVK	01/10/2010	

INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.		ITEM No.	No OF ITEMS	
	CODE 4133		1:2.5	.71	O 1 4 4 O 4 O 1 O 3 1		028		
	TITLE				DRAWING No.				
	SHEET				41440401312				
	(B'LESS EXCITER FOR 800MW TG)				SHEET No.1		No.OF SHEETS1		

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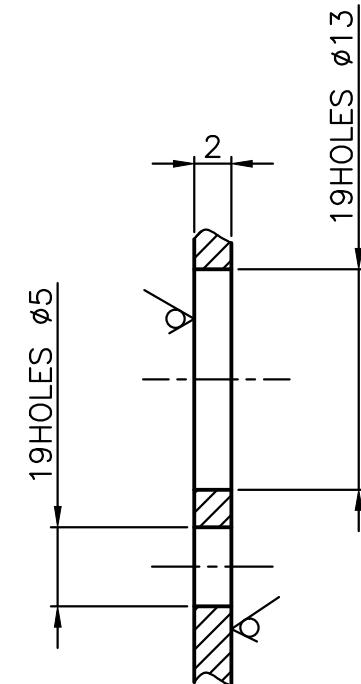
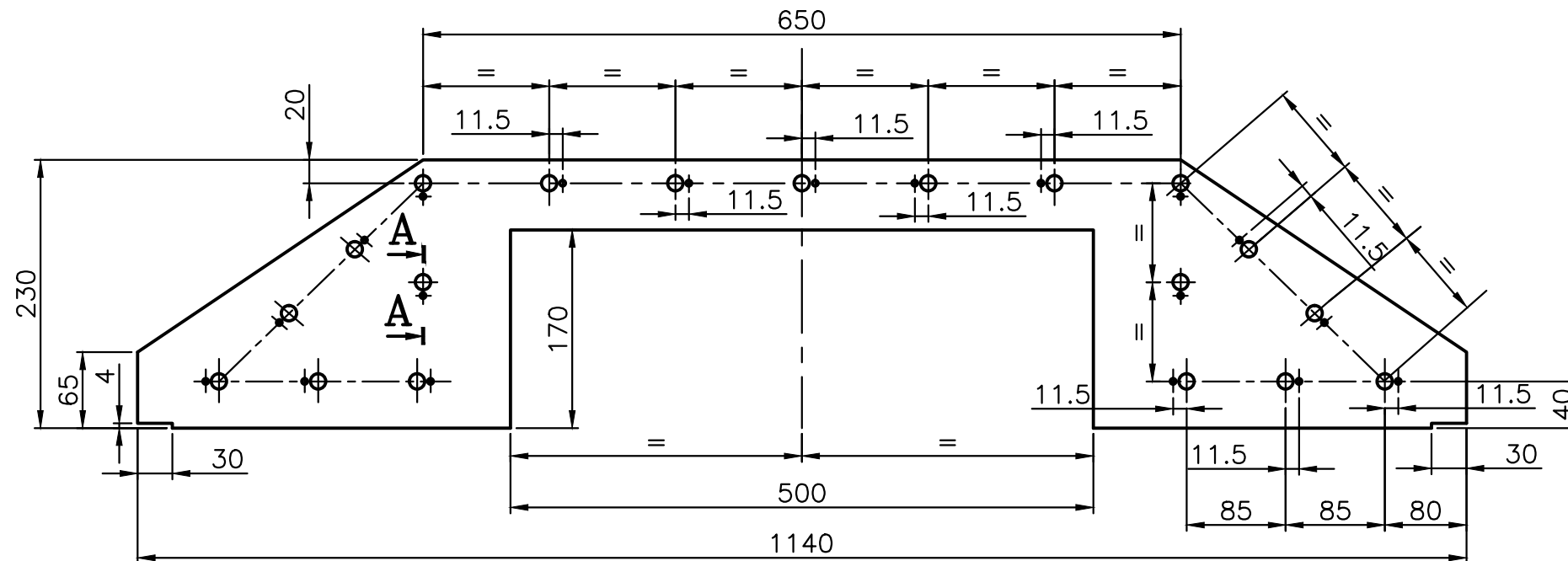
INVENTORY NO. SIGN & DATE 26-5607-122988 b/kwu REF. DRG NO.

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

31440401146
DRAWING NO.



SECTION-AA

TECHNICAL REQUIREMENTS

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

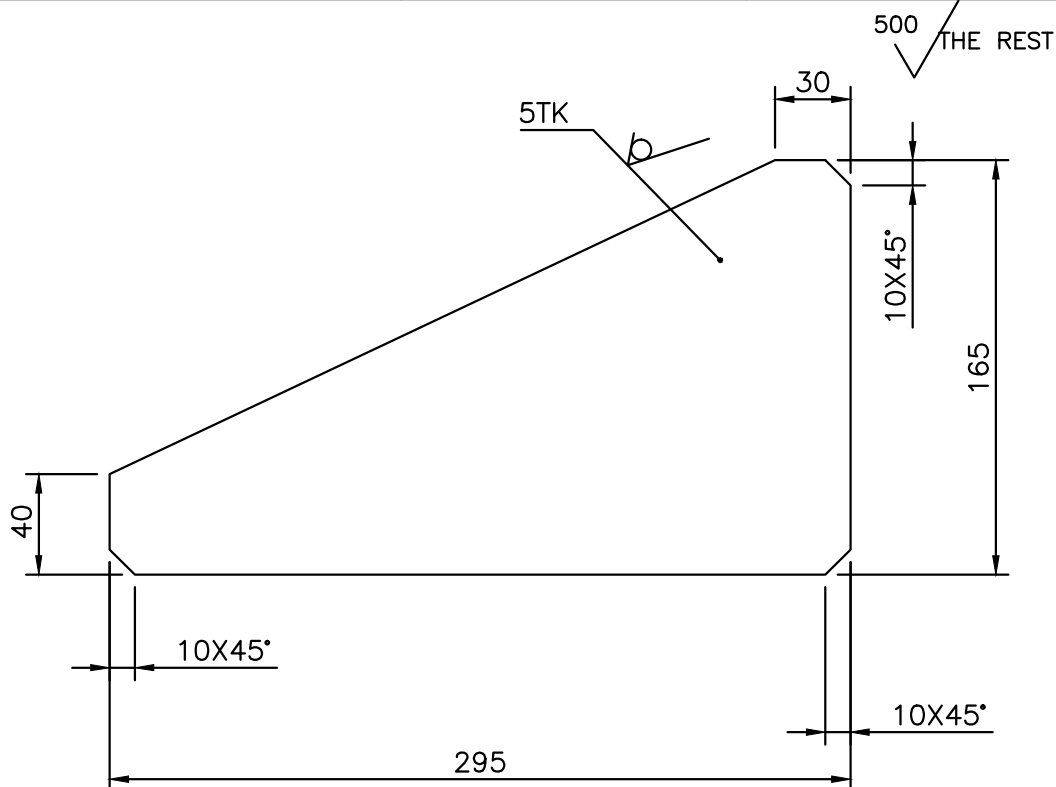
CBOM NO. 01440401029		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 800MW TG.					
AGREED DEPT.	NAME	SIGN	DATE	BHARAT HEAVY ELECTRICALS LTD. HARDWAR		DRN	NAME	SIGN	DATE	NO.OF VAR.	
WTX	AWTXIS	AWTXIS	28/08/2010			CHD	STGEVK	STGEVK	05/08/2010		
						APD	STGEVK	STGEVK	05/08/2010		
						ATGEVK		ATGEVK	01/10/2010	73, 74	
REV.	DATE	ALTERED	REV.	DATE	ALTERED	DEPT. TGE	SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
		CHECKED			CHECKED	CODE 4133	1:5	2.182	01440401031	029	75, 77
						TITLE		DRAWING NO.			
						SHEET		31440401146			
						SHEET NO. 1		NO.OF SHEETS 1			

SIZE A3

FIRST ANGLE PROJECTION


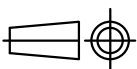
(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	CBOM No. 01440401029		STATUS OF DRG	
						AGREED DEPT.	NAME	SIGN	DATE
						WTX	AWTXBLM	AWTXBLM	28/09/2020
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208 WELDING A7B/C/D AA0621104 GAS CUTTING-T3 AA0621101									



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

REF.DRG.No.	 BHARAT HEAVY ELECTRICALS LTD HARDWAR										DRN	NAME	SIGN	DATE	NO. OF VAR
											CHD	STGERY	STGERY	07/09/2020	
SIGN & DATE	INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.			ITEM No.	No OF ITEMS					
		CODE 4133		1:2.5		1.255	O 1 4 4 0 4 0 1 0 3 1				002				
TITLE		SHEET				DRAWING No.									
						41440401351									
						SHEET No.1			No.OF SHEETS1						

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INVENTORY NO.	SIGN & DATE	26-5607-98976b/KWU (EMT270-369) (ITEM No.61) REF. DRG NO.
---------------	-------------	--

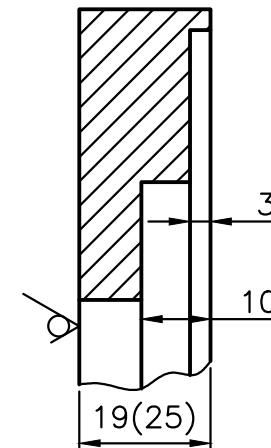
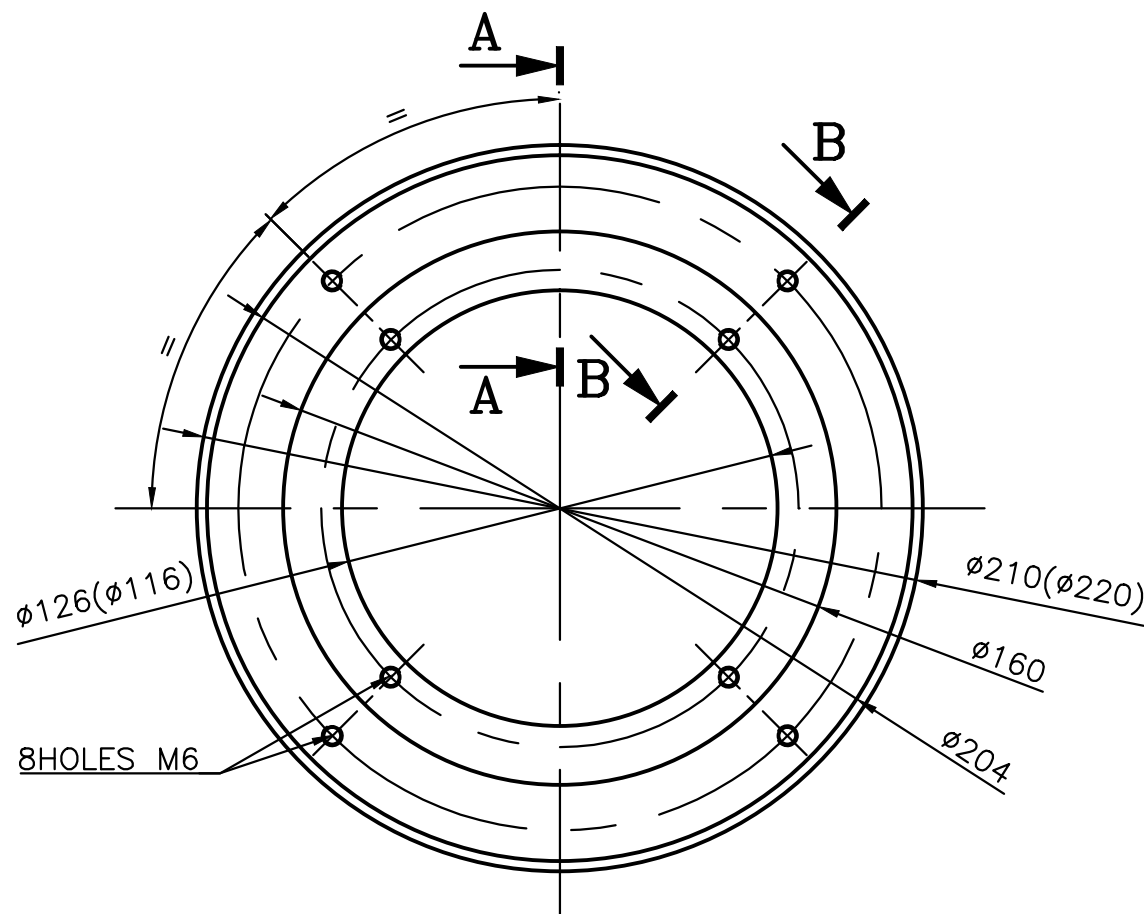
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

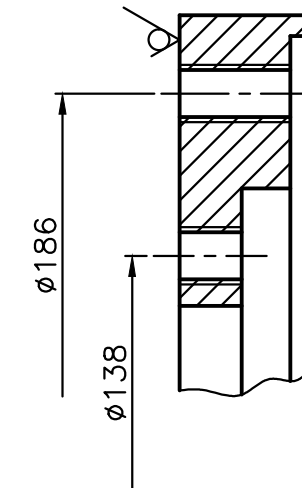
FORM: DG-38(B)

DRAWING NO.
3-144-04-01070

12.5/
▽ THE REST



SECTION AA
SCALE 1:1



SECTION BB
SCALE 1:1

TECHNICAL REQUIREMENTS

- MARK IDENTIFICATION ACCORDING TO HW 0400397.
- DIMENSIONS IN BRACKETS ARE BEFORE MACHINING.

01
SUPERSEDES THE OLD
DRG. UNDER THE SAME NO.
TGE-10-F0018

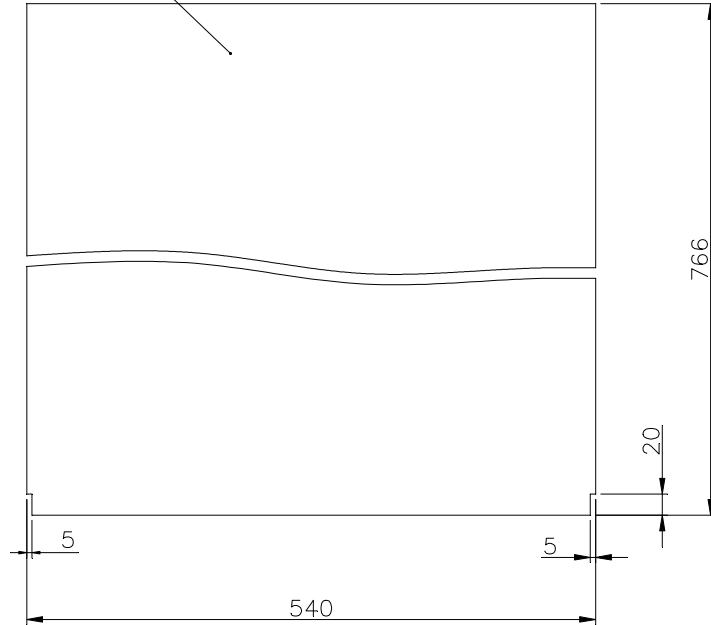
GRADE OF UNTOL. DIM.:—		CBOM NO. 0-144-04-01011		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT																	
M/CG- W/C/M/F AA 0230208		AGREED DEPT.		NAME		SIGN		DATE		BHARAT HEAVY ELECTRICALS LTD. HARDWAR													
WELDING- A/B/C/D AA621104		WT		ROY		-S/D-		21.5.90															
GAS CUTTING- 'T3' AA0621101																							
REV.		DATE		ALTERED		REV.		DATE		ALTERED VIJAY -S/D-		DEPT. TGE		SCALE		WEIGHT(Kg.)		REF. TO ASSY. DRG.		ITEM NO.		NO.OF VAR.	
				CHECKED		01		16.1.10		CHECKED TNG -S/D-		CODE 4133		1:2		2.390		0-144-04-01013		030		73, 74	
										CHANGES ACCORDING TO		TITLE						DRAWING NO.		01		75, 77	
										CH.AD. NO.—		FLANGE						3-144-04-01070		01		75, 77	
										TGE-10-F0018								SHEET NO. 1		NO.OF SHEETS 1		SIZE A3	

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	PA -SD-	CBOM No.		STATUS		
		CHECKED	01	26.02.22	CHECKED	DRM -SD-	01440401003		OF DRG		
CHANGES AS PER C/A NO. TGE-22-F0039			AGREED		NAME		SIGN		DATE		
			DEPT.		CHHABRA		-SD-		3.9.81		
			WT								
GRADE OF UNTOOL DIM/M/CG/M/F			AA0230208			WELDING A/B/C/D		AA0621104		GAS CUTTING-T3 AA0621101	

6 THICK

500/ THE REST



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

01

SUPERSEDES

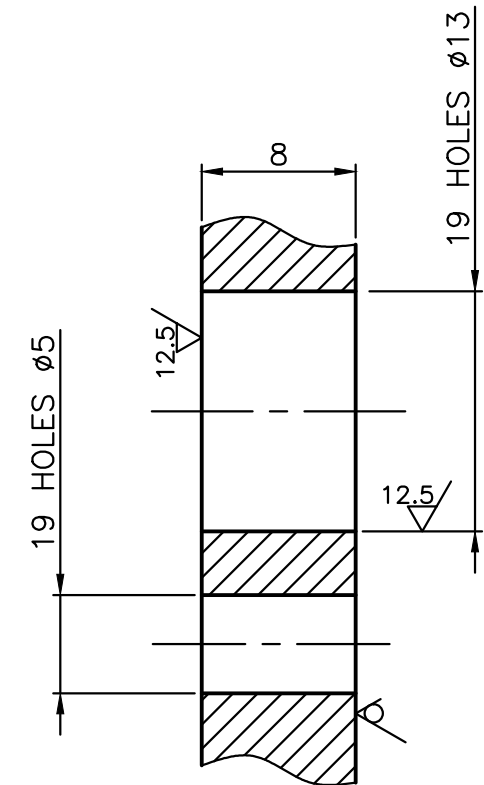
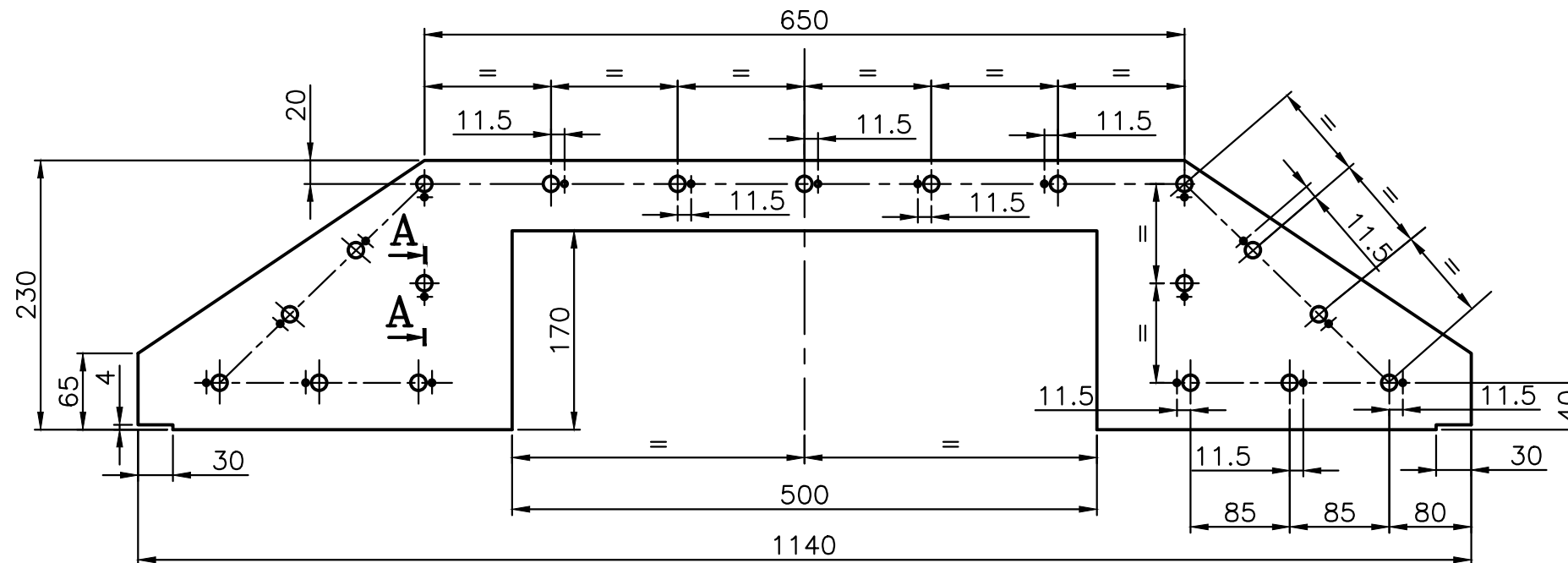
BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	YC GARG	-SD-	29.1.81	
CHD	KSR/KNW	-SD-	22.9.81	
APD	NP GUPTA	-SD-	28.9.81	

INVENTORY No.	SIGN & DATE		SCALE		WEIGHT(Kg)		REF. TO ASSY.DRG.		ITEM No. OF ITEMS	
	DEPT.TGE	CODE	1:5	19.50	01440401001	003				
TITLE					DRAWING No.					
SHEET					41440401010					
(B'LESS EXCITER FOR 500MW TG)					SHEET No.1 No. OF SHEETS 1					

FORM: DG-38(B)


200/√THE REST



SECTION-AA

TECHNICAL REQUIREMENTS

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

				CBOM NO. 01440401029		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT				B'LESS EXCITER FOR 800MW TG				
GRADE OF UNTOL. DIM.:—				WTX	AWTXIS	AWTXIS	28/08/2010	<div><div><div>बी एच ई सी</div><div>BHEL</div></div><div>BHARAT HEAVY ELECTRICALS LTD. HARDWAR</div></div>					NAME	SIGN	DATE	NO.OF VAR.
M/CG— V/C/M/F AA 0230208												DRN	STGEVK	STGEVK	05/08/2010	
WELDING— A/B/C/D —AA621104												CHD	STGESSM	STGESSM	05/08/2010	
GAS CUTTING—'T3'AA0621101												APD	ATGEVK	ATGEVK	01/10/2010	
REV.	DATE	ALTERED CHECKED		REV.	DATE	ALTERED CHECKED		DEPT. TGE		SCALE	WEIGHT(Kg.)	REF. TO ASSY. DRG.		ITEM NO.	NO.OF ITEMS	
								CODE 4133		1:5	8.482	01440401031		004		75, 77
								TITLE				1	3	DRAWING NO. 31440401145		
												SHEET NO.1		NO.OF SHEETS 1		

SIZE A3

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26-5607-122988 b/kwu
REF. DRG NO.

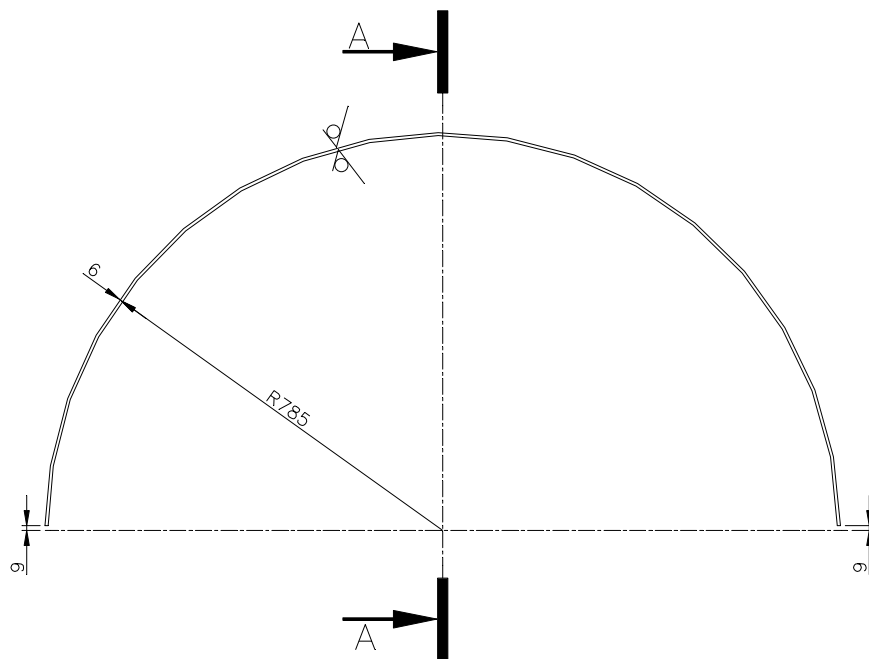
SIGN & DATE

INVENTORY NO.

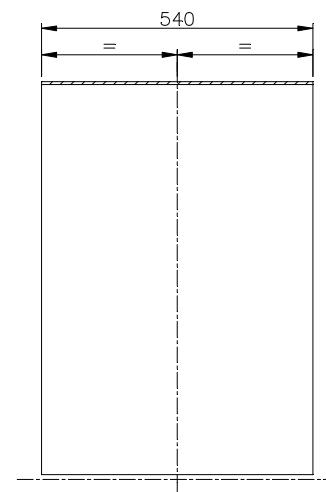
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

500/
THE RESTDRAWING NO.
31440401010

DEVELOPED LENGTH=2458



SECTION A-A

TECHNICAL REQUIREMENT: -

1. IDENTIFICATION ACCORDING TO HW0400397.

02
SUPERSEDES

GRADE OF UNTOL. DIM.: -

M/CG- Y/Q/M/F AA 0230208

WELDING-A/B/C/D-AA0621104

GAS CUTTING-T3'AA0621101

REV.	DATE	ALTERED
02	26.02.22	CHECKED

CBOM NO. 01440401003			STATUS OF DRG.
AGREED DEPT.	NAME	SIGN	DATE
WT	CHHABRA	—SD—	23.9.81

REV.	DATE	ALTERED PA	-SD-
02	26.02.22	CHECKEDRM	-SD-

CHANGES AS PER C/A
NO.
TGE-22-F0039TYPE OF PRODUCT
OR
NAME OF CUSTOMER/ PROJECT
BRUSHLESS EXCITER FOR
500MW TGBHARAT HEAVY ELECTRICALS LTD.
HARDWAR

DEPT. TGE

CODE 4133



SCALE

1:10

WEIGHT(Kg.)

62.642

TITLE

SHEET

NAME	SIGN	DATE	NO.OF VAR.
TNG	-SD-	18.4.81	-
KSR/KNW	-SD-	22.9.81	-
NPG	-SD-	28.9.81	73, 74

REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
01440401001	005	-
		75, 77

DRAWING NO.
31440401010

SHEET NO. 1 NO.OF SHEETS 1

SIZE A3

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OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

INVENTORY NO. SIGN & DATE 26-5607-122988 a/kwu REF. DRG NO.

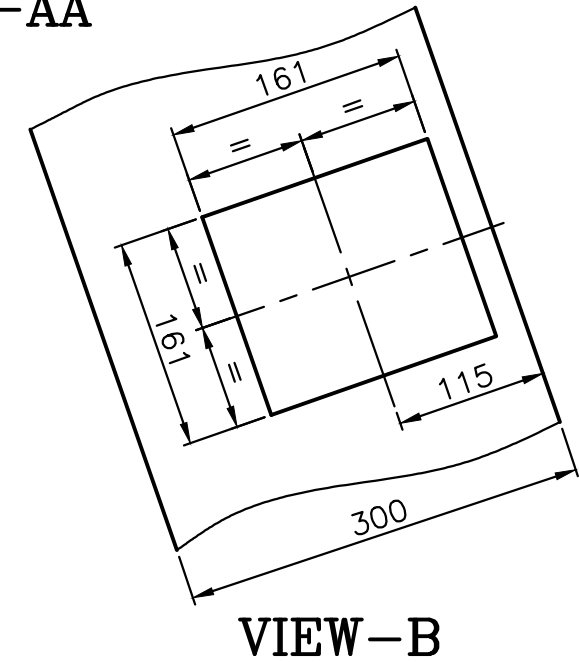
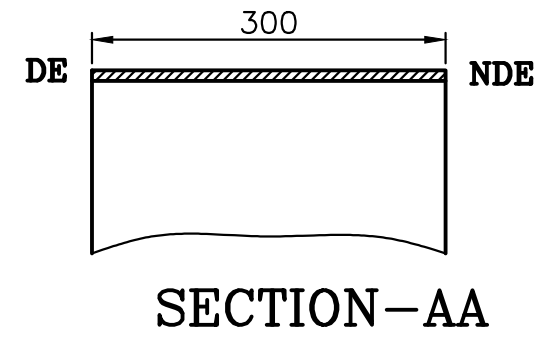
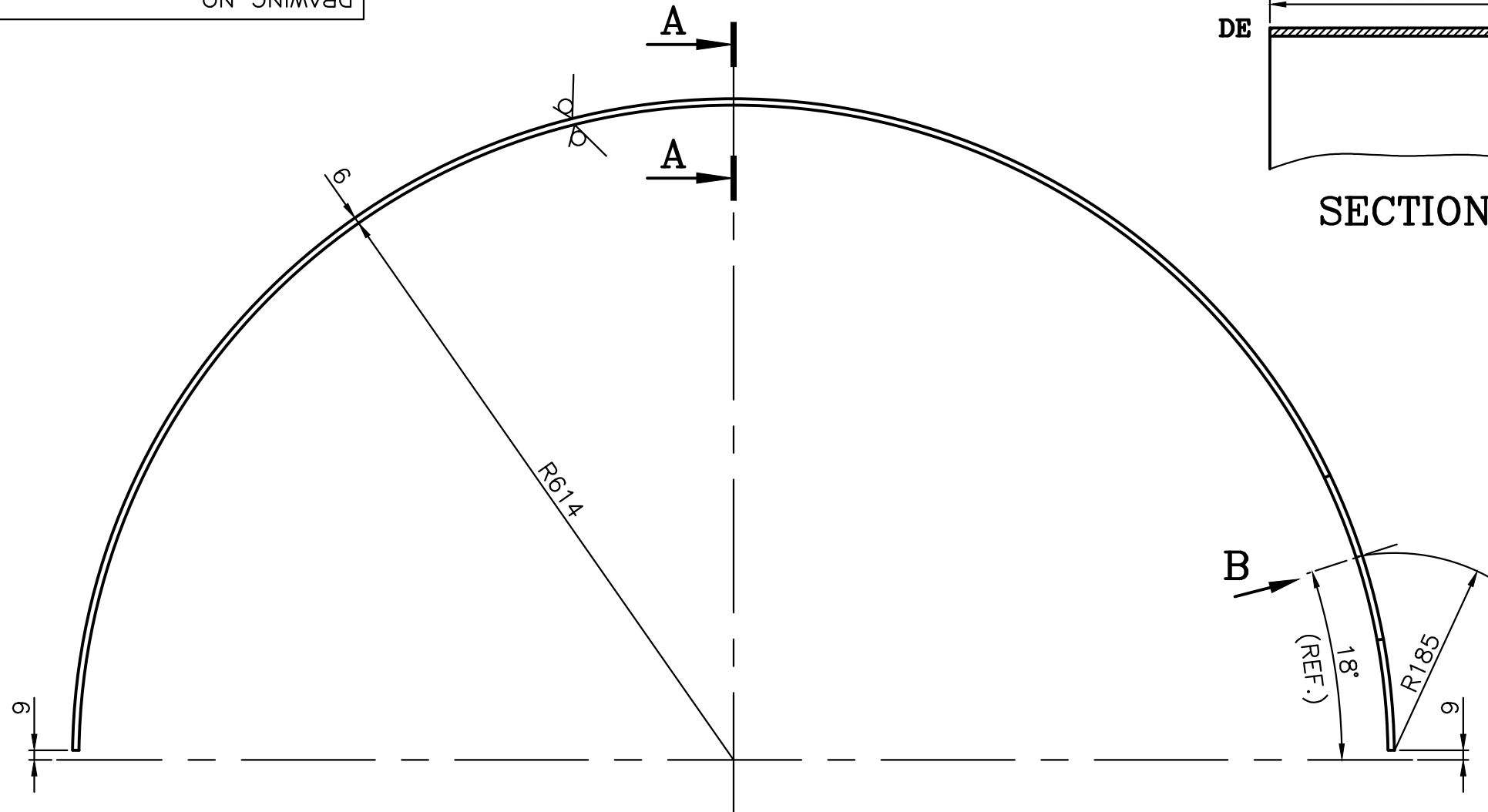
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

500/ THE REST

31440401147
DRAWING NO.



DEVELOPED LENGTH=1920

TECHNICAL REQUIREMENTS

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

CBOM NO. 01440401029		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 800MW TG.				
AGREED DEPT.	NAME	SIGN	DATE	BHARAT HEAVY ELECTRICALS LTD. HARDWAR		DRN	NAME	SIGN	DATE	NO.OF VAR.
WTX	AWTXIS	AWTXIS	28/08/2010			CHD	STGEVK	STGEVK	05/08/2010	
GRADE OF UNTOL. DIM.:—						APD	STGEVK	STGEVK	01/10/2010	73, 74
M/CG- W/C /M/F AA 0230208						REF. TO ASSY. DRG.		ITEM NO.		NO.OF ITEMS
WELDING-A/B/C/D-AA621104						01440401031		006		75, 77
GAS CUTTING-'T3'AA0621101						DRAWING NO.		31440401147		
REV.	DATE	ALTERED CHECKED	REV.	DATE	ALTERED CHECKED	TITLE		SHEET		
						DEPT. TGE		SCALE		
						CODE 4133		1:5		
						WEIGHT(Kg.)		26.031		
						SHEET		1 3		
						SHEET NO.1		NO.OF SHEETS 1		

SIZE A3

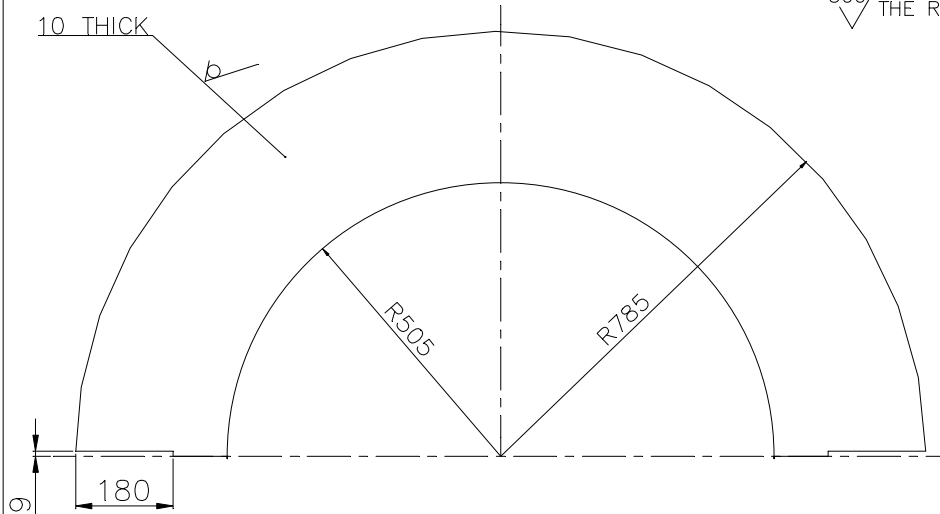
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	PA -SD- DRM -SD-	CBDM No. 01440401003			STATUS OF DRG
			CHANGES AS PER C/A NO. TGE-22-F0039				AGREED DEPT.	NAME	SIGN	DATE
							WT	CHHABRA	-SD-	3.9.81
GRADE OF UNTO L.DIM.M/CG/M/F.AA0230208			WELDING A/B/C/D AA0621104				GAS CUTTING-T3 AA0621101			

500/ THE REST

10 THICK



TECHNICAL REQUIREMENT: -

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

01

SUPERSEDES



BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	YC GARG	-SD-	30.1.81	
CHD	KSR/KNW	-SD-	22.9.81	
APD	NP GUPTA	-SD-	28.9.81	

26-5607-86545 a/kwu
REF.DRG.No. IT.3

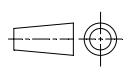
SIGN & DATE

INVENTORY No.

DEPT.TGE

CODE 4133

TITLE



SCALE

1:10

WEIGHT(Kg)

44.5

REF.TD ASSY.DRG.

01440401001

ITEM No.

007

No OF ITEMS

-

SHEET

(B'LESS EXCITER FOR 500MW TG)

DRAWING No.

41440401011

SHEET No.1

No.OF SHEETS1

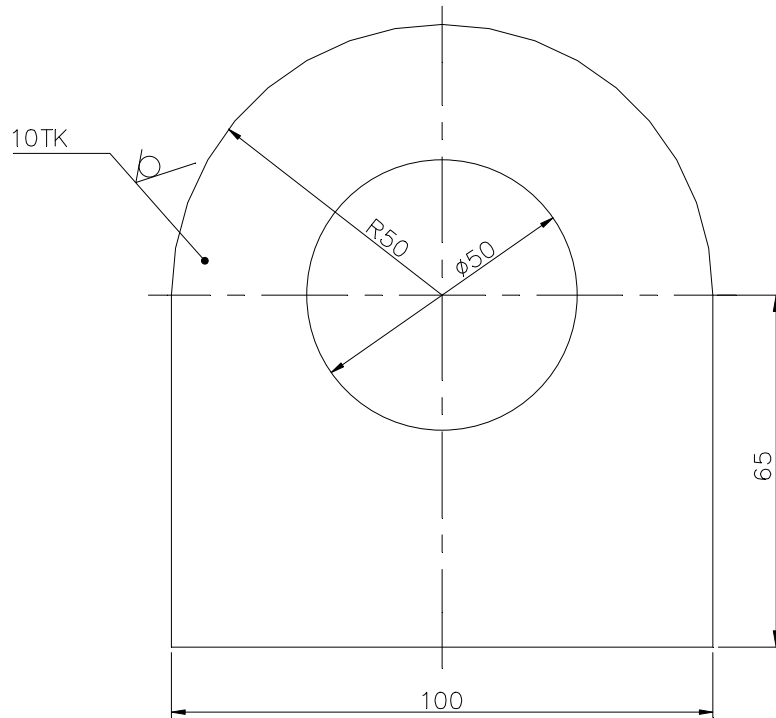
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	PA -SD-	CBOM No.	STATUS
		CHECKED	01	26.02.22	CHECKED	DRM -SD-	01440401003	OF DRG
CHANGES AS PER C/A NO. TGE-22-F0039			AGREED	NAME	SIGN	DATE		
			DEPT.	WT	CHHABRA	-SD-	23.9.81	

GRADE OF UNTOL.DIM.M/CG/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101


500 THE REST



TECHNICAL REQUIREMENT: -

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

01
SUPERSEDES

SIGN & DATE		INVENTORY No.		SCALE		WEIGHT(Kg)		REF.TD ASSY.DRG.		ITEM No.		No. OF ITEMS	
		BHARAT HEAVY ELECTRICALS LTD HARDWAR		1:1		0.66		01440401001		008		-	
DEPT.TGE		CODE 4133		TITLE		DRAWING No.		SHEET No.1		No. OF SHEETS			
				LIFTING LUG		41440401020							
				(B'LESS EXCITER FOR 500MW TG)									

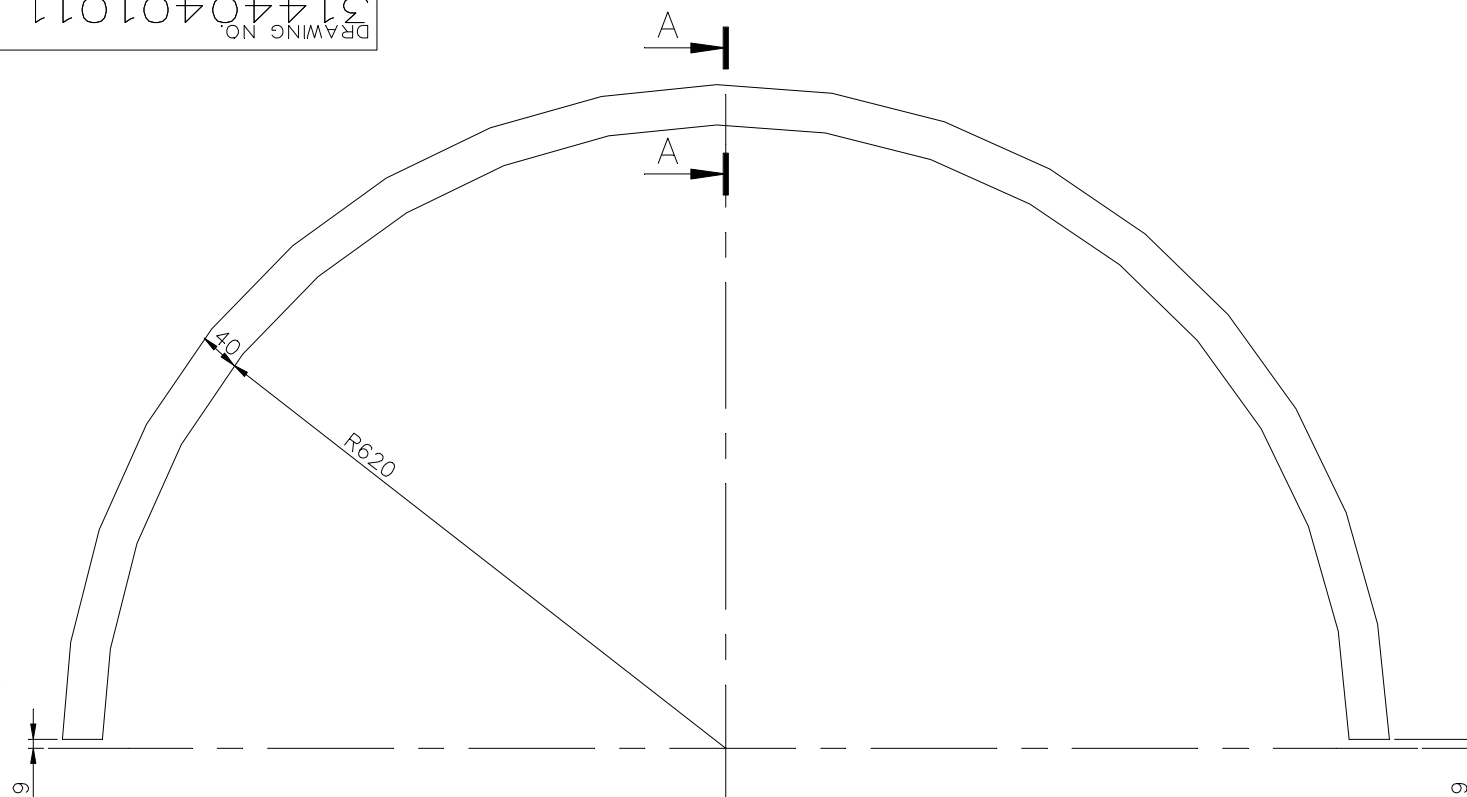
FIRST ANGLE PROJECTION

DOC REV NO.: 2

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

ALL OVER

DRAWING NO.
31440401011

SECTION A-A

SCALE 1:1

DEVELOPED LENGTH=1993

TECHNICAL REQUIREMENT: —

1. MARK IDENTIFICATION ACCORDING TO HW0400397.

SUPERSEDES
01

CBOM NO. 01440401003		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT		B'LESS EXCITER FOR 500MW TG.			
AGREED DEPT.	NAME	SIGN	DATE	DRN		NAME	SIGN	DATE	NO.OF VAR.
WT	CHHABRA	-SD-	23.9.81	CHD		TNG	-SD-	18.4.81	—
GRADE OF UNTOL. DIM.: —				APD		KSR/KNW	-SD-	22.9.81	—
M/CG- Y/C/M/F AA 0230208				BPH		NPG	-SD-	28.9.81	73, 74
WELDING- A/B/C/D -AA621104				DEPT. TGE		REF. TO ASSY. DRG.		ITEM NO.	NO.OF ITEMS
GAS CUTTING- 'T3' AA0621101				CODE 4133		01440401001		009	— 75, 77
REV.	DATE	ALTERED CHECKED	REV.	DATE	ALTERED PA —SD— CHECKED RM —SD—	SCALE 1:5		WEIGHT(Kg.) 6.296	
			CHANGES AS PER C/A NO. TGE-22-F0039			TITLE FLAT		DRAWING NO. 31440401011	
						SHEET NO.1		NO.OF SHEETS 1	

SIZE A3



BILL OF MATERIAL

Printed
On:27.08.2024

BOM No: 01440401031

Var: 00

Revno: 5

Rev Date: 18.05.2020

Printed By:

Description: AIR GUIDE COVER (WELDED)

Tot wt: 674.07

Item No	Qty(Total)	Zone	Drawingno Var Mvar	Mat Code	Mat Spec	Weight
Typ	Cat		Description		Assy. Remarks	
			Var/Matl. Description		GRP	Fab Wt
0			01440401031 00			674.07
1(1)			AIR GUIDE COVER (WELDED)			
MF	DR				N	674.25
1			41440401311 00 00	AA1011808099	AA10108	2.87
4(4)			SHEET			
MF	DR					
2			41440401351 00	AA1011808013	AA10108	1.255
9(9)			SHEET			
MF	DR					
3			41440401010 00 00	AA1011808030	AA10108	19.5
2(2)			SHEET		BOR 01440401003	
MF	DR					
4			31440401145 00 00	AA1011808099	AA10108	8.482
4(4)			SHEET			
MF	DR					
5			31440401010 00 00	AA1011808030	AA10108	62.642
1(1)			SHEET		BOR 01440401003	
MF	DR					
6			31440401147 00 00	AA1011808030	AA10108	26.031
1(1)			SHEET			
MF	DR					
7			41440401011 00 00	AA1011819074	AA10119	44.5
2(2)			SHEET		BOR 01440401003	
MF	DR					
8			41440401020 00 00	AA1011819074	AA10119	0.66
4(4)			LIFTING LUG		BOR 01440401003	
MF	DR					
9			31440401011 00 00	AA1010308580	AA10108	6.296
2(2)			FLAT		BOR 01440401003	
MF	DR					
10			41440401045 00 00	AA1020218070	AA10218	0.013
2(2)			STUD		BOR01440401003	
MF	DR					
11			21440401002 00			0.42
2(2)			FRAME		BOR 01440401003	
MF	DR				N	
12			41440401338 00 00	AA1011808013	AA10108	1.18
1(1)			SHEET			
MF	DR					
13				AA1010308084	AA10108	2.3
1(1)			FLAT 16X50X400			
MF	DR		ST-A(FE410 WA)FLAT			
14			41440401324 00 00	AA1011808030	AA10108	13.379
4(4)			SHEET			
MF	DR					
15			31440401015 00			18.04
1(1)			SUPPORT		BOR 01440401003	
MF	DR				N	

ENGG

Initial Date

Worked By tgeessm 01.07.2010
 Checked By tgeessm 01.07.2010
 Approved By tgevk 05.08.2010



BILL OF MATERIAL

Printed
On:27.08.2024

BOM No: 01440401031

Var: 00

Revno: 5

Rev Date: 18.05.2020

Printed By:

Description: AIR GUIDE COVER (WELDED)

Tot wt: 674.07

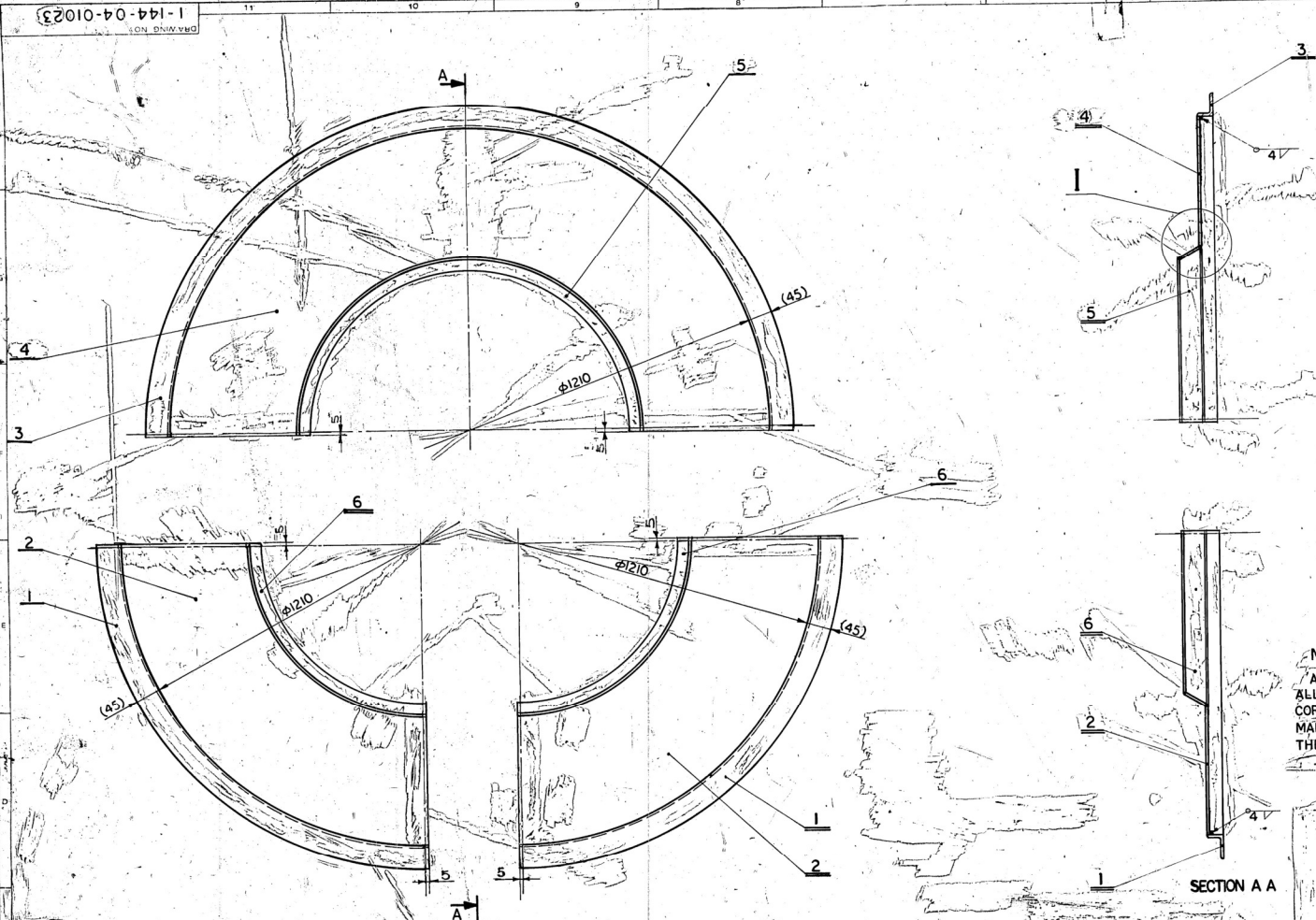
Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
16			41440401012 00 00	AA1011819074	AA10119	32.0
4(4)			SHEET		BOR 01440401003	
MF	DR					
17			31440401012 00 00	AA1010308580	AA10108	3.125
4(4)			FLAT		BOR 01440401003	
MF	DR					
18				AA1011819171	AA10119	12.7
4(4)			STRIP 32X60X842			
MF	DR		ST-FE410 WB-PLATE			
19			41440401038 00 00	AA1011819171	AA10119	8.0
2(2)			STRIP		BOR 01440401003	
MF	DR					
20				HW1041046839	AA10446	1.017
1(1)			TUBE 33.7X2.6X510			
MF	DR		ST-BQ-A1-CDS-TUBE			
21			31440401144 00 00	AA1011808030	AA10108	24.353
1(1)			SHEET			
MF	DR					
22			31440401016 00			13.85
1(1)			SUPPORT		BOR 01440401003	
MF	DR				N	
23			31440401017 00 00	AA1011808056	AA10108	30.42
1(1)			SHEET		BOR 01440401003	
MF	DR					
24			41440401040 00 00	AA1011808056	AA10108	13.52
1(1)			SHEET		BOR 01440401003	
MF	DR					
25				AA7121123371	AA7121123	0.039
58(58)			SCRU HEX A- 8.8			
SI	DR		M12X35			
26				HW7169098024	HW7169098	0.005
58(58)			WASHER LOCK WITH LUG-ST			
SI	DR		13			
27				AA7151115040	AA7151115	0.017
58(58)			NUT HEX. A-8			
SI	DR		M12			
28			41440401312 00 00	AA1011715112	AA10115	0.71
2(2)			SHEET		TECHNOLOGICAL	
MF	DR					
29			31440401146 00 00	AA1011715112	AA10115	2.182
2(2)			SHEET		TECHNOLOGICAL	
MF	DR					
30			31440401070 00 00	AA1011819155	AA10119	2.39
1(1)			FLANGE		CBOM01440401011	
MF	DR					

ENGG

Initial Date

Worked By tgeessm 01.07.2010
Checked By tgeessm 01.07.2010
Approved By tgevk 05.08.2010

1-144-04-01023



SYMBOL AND SIZE OF SEAM	4 ∇
SEAM LENGTH M	6-050
WEIGHT OF DEPOSITED METAL Kg	0-570
TYPE OF ELECTRODE	E-6013

MANUFACTURING PROCEDURE

ANGLES ITEM 1 & 3 TO BE BENT TO I.D. OF 1210 KEEPING BENDING ALLOWANCE OF 200 mm AT BOTH ENDS. CHECK THE BENDING CORRECTNESS OF THE ANGLES WITH TECHNOLOGICAL TEMPLATE (TO BE MADE BY SUBCONTRACTOR) AND RECTIFY IF NECESSARY. CUT OFF THE EXTRA LENGTH.

TACK WELD ALL THE ITEMS FOLLOWED BY REGULAR WELDING.

TECHNICAL REQUIREMENTS

- DIMENSIONS IN THE BRACKETS ARE FOR REFERENCE ONLY.
- CLASSIFICATION GROUPS ACCORDING TO HW 0620099 : CK.
- TEST SCOPE ACCORDING TO HW 0850199 : CATEGORY OF SERVICE REQUIREMENTS 4.
- SURFACE TREATMENT (i.e. SHOT BLASTING/PAINTING ETC.) AS PER TECHNOLOGICAL INSTRUCTION NO. 0912-015.
- CHECK ALL THE 3 SEGMENTS BY TACK WELDING TOGETHER FOR COMPLETE DIMENSIONS AND FLATNESS OF THE COVER.
- THIS JOB IS TO BE OFF LOADED IN CONJUNCTION WITH AIR GUIDE COVER (WELDED) TO DRG. 0-144-04-01013, (APPLICABLE IF OFF LOADED).
- FOR COVER MACHINED REFER DRG. 1-144-04-01022.
- IDENTIFICATION ACCORDING TO HW 0400397.
- ALL THE THREE SEGMENTS OF COVER OF EACH P.O. ARE MATCHED & SUITABLY IDENTIFIED SO THAT MIXING OF SEGMENTS OF COVERS OF OTHER PLANT ORDER IS AVOIDED.

10. TECHNOLOGICAL SUPPORTS TO BE PROVIDED DURING WELDING TO MINIMISE DISTORTION.

SCALE: 1:1

002	---	006 PLATE	-3-144-04-01075	- AA101808013	- NO	1-000	F
001	---	005 PLATE	-3-144-04-01074	- AA101808013	- NO	2-000	H
001	---	004 SEGMENT	-4-144-04-01178	- AA101808056	- NO	24-360	G
001	---	003 ANGLE	-3-144-04-01069	- AA101808056	- NO	5-570	F
002	---	002 SHEET	-4-144-04-01177	- AA101808056	- NO	12-260	F
002	---	001 ANGLE	-3-144-04-01068	- AA101808056	- NO	2-810	E

VAR CO	REMARKS	ITEM NO	DESCRIPTION	UNIT	VAR	MATERIAL	UNIT
--------	---------	---------	-------------	------	-----	----------	------

CARD TYPE-1	CARD TYPE-2
0-144-04-01011	BRUSHLESS EXCITER FOR 500 MW TG.

NAME	DATE	NAME OF CUSTOMER / PROJECT	DATE
W72	21/05/2010		

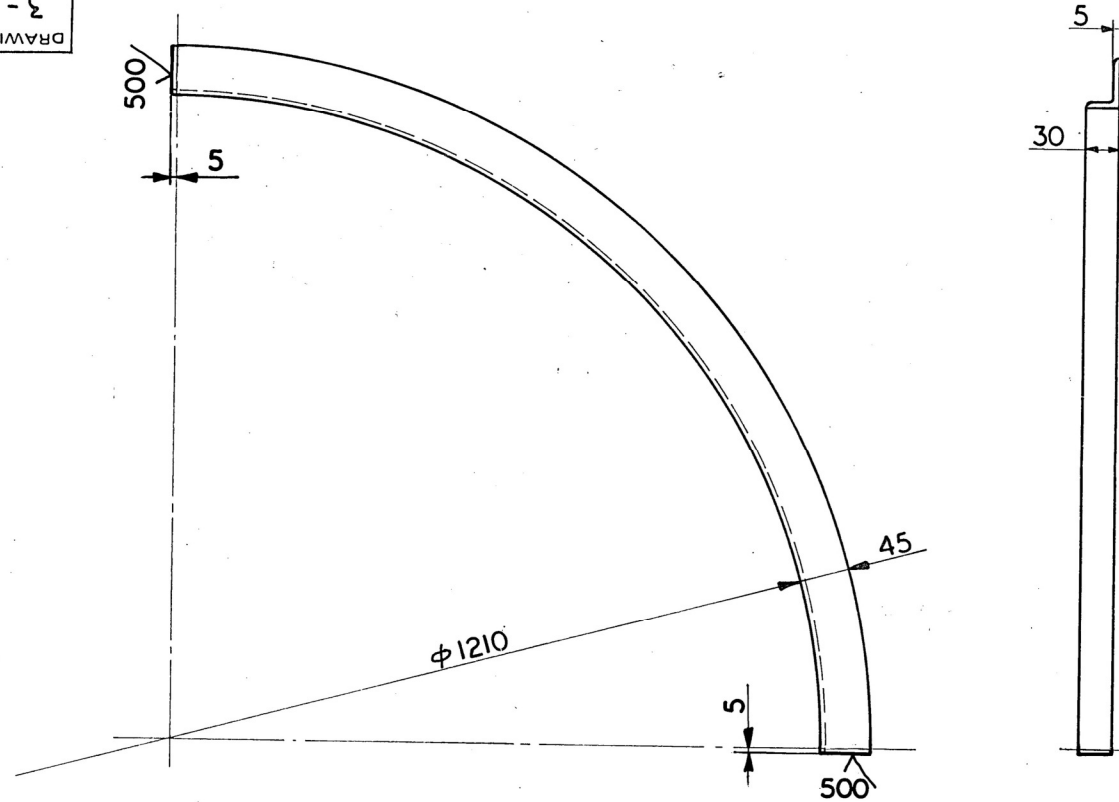
NAME	DATE	NAME OF CUSTOMER / PROJECT	DATE
W72	21/05/2010		

NAME	DATE	NAME OF CUSTOMER / PROJECT	DATE
W72	21/05/2010		

NAME	DATE	NAME OF CUSTOMER / PROJECT	DATE
W72	21/05/2010		

3-144-04-01068

DRAWING NO.



DEVELOPED LENGTH = 996

TECHNICAL REQUIREMENT

I. IDENTIFICATION ACCORDING TO HW 0400397.

—	—	—	ANGLE	—	—	HW 1012608964	—	—	2810
VAR. 00	REMARKS	ITEM NO.	DESCRIPTION	59	DRAWING NO.	29 31	MATERIAL CODE	55 57	UNIT WT. (Kg.)
59	64 65	75 25 27	29	58	60	32 33 46	VAR. MATERIAL SPECN.	54	66

CARD TYPE-3

28

CARD TYPE-1

28 → CARD TYPE-2

GMS/GR. SP. NO.	STATUS OF DRG.
0-144-04-01011	
AGREED DEPT.	NAME
WT	ROY
SIGN.	DATE
	21/5/90

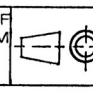
TYPE OF PRODUCT

OR BRUSHLESS EXCITER FOR 500MW TG.
NAME OF CUSTOMER/PROJECTBHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DRN.	NAME	SIGN.	DATE	NO. OF
CHD.	T. N. G.	20/3/90		VAR.
APPD.	S.M.	21.3.90		
	I.C. RAO	16.6.90		

REV	DATE	ALTERED
		CHECKED

DEPT.	GRADE OF
T.G.E.	UNTOLD DIM
CODE	
4133	¢/M/F

SCALE
1:5WEIGHT (Kg)
2-810

REF. TO ASSY. DRG.	ITEM NO.	NO. OF
1-144-04-01023	001	ITEMS

ANGLE

DRAWING NO.	REV.
3-144-04-01068	
SHEET NO.	NO. OF SHEETS:-

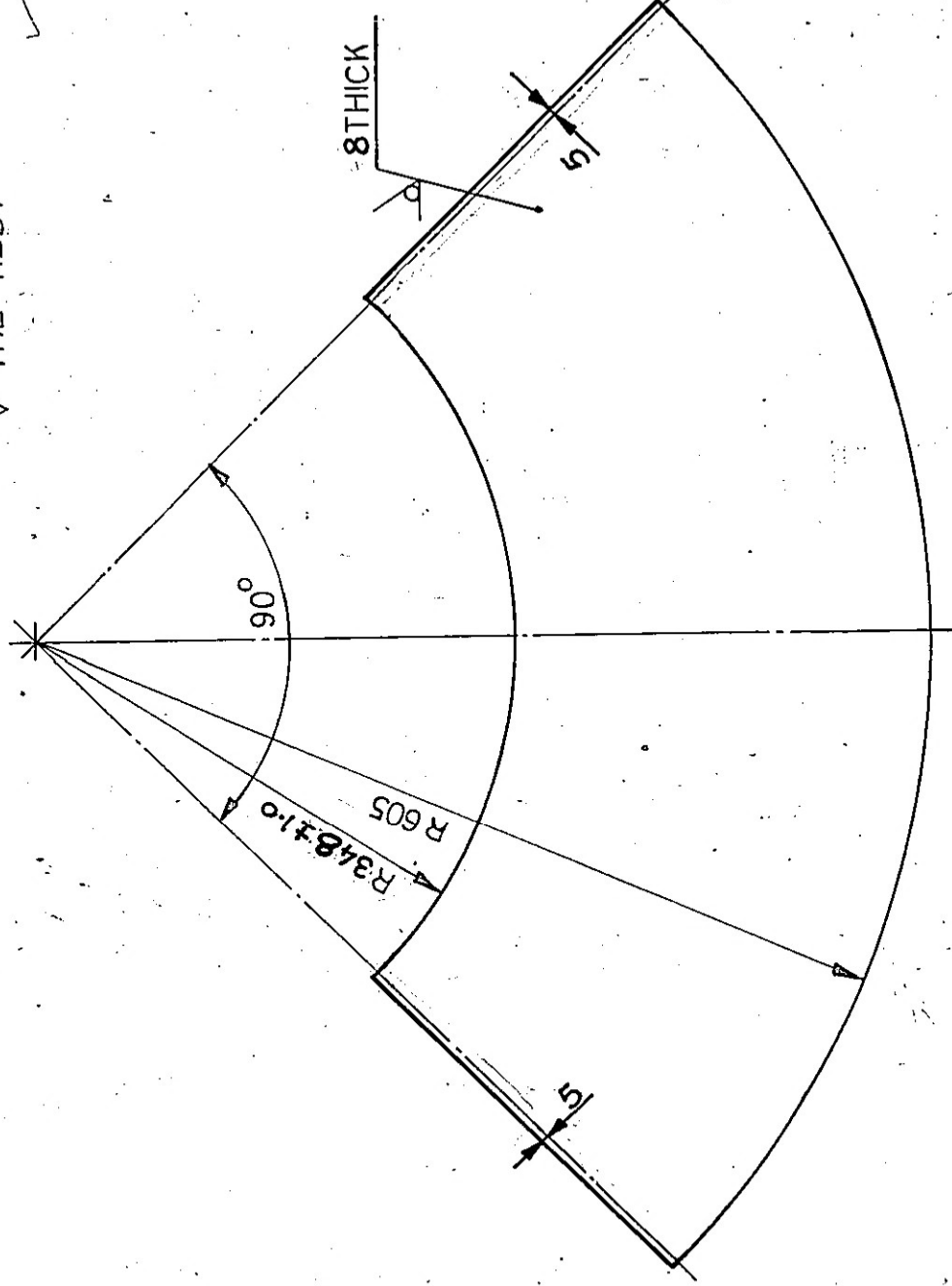
SIZE A3

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	G.M.S. NO. 0-144-04-01011	STATUS OF DRG. U
						AGREED DEPT.	SIGN
						NAME	DATE
						WT	21 5/90
						ROY	

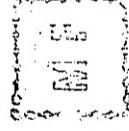
500

THE REST



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW 04 00 397.



—	—	SHEET	—	AA1011808056	—	—	12 260
REMARKS.	ITEM NO.	DESCRIPTION	VAR.	AA10108	—	—	—
				MATERIAL CODE	A	—	UNIT WEIGHT
				MATERIAL SPECN	C	—	—
CARD TYPE-3	CARD TYPE-1	CARD TYPE-2					



BHARAT HEAVY ELECTRICALS LTD.

RANIPUR - HARDWAR.

DEPT TGE	CODE 4133	SCALE 1:5	WEIGHT (KG) 12-260	REF. TO ASSY. DRG. 1-144-04-01023	ITEM NO. 002
SHEET				NAME T.N.G.	SIGN. Balle
				DRAWN T.N.G.	DATE 24.3.90
				CHECKED S.M.	DATE 24.4.90
				APPROVED I.C.RAO	DATE 16.6.90

(BRUSHLESS EXCITER FOR 500 MW TG.)

Dimensions to be Controlled Within Limits as Shown.
Machining Tolerance ± 0.25 mm Unless Otherwise
Specified.
Shown Non-Machining Tolerance ± 0.1 mm

4-144-04-01177

SHEET NO. 1 NO. OF SHEETS. 1

SIZE A4

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

26-5607-99390/KW
(ITEM NO. 67)
Ref Drg. No

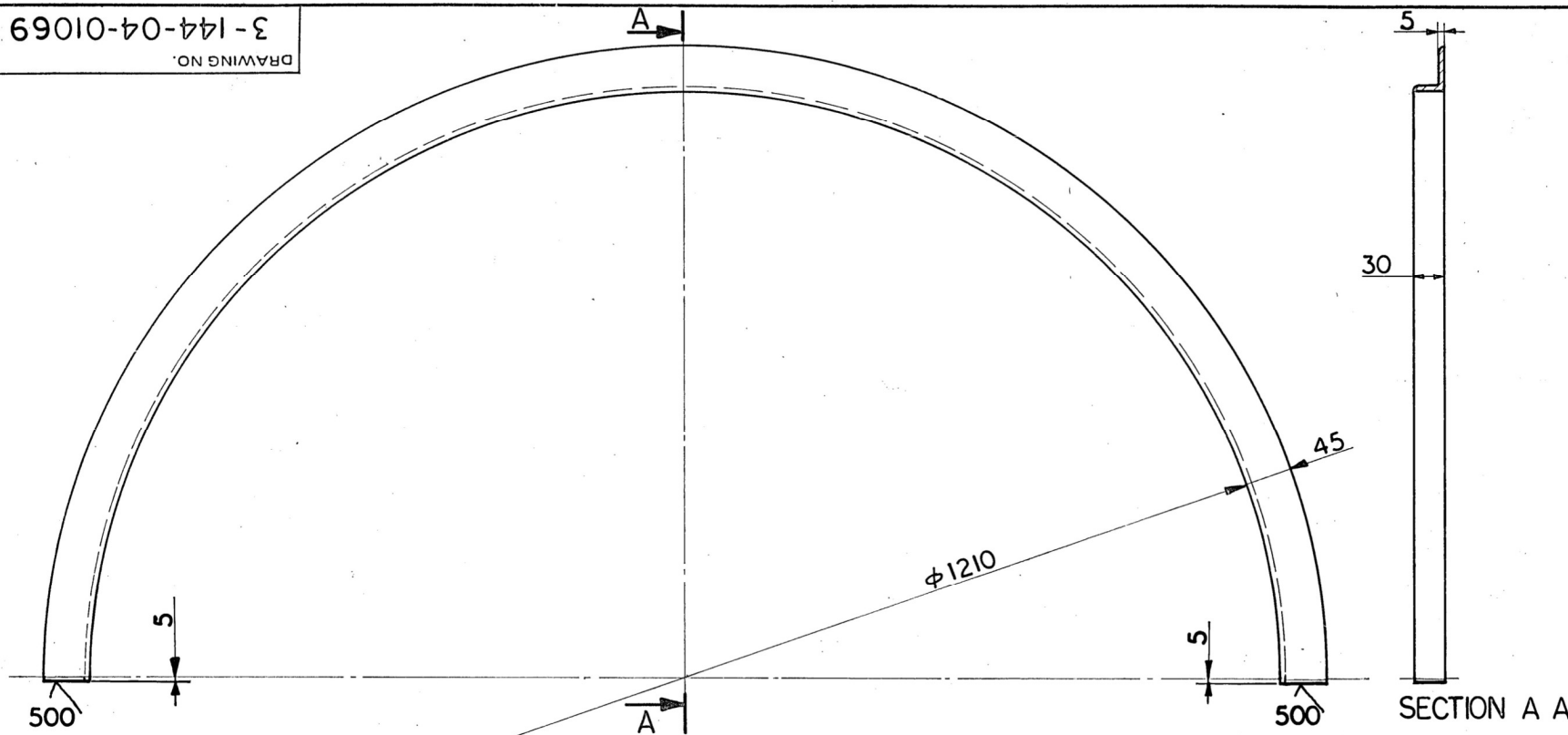
Sign & Date
18/7/90

Inventory No.
E61-14696

69010-04-01069

DRAWING NO.

✓ THE REST ✓



DEVELOPED LENGTH = 1982



TECHNICAL REQUIREMENT

I. IDENTIFICATION ACCORDING TO HW 0400397.

—	—	—	ANGLE	—	—	—	HW 012608964	—	—	5570	—					
							AA 1010B									
VAR. 00	REMARKS	ITEM NO.	DESCRIPTION	59	STD.	DRAWING NO.	29	31	34	MATERIAL CODE	55	57	UNIT WT. (Kg.)	72		
							VAR.			MATERIAL SPECN.	54	56		65		
59	64	65	75	25	27	29	58	60	77	32	33	46	54	66	71	73
CARD TYPE-3						28	CARD TYPE-1						28	CARD TYPE-2		

GMS/GR. SP. NO.				STATUS OF DRG.	
0-144-04-01011					
AGREED DEPT.	NAME	SIGN.	DATE		
WT	Roy	<i>[Signature]</i>	21/5/90		

TYPE OF PRODUCT
OR BRUSHLESS EXCITER FOR 500 MW TG.
NAME OF CUSTOMER/PROJECT

				BHARAT HEAVY ELECTRICALS LTD. RANIPUR - HARDWAR.		DRN.	NAME T. N. G.	SIGN. <i>Rao</i>	DATE 20/3/90	NO. OF VAR.
				CHD.	S.M.		<i>SM</i>	20-3-90	-	
				APPD.	I. C. RAO		<i>rao</i>	16-6-90	73, 74	
DEPT. T.G.E.	GRADE OF UNTOLD DIM		SCALE 1:5	WEIGHT (Kg) 5-570	REF. TO ASSY. DRG. 1-144-04-01023				ITEM NO. 003	NO. OF ITEMS -
CODE 4133	¢/M/¢									75, 77
TITLE ANGLE				CARD CODE -		DRAWING NO. 3-144-04-01069				REV. -
						SHEET NO.				NO. OF SHEETS:-

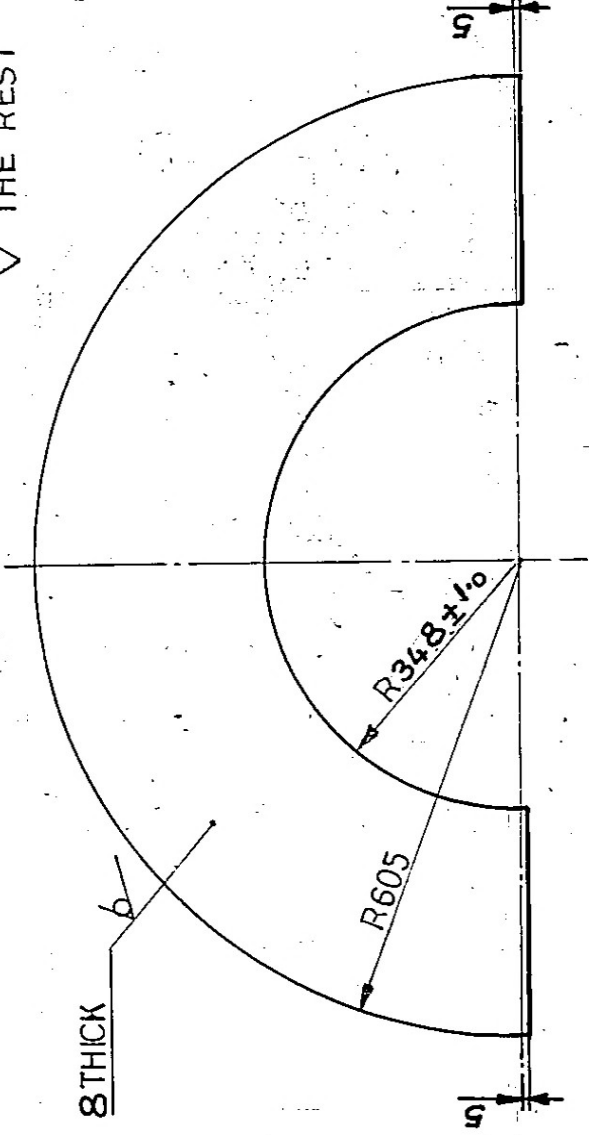
SIZE A3

26-5607-98976 B JKW.U.
(ITEM NO. 25)
Ref. Drg. No.
Sign & Date
Inventory No.

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

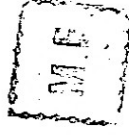
REV	DATE	ALTERED	CHECKED	REV	DATE	ALTERED	CHECKED	GMS. NO.	STATUS OF DRG.
								0-144-04-01011	U
								AGREED DEPT.	SIGN
								WT	DATE
								207	21/5/90

500 ✓
THE REST



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.



—	—	SEGMENT	—	AA1011808056	—	—	24	360
REMARKS	ITEM NO.	DESCRIPTION	VAR.	MATERIAL CODE	A	—	UNIT WEIGHT	—
				MATERIAL SPECN	C	—		
CARD TYPE-3.			CARD TYPE-1		CARD TYPE-2			



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DEPT TGE	CODE 4133	SCALE 1:10	WEIGHT (KG) 24.360	REF. TO ASSY. DRG. 1-144-04-01023	ITEM NO. 004
SEGMENT			DRAWN T.N.G.	SIGN. T.N.G.	DATE 24.3.90
(BRUSHLESS EXCITER FOR 500 MW TG.)			CHECKED S.M.	SIGN. S.M.	DATE 2.4.90
Dimensions to be Controlled Within Limits as Shown			APPROVED I.C. RAO	SIGN. I.C. RAO	DATE 2.4.90

Inventory No. Et1-14697	Sign & Date 18/7/90	Ref Drg. No. 26-5607-99390/KWU (ITEM NO.66)	Card Code —	Drawing No. 4-144-04-01178	Sheet No. 1	No. of Sheets 1	Size A4
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Inventory No. Et1-14706

MF

SIZE A3



BILL OF MATERIAL

Printed
On:27.08.2024

BOM No: 11440401023

Var: 00

Revno: 1

Rev Date: 22.11.2002

Printed By:

Description: COVER(WELDED)

Tot wt: 64.64

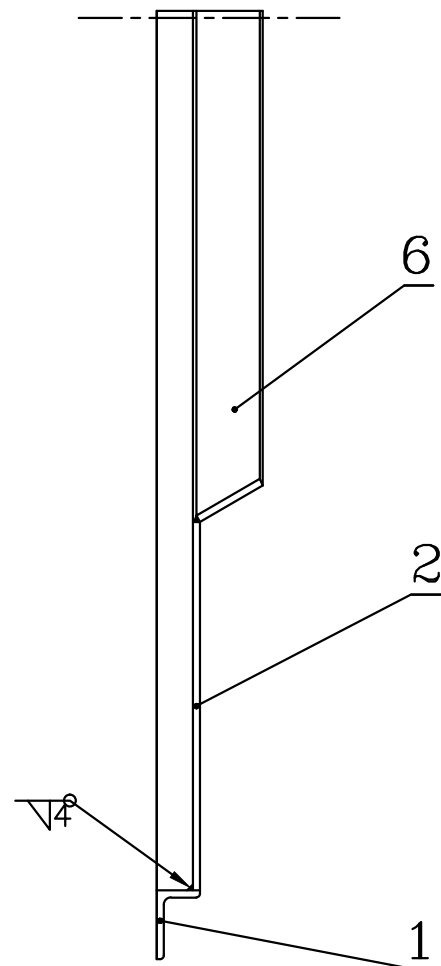
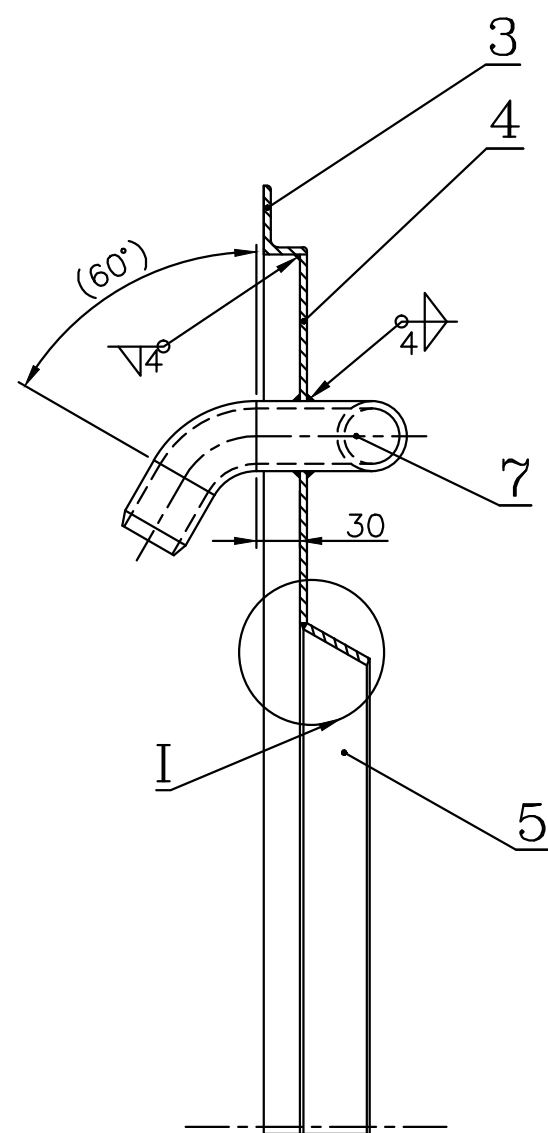
Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
0			11440401023 00			64.64
1(1)			COVER(WELDED)			
MF	DR				N	
1			31440401068 00 00	AA1012508056	AA10108	2.81
2(2)			ANGLE			
MF	DR					
2			41440401177 00 00	AA1011808056	AA10108	12.26
2(2)			SHEET			
MF	DR					
3			31440401069 00 00	AA1012508056	AA10108	5.57
1(1)			ANGLE			
MF	DR					
4			41440401178 00 00	AA1011808056	AA10108	24.36
1(1)			SEGMENT			
MF	DR					
5			31440401074 00 00	AA1011808013	AA10108	2.0
1(1)			PLATE			
MF	DR					
6			31440401075 00 00	AA1011808013	AA10108	1.0
2(2)			PLATE			
MF	DR					

ENGG

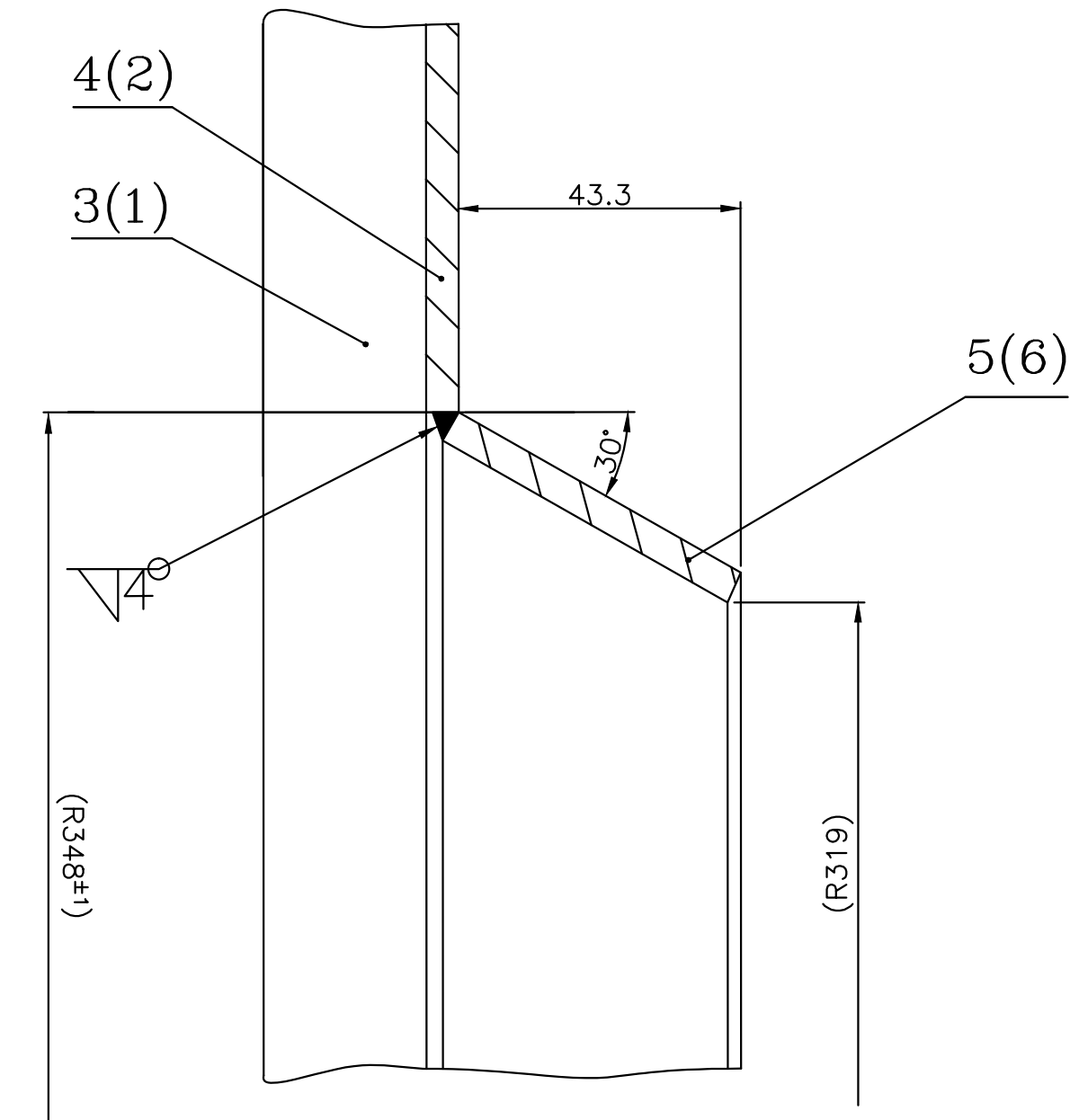
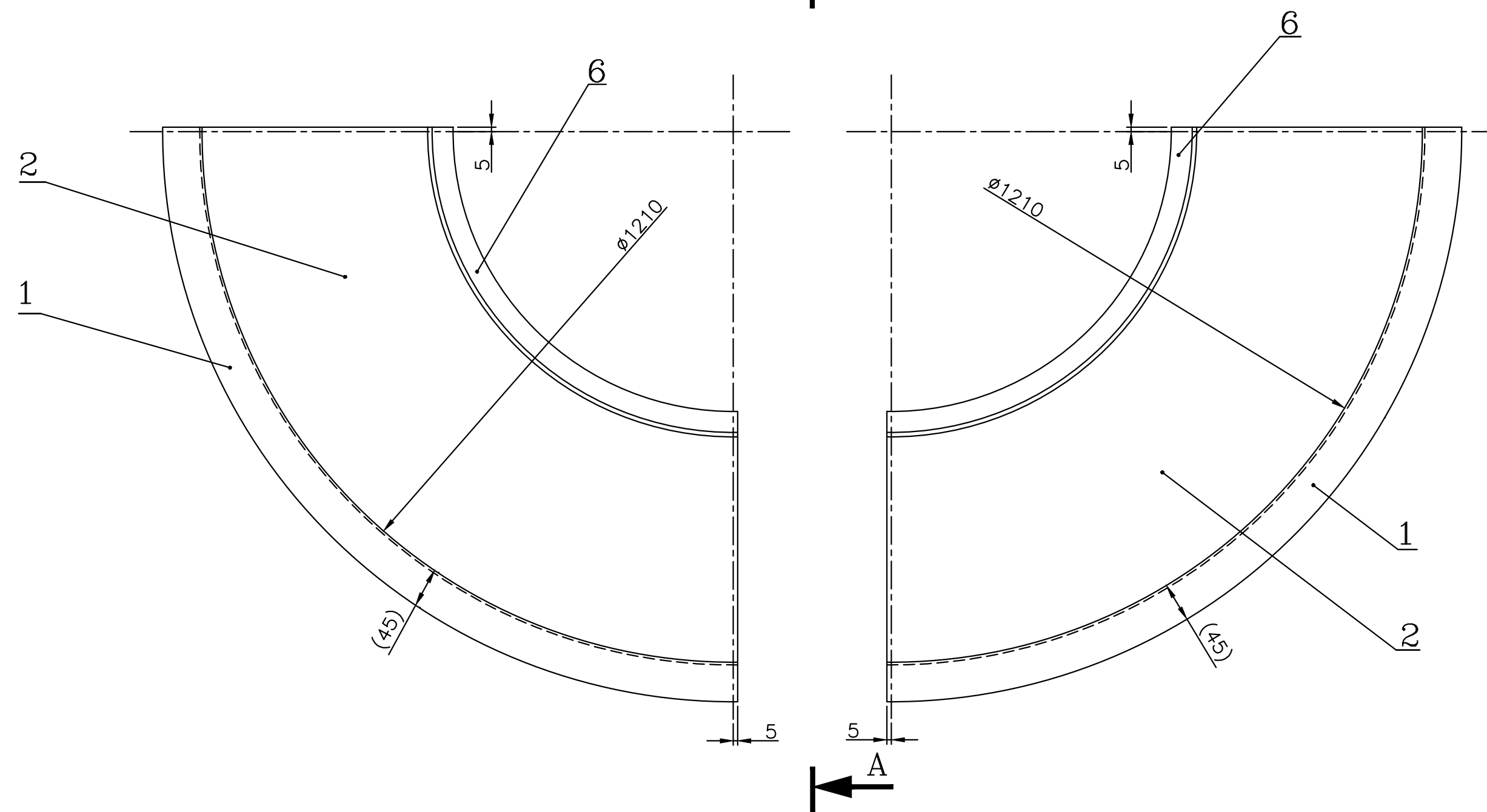
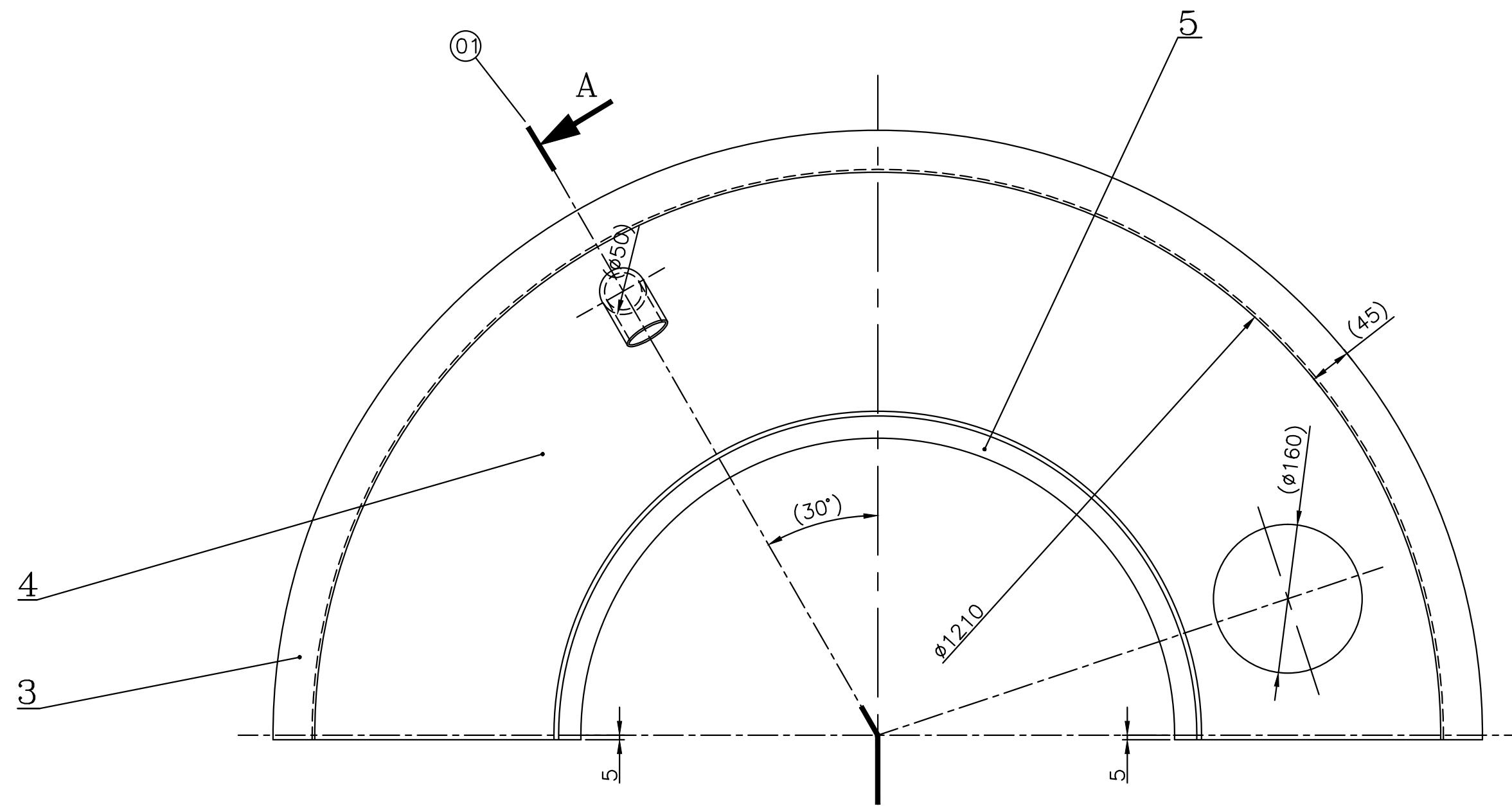
Initial Date

Worked By tgevk 11.09.2001
Checked By tgevk 11.09.2001
Approved By tgekr 12.11.2001

DRAWING NO. 11440401039




SECTION A A



DETAIL-I

SCALE 1:1

SYMBOL AND SIZE OF SEAM	4 
SEAM LENGTH M	6.050
WEIGHT OF DEPOSITED METAL Kg	0.570
TYPE OF ELECTRODE	E-7018

TECHNICAL REQUIREMENTS

1. DIMENSIONS IN THE BRACKETS ARE FOR REFERENCE ONLY.
2. CLASSIFICATION GROUPS ACCORDING TO HW 0620099 : CK.
3. TEST SCOPE ACCORDING TO HW 0850199 : CATEGORY OF SERVICE REQUIREMENTS 4.
4. SURFACE TREATMENT (i.e. SHOT BLASTING/PAINTING ETC.) AS PER TECHNOLOGICAL INSTRUCTION NO. 0912.015 .
5. CHECK ALL THE 3 SEGMENTS BY TACK WELDING TOGETHER FOR COMPLETE DIMENSIONS AND FLATNESS OF THE COVER.
6. THIS JOB IS TO BE OFF LOADED IN CONJUNCTION WITH AIR GUIDE COVER (WELDED) TO DRG. 0-144-04-01031.
7. FOR COVER MACHINED REFER DRG. 1-144-04-01040.
8. IDENTIFICATION ACCORDING TO HW 0400397.
9. ALL THE THREE SEGMENTS OF COVER OF EACH P.O ARE MATCHED & SUITABLY IDENTIFIED SO THAT MIXING OF SEGMENTS OF COVERS OF OTHER PLANT ORDER IS AVOIDED.
10. TECHNOLOGICAL SUPPORTS TO BE PROVIDED DURING WELDING TO MINIMISE DISTORTION.

MANUFACTURING PROCEDURE

- ANGLES ITEM 1&3 TO BE BENT TO I.D. OF 1210 KEEPING BENDING ALLOWANCE OF 200mm AT BOTH ENDS. CHECK THE BENDING CORRECTNESS OF THE ANGLES WITH TECHNOLOGICAL TEMPLATE (TO BE MADE BY SUBCONTRACTOR) AND RECTIFY IF NECESSARY. CUT OFF THE EXTRA LENGTH.
- TACK WELD ALL THE ITEMS FOLLOWED BY REGULAR WELDING.

-TACK WELD ALL THE ITEMS FOLLOWED BY REGULAR WELDING.

SUPERSEDES THE OLD DRG.
UNDER THE SAME NO.
TGE-13-F0393

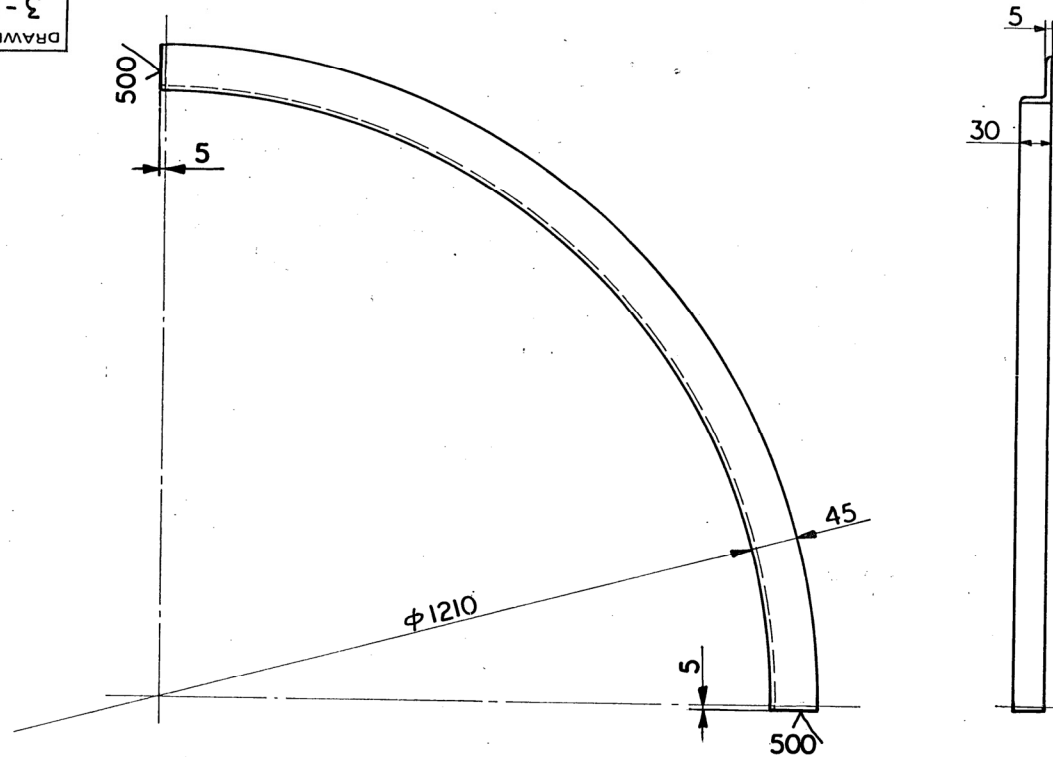
[illegible]

SIZE A1

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3-144-04-01068

DRAWING NO.



THE REST

DEVELOPED LENGTH = 996.

TECHNICAL REQUIREMENT

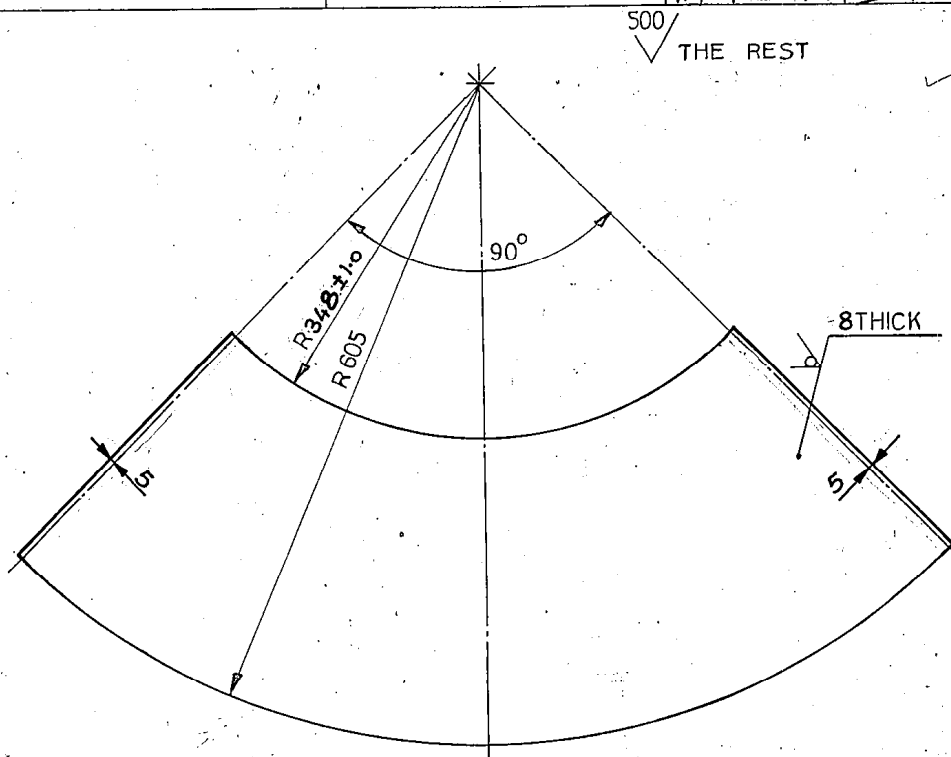
1. IDENTIFICATION ACCORDING TO HW 0400397.

		-	ANGLE				HW 012608964			2810	
VAR. 00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	MATERIAL CODE	UNIT WT. (Kg.)					
CARD TYPE-3	28 →	CARD TYPE-1	28 →	CARD TYPE-2	28 →	CARD TYPE-2					
GMS/GR. SP. NO. O-144-04-01011	STATUS OF DRG.	TYPE OF PRODUCT OR BRUSHLESS EXCITER FOR 500MW TG. NAME OF CUSTOMER / PROJECT									
AGREED DEPT. WT	NAME <u>Roy</u>	SIGN. <u>[Signature]</u>	DATE 21/5/90	BHARAT HEAVY ELECTRICALS LTD. RANIPUR - HARDWAR.	DRN. T.N.G.	SIGN. <u>[Signature]</u>	DATE 20/3/90	NO. OF VAR.			
REV	DATE	ALTERED	DEPT. CODE 4133	GRADE OF UNTO DIM Ø/M/F	SCALE I : 5	WEIGHT (Kg) 2-810	REF. TO ASSY. DRG. I-144-04-01023	ITEM NO. 001	NO. OF ITEMS 77		
TITLE ANGLE	CARD CODE -	DRAWING NO. 3-144-04-01068	SHEET NO.	NO. OF SHEETS:-							

SIZE A3

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

REV	DATE	ALTERED	REV	DATE	ALTERED	GMS. NO.	STATUS OF DRG.
		CHECKED			CHECKED	0-144-04-01011	U
						AGREED DEPT.	NAME
						WT	ROY
						SIGN	DATE
							21/5/90



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW 04 00 397.

—	—	SHEET	—	—	AA1011808056	—	—	12	260
REMARKS.	ITEM NO.	DESCRIPTION	STD.	VAR.	MATERIAL CODE	A	—	UNIT WEIGHT	—
					MATERIAL SPECN	C	—		

CARD TYPE-3

CARD TYPE-1

CARD TYPE-2



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DEPT	CODE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
TGE	4133	1:5	12.260	1-144-04-01023	002
SHEET				NAME	SIGN.
(BRUSHLESS EXCITER FOR 500 MW TG.)				T.N.G.	Bath
				CHECKED	S.M.
				APPROVED	I.C. RAO

Dimensions to be Controlled Within Limits as Shown.
Machining Tolerance ± 0.25 mm Unless Otherwise Specified.
Grade of UNFOL
Shown Non-Machining Tolerance ± 0.1 mm ϕ / M / F

CARD CODE

DRAWING NO.

4-144-04-01177

SHEET NO.

1

NO. OF SHEETS.

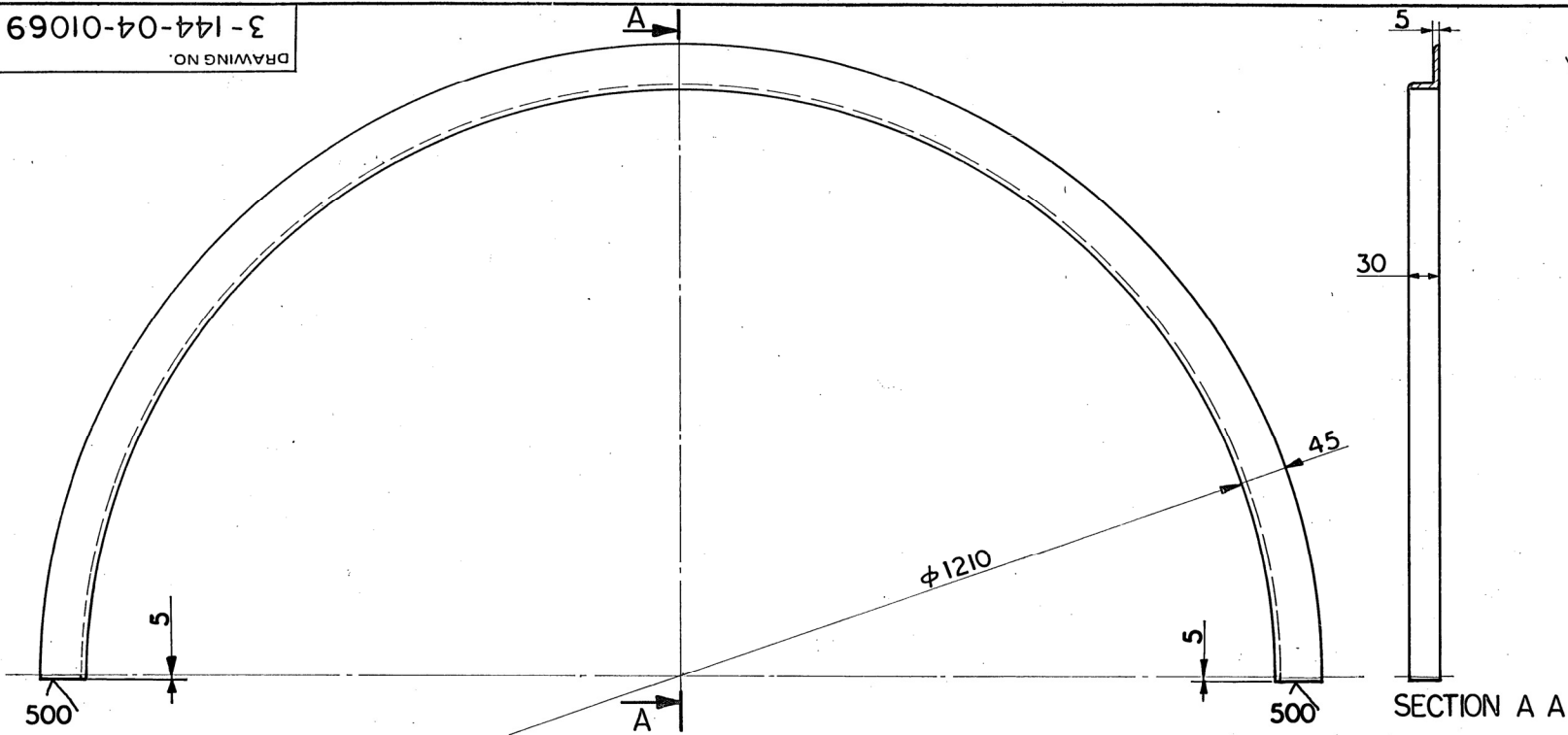
1

SIZE A4

3-144-04-01069

DRAWING NO.

✓ THE REST ✓



DEVELOPED LENGTH = 1982

TECHNICAL REQUIREMENT

I. IDENTIFICATION ACCORDING TO HW 0400397.

—	—	—	ANGLE	—	—	—	HW 012608964	—	—	51570
VAR. 00	REMARKS	ITEM NO.	DESCRIPTION	59	DRAWING NO.	29 31 34	MATERIAL CODE	55 57	UNIT WT. (Kg.)	72
59	64 65	75 25 27	29	58 60	77	32 33 46	MATERIAL SPECN.	54	66	71 72
CARD TYPE-3			28 →	CARD TYPE-1			28 →	CARD TYPE-2		

GMS/GR. SP. NO.				STATUS OF DRG.	
0-144-04-01011					
AGREED DEPT.	NAME	SIGN.	DATE		
NT	Roy	<i>[Signature]</i>	21/5/90		

TYPE OF PRODUCT
OR BRUSHLESS EXCITER FOR 500 MW TG.
NAME OF CUSTOMER/PROJECT



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DRN.	NAME	SIGN.	DATE	NO. OF VAR.
CHD.	T. N. G.	<i>[Signature]</i>	20/3/90	—
APPD.	S.M.	<i>[Signature]</i>	20/3/90	—
	I. C. RAO	<i>[Signature]</i>	16/6/90	73/74

REV	DATE	ALTERED	CHECKED

DEPT.	GRADE OF	SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
T.G.E.	UNTOLDIM	1:5	5:570	1-144-04-01023	003	—
CODE	φ/M/φ					75/77

TITLE	CARD CODE	DRAWING NO.	REV.
ANGLE	—	3-144-04-01069	—
		SHEET NO.	NO. OF SHEETS:-
			22/23/24

SIZE A3

26-5607-989766 JKW.

(ITEM NO. 25)

Ref. Drg. No.

Sign & Date

18/7/90

Inventory No.

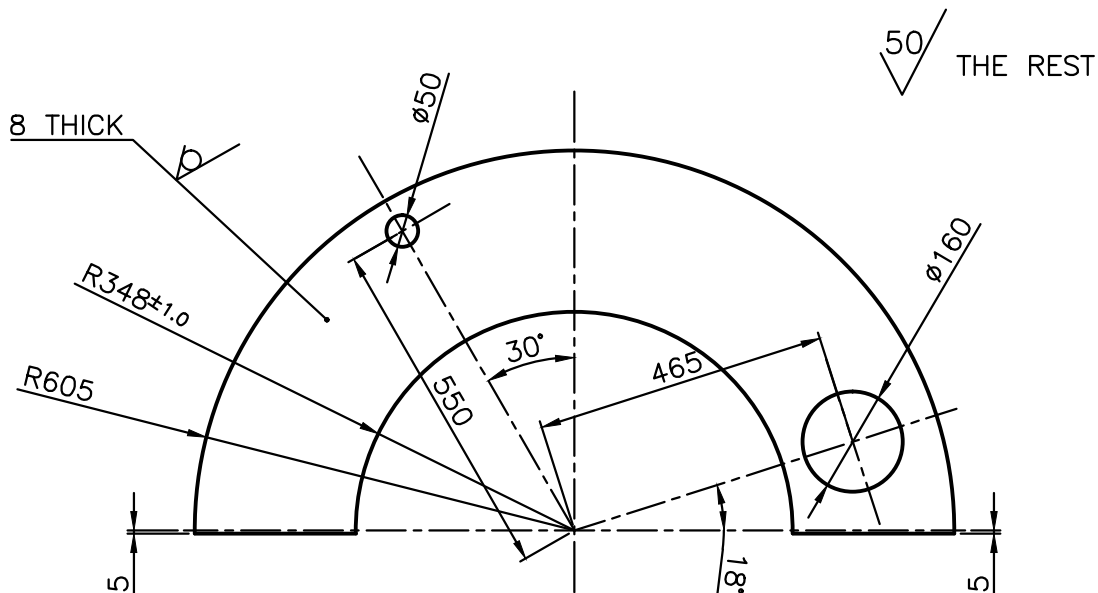
641-14701

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	CBOM No.			STATUS
		CHECKED			CHECKED	01440401029			
						AGREED	NAME	SIGN	DATE
						DEPT.			
						WTX	AWTXIS	AWTXIS	28/08/2010
GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208					WELDING A/B/C/D AA0621104		GAS CUTTING-T3 AA0621101		

GRADE OF UNTOL.DIM.M/CGC/M/F.AA0230208 WELDING A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101



TECHNICAL REQUIREMENT

1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

26-5907-122988/IT.26
REF.DRG.No.

SIGN & DATE

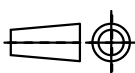
BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	05/08/2010	
CHD	STGESSM	STGESSM	05/08/2010	
APD	ATGEVK	ATGEVK	01/10/2010	

INVENTORY No.

DEPT.TGE

CODE 4133



SCALE

1:10

WEIGHT(Kg)

24.36

REF.TO ASSY.DRG.

11440401039

ITEM

No.

004

No OF

ITEMS

TITLE

PLATE

(B'LESS EXCITER FOR 800MW TG)

DRAWING No.

41440401310

SHEET No.1

No.OF SHEETS1

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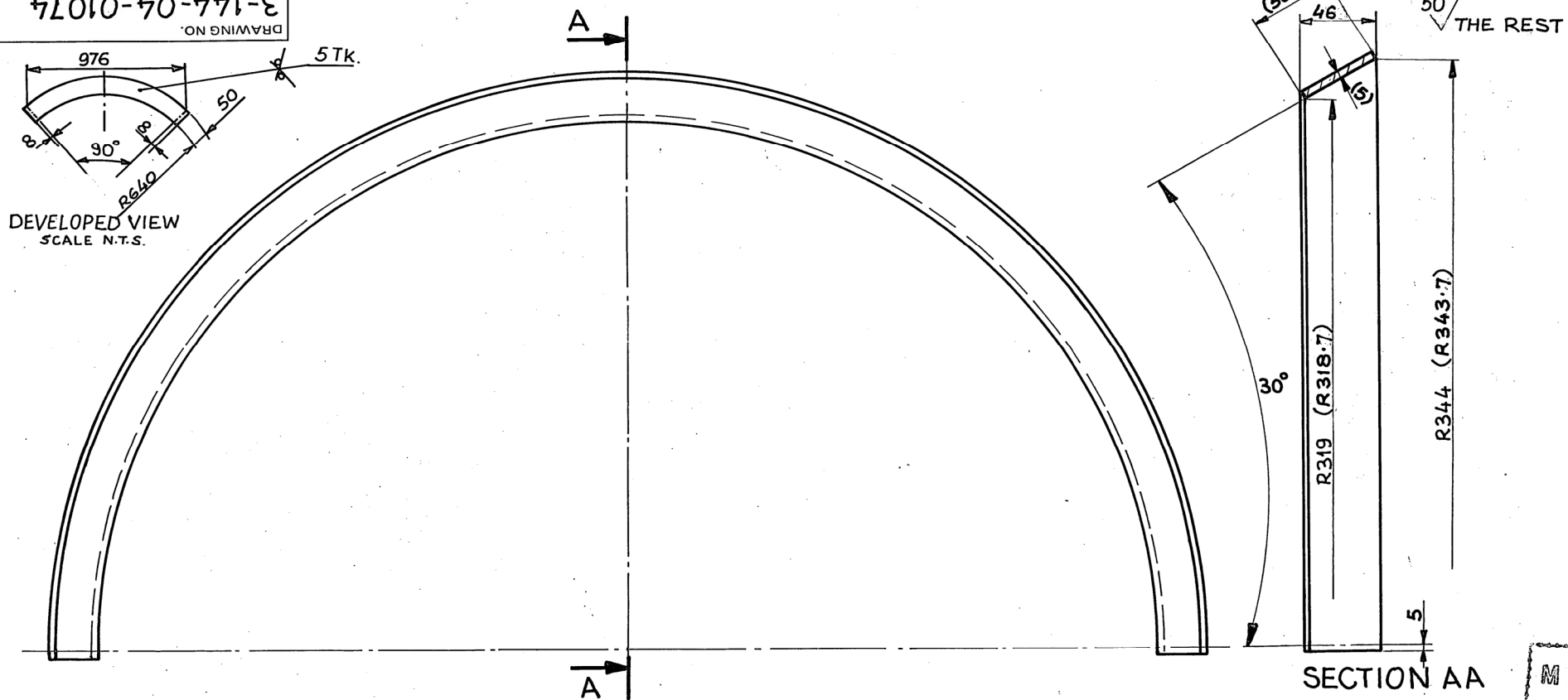
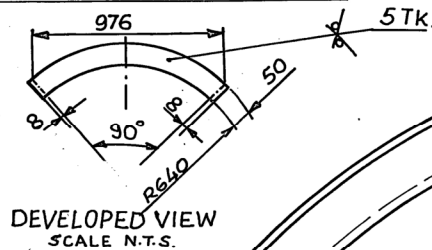
26-5607-99390/KWJ
(ITEM NO. 68)
Ref. Drg. No.

Sign & Date

Inventory No.
661-14107

71010-70-771-3

DRAWING NO.



TECHNICAL REQUIREMENTS

1. IDENTIFICATION ACCORDING TO HWO400397.
2. DIMENSIONS IN BRACKETS ARE THEORITICAL.

VAR. 00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	AA1011808013	2000
59	64	65	75	25	27	29
58	59	60	77	32	33	46
29	31	34	45	55	57	58
32	33	46	54	66	71	72
59	64	65	75	25	27	29
58	59	60	77	32	33	46
29	31	34	45	55	57	58
32	33	46	54	66	71	72

GMS/SP. NO.	STATUS OF DRG.
0-144-04-01011	
AGREED DEPT.	NAME
WT	Roy
SIGN.	DATE
	21/5/90

TYPE OF PRODUCT
OR
BRUSHLESS EXCITER FOR 500 MW TG.
NAME OF CUSTOMER/PROJECT



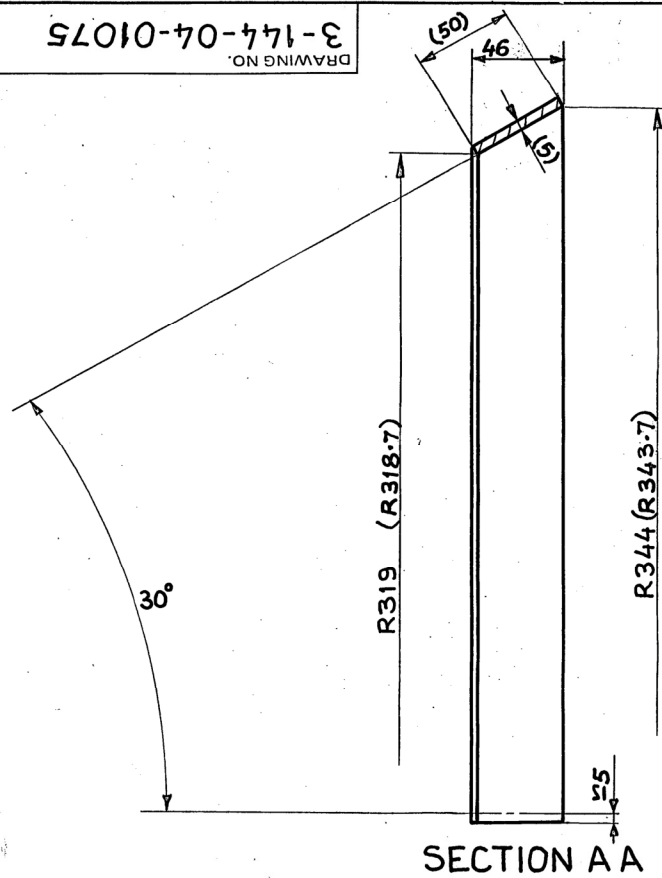
BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DRN.	NAME	SIGN.	DATE	NO. OF VAR.
CHD.	T.N.G.	Path	15.5.90	
APPD.	S.M.	SM	15.5.90	
	I.C. RAO	erhu	16.6.90	73/74

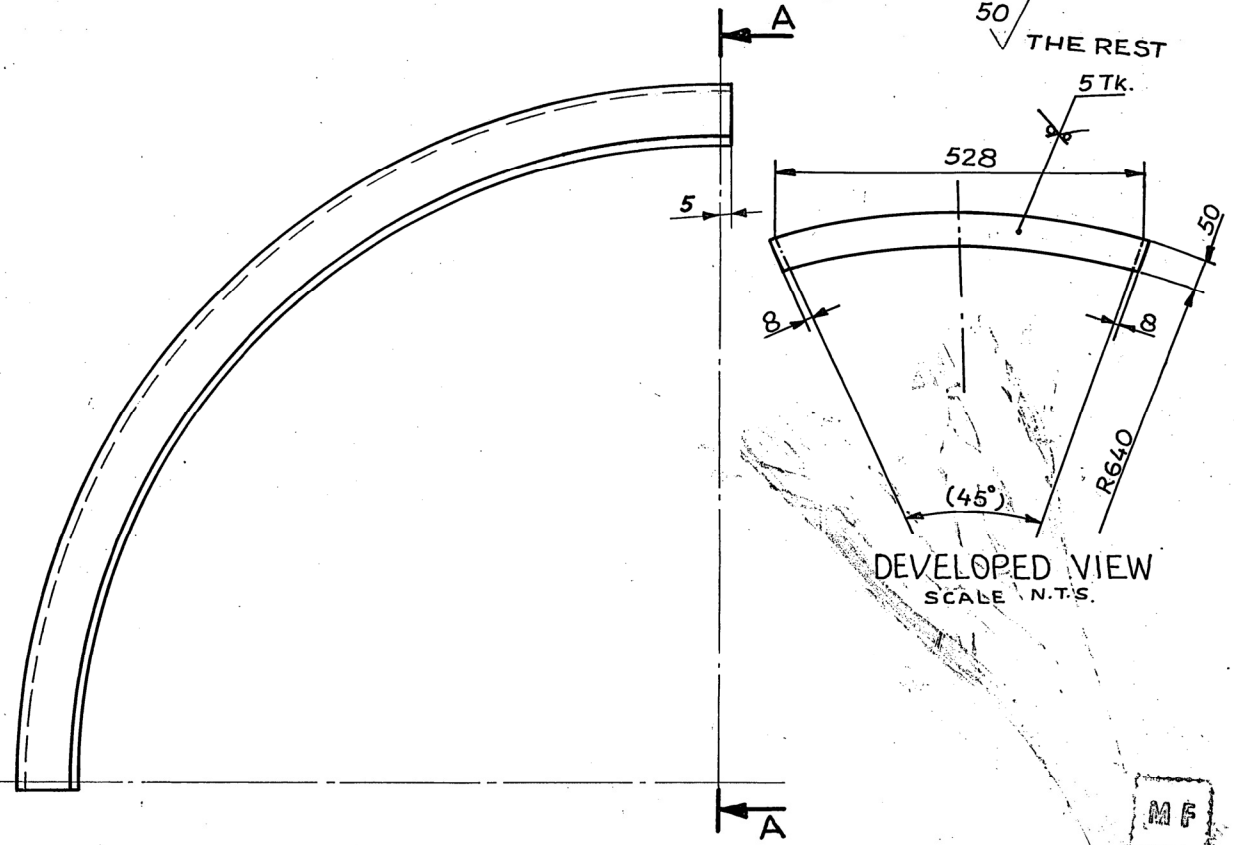
REV	DATE	ALTERED
		CHECKED

DEPT.	GRADE OF	SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
T.G.E.	UNTOLDIM	1:2.5	2.000	1-144-04-01023	005	001
CODE	d/m/f			DRAWING NO.		
4233				3-144-04-01074		
TITLE				SHEET NO.	1	NO. OF SHEETS:- 1
PLATE						

SIZE A3

3-144-04-01075
DRAWING NO.

SECTION A-A

DEVELOPED VIEW
SCALE N.T.S.

TECHNICAL REQUIREMENTS

1. IDENTIFICATION ACCORDING TO HWO400397.
2. DIMENSIONS IN BRACKETS ARE THEORITICAL.

—	—	—	PLATE	—	—	—	AA1011808013	—	—	1000	—
VAR. 00	REMARKS	ITEM NO.	DESCRIPTION	59	DRAWING NO.	29 31	AA10108	55 57	UNIT WT. (Kg.)	72	
59	64 65	75 25 27	29	58 60	77	34	MATERIAL CODE	55 56 57	UNIT	72	
						VAR.	MATERIAL SPECN	58 59		60	
						32 33 46		54		61	
CARD TYPE-3			CARD TYPE-1			CARD TYPE-2					

GMS/CR. SP. NO.			STATUS OF DRG
0-144-04-01011			
AGREED DEPT.	NAME	SIGN.	DATE
WT	ROY	<u>law</u>	21 5/90

TYPE OF PRODUCT
OR
BRUSHLESS EXCITER FOR 500 MW TG.

NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.	DRN.	NAME	SIGN.	DATE	NO. OF VAR.
RANIPUR - HARDWAR.	CHD.	T. N. G.	207	15.5.90	
	APPD.	S. M.	SM	15.5.90	
		I. C. RAO	207	16.6.91	73, 74

REV	DATE	ALTERED	DEPT.	GRADE OF UNTOLODIM	SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
		CHECKED	T.G.E.	Q/M/T	1:2.5	1000	1-144-04-01023	006	001
			CODE				DRAWING NO.		REV.
			4233				3-144-04-01075		
			TITLE				SHEET NO.		NO. OF SHEETS:- 1
			PLATE						

SIZE A3

26-5607-99390/KWU
(ITEM No. 69)

Ref. Drg. No.

18-7-90
Sign & Date

Inventory No.

Eti. 14707

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OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

26-5607-124552/KWU
(ITEM 1,2&3)
REF. DRG NO.

SIGN & DATE

INVENTORY NO.

31440401150
DRAWING NO.

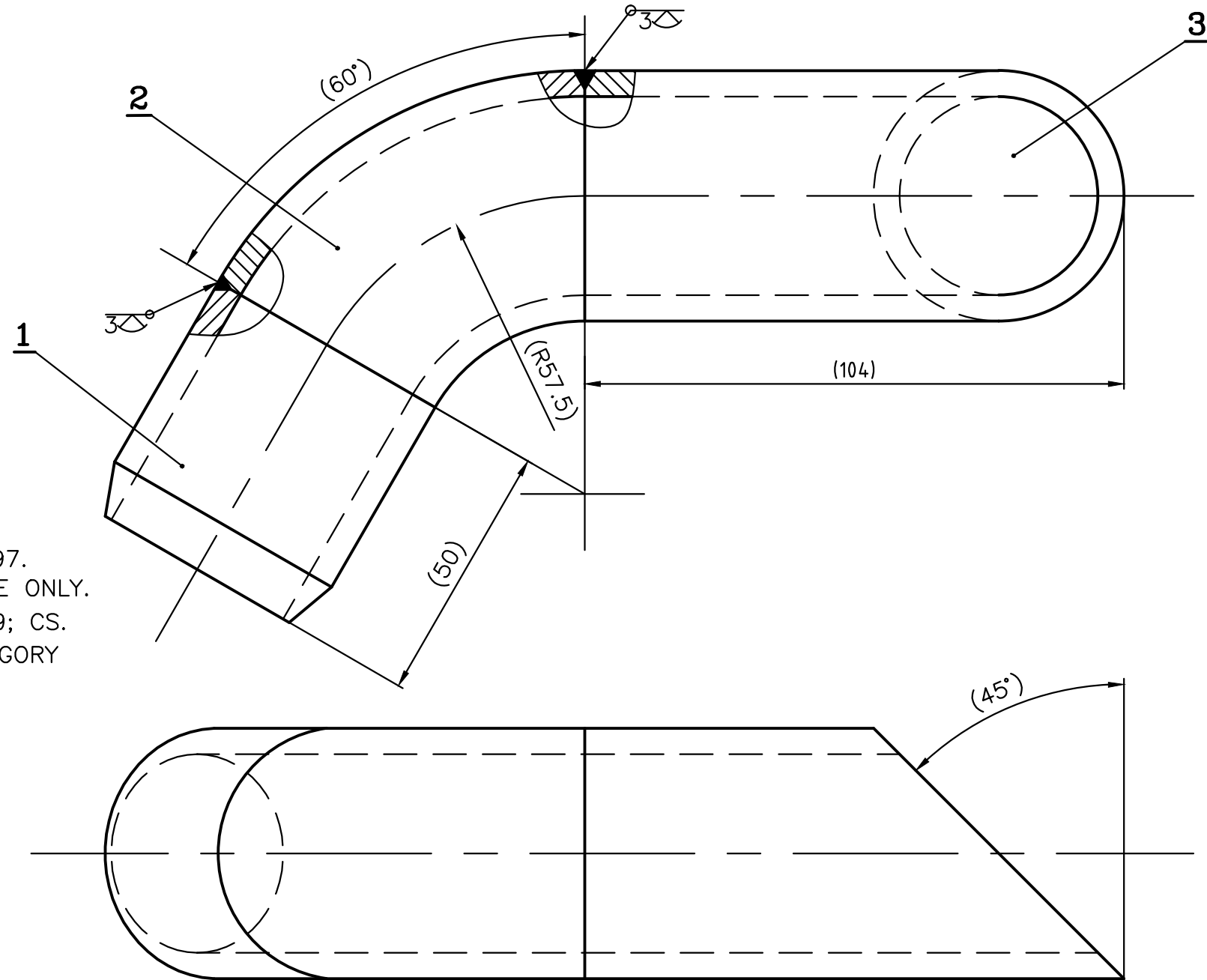
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM: DG-38(B)

TECHNICAL REQUIREMENTS:

1. MARK IDENTIFICATION ACCORDING TO HW0400397.
2. DIMENSIONS IN BRACKETS ARE FOR REFERENCE ONLY.
3. QUALITY GRADE OF WELDS AS PER HW0620099; CS.
4. TEST SCOPE ACCORDING TO HW0850199, CATEGORY OF SERVICE REQUIREMENT 4.



GRADE OF UNTOL. DIM.:—				CBOM NO. 01440401029		STATUS OF DRG.		TYPE OF PRODUCT OR NAME OF CUSTOMER/ PROJECT				B,LESS EXCITER FOR 800MW TG.											
M/CG- V/C/M/F AA 0230208				AGREED DEPT.		NAME		SIGN		DATE		DRN		NAME		SIGN		DATE		NO.OF VAR.			
WELDING-A/B/C/D-AA621104				WTX		AWTXTSC		AWTXTSC		30/09/2010		CHD		STGEVK		STGEVK		05/08/2010					
GAS CUTTING-'T3'AA0621101												APD		ATGEVK		ATGEVK		01/10/2010		73, 74			
REV.		DATE		ALTERED CHECKED		REV.		DATE		ALTERED CHECKED		DEPT. TGE		SCALE		WEIGHT(Kg.)		REF. TO ASSY. DRG.		ITEM NO.			
												CODE 4133		1:1		.86		11440401039		007			
												TITLE				DRAWING NO.							
												PIPE ASSY.				31440401150							
																SHEET NO.1				NO.OF SHEETS 1			

SIZE A3



BILL OF MATERIAL

Printed
On:27.08.2024

BOM No: 11440401039
Description: COVER (WELDED)

Var: 00

Revno: 2

Rev Date: 31.01.2015

Printed By:

Tot wt: 64.64

Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
0			11440401039 00			64.64
1(1)			COVER (WELDED)			
MF	DR				N	
1			31440401068 00 00	AA1012508056	AA10108	2.81
2(2)			ANGLE		CBOM01440401011	
MF	DR					
2			41440401177 00 00	AA1011808056	AA10108	12.26
2(2)			SHEET		CBOM01440401011	
MF	DR					
3			31440401069 00 00	AA1012508056	AA10108	5.57
1(1)			ANGLE		CBOM01440401011	
MF	DR					
4			41440401310 00 00	AA1011808056	AA10108	24.36
1(1)			PLATE			
MF	DR					
5			31440401074 00 00	AA1011808013	AA10108	2.0
1(1)			PLATE		CBOM01440401011	
MF	DR					
6			31440401075 00 00	AA1011808013	AA10108	1.0
2(2)			PLATE		CBOM01440401011	
MF	DR					
7			31440401150 00			0.86
1(1)			PIPE ASSY.			
MF	DR				N	

ENGG

Initial Date

Worked By tguessm 01.07.2010
Checked By tguessm 01.07.2010
Approved By tgevk 05.08.2010



BILL OF MATERIAL

Printed
On:09.09.2024

BOM No: 01440401028 Var: 00 Revno: 2 Rev Date: 11.01.2020
Description: AIR GUIDE COVER (WELDED) Tot wt: 1241.54

Printed By:

Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
0			01440401028 00			1241.54
1(1)			AIR GUIDE COVER (WELDED)			
MF	DR		800MW B'LESS EXCITER		Y	1241.54
1			31440401141 00 00	AA1011808013	AA10108	145.6
1(1)			PLATE			
MF	DR					
2			31440401142 00 00	AA1011819074	AA10119	135.0
1(1)			PLATE			
MF	DR					
3			41440401052 00 00	AA1011808013	AA10108	40.0
2(2)			PLATE		CBOM91440401002	
MF	DR					
4			41440401047 00 00	AA1011819074	AA10119	105.9
2(2)			PLATE		CBOM91440401002	
MF	DR					
5			41440401046 00 00	AA1011819074	AA10119	102.4
1(1)			PLATE		CBOM91440401002	
MF	DR					
6				AA7151115024	AA7151115	0.005
6(6)			NUT HEX. A-8			
SI	DR		M8			
7			41440401302 00	HW1012808980	AA10108	3.8
3(3)			PROFILE		CUT TO SIZE	
MF	DR					
8				AA1011808013	AA10108	145.2
1(1)			PLATE 5X1874X1968			
MF	DR		ST-A(FE410 WA)PLATE			
9			41440401068 00 00	HW1012808980	AA10108	14.5
4(4)			PROFILE		CBOM91440401002	
MF	DR					
10			41440401304 00	HW1012808980	AA10108	7.8
7(7)			PROFILE		CUT TO SIZE	
MF	DR					
11			41440401352 00	HW1012808980	AA10108	13.8
2(2)			PROFILE		CUT TO SIZE	
MF	DR					
12			41440401305 00 00	AA1012508099	AA10108	10.8
2(2)			PROFILE		CUT TO SIZE	
MF	DR					
13			31440401143 00 00	AA1011808013	AA10108	144.7
1(1)			PLATE			
MF	DR					
14			41440401306 00	HW1012808980	AA10108	2.4
4(4)			PROFILE		CUT TO SIZE	
MF	DR					
15				AA1010308050	AA10108	0.8
8(8)			FLAT 50X8 , L=250			
MF	DR		ST-A(FE410 WA)FLAT			

ENGG

	Initial	Date
Worked By	tguessm	23.06.2010
Checked By	tguessm	28.06.2010
Approved By	tgevk	21.07.2010



BILL OF MATERIAL

Printed
On:09.09.2024
Printed By:

BOM No: 01440401028 Var: 00 Revno: 2 Rev Date: 11.01.2020
Description: AIR GUIDE COVER (WELDED) Tot wt: 1241.54

Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
16			41440401062 00 00	AA1011819074	AA10119	1.0
6(6)			STRIP		CBOM91440401002	
MF	DR					
17			41440401303 00	HW1012808980	AA10108	3.9
4(4)			PROFILE		CUT TO SIZE	
MF	DR					
18			41440401061 00 00	AA1011819074	AA10119	0.5
2(2)			STRIP		CBOM91440401002	
MF	DR					
19			41440401307 00	HW1012808980	AA10108	2.4
4(4)			PROFILE		CUT TO SIZE	
MF	DR					

BOM - 01440401028 00

ENGG

	Initial	Date
Worked By	tguessm	23.06.2010
Checked By	tguessm	28.06.2010
Approved By	tgevk	21.07.2010



BILL OF MATERIAL

Printed
On:09.09.2024

BOM No: 01440401031

Var: 00

Revno: 5

Rev Date: 18.05.2020

Printed By:

Description: AIR GUIDE COVER (WELDED)

Tot wt: 674.07

Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
0			01440401031 00			674.07
1(1)			AIR GUIDE COVER (WELDED)			
MF	DR				N	674.25
1			41440401311 00 00	AA1011808099	AA10108	2.87
4(4)			SHEET			
MF	DR					
2			41440401351 00	AA1011808013	AA10108	1.255
9(9)			SHEET			
MF	DR					
3			41440401010 00 00	AA1011808030	AA10108	19.5
2(2)			SHEET		BOR 01440401003	
MF	DR					
4			31440401145 00 00	AA1011808099	AA10108	8.482
4(4)			SHEET			
MF	DR					
5			31440401010 00 00	AA1011808030	AA10108	62.642
1(1)			SHEET		BOR 01440401003	
MF	DR					
6			31440401147 00 00	AA1011808030	AA10108	26.031
1(1)			SHEET			
MF	DR					
7			41440401011 00 00	AA1011819074	AA10119	44.5
2(2)			SHEET		BOR 01440401003	
MF	DR					
8			41440401020 00 00	AA1011819074	AA10119	0.66
4(4)			LIFTING LUG		BOR 01440401003	
MF	DR					
9			31440401011 00 00	AA1010308580	AA10108	6.296
2(2)			FLAT		BOR 01440401003	
MF	DR					
10			41440401045 00 00	AA1020218070	AA10218	0.013
2(2)			STUD		BOR01440401003	
MF	DR					
11			21440401002 00			0.42
2(2)			FRAME		BOR 01440401003	
MF	DR				N	
12			41440401338 00 00	AA1011808013	AA10108	1.18
1(1)			SHEET			
MF	DR					
13				AA1010308084	AA10108	2.3
1(1)			FLAT 16X50X400			
MF	DR		ST-A(FE410 WA)FLAT			
14			41440401324 00 00	AA1011808030	AA10108	13.379
4(4)			SHEET			
MF	DR					
15			31440401015 00			18.04
1(1)			SUPPORT		BOR 01440401003	
MF	DR				N	

ENGG

Initial Date

Worked By tgeessm 01.07.2010

Checked By tgeessm 01.07.2010

Approved By tgevk 05.08.2010



BILL OF MATERIAL

Printed
On:09.09.2024

BOM No: 01440401031

Var: 00

Revno: 5

Rev Date: 18.05.2020

Printed By:

Description: AIR GUIDE COVER (WELDED)

Tot wt: 674.07

Item No	Qty(Total)	Zone	Drawingno Var Mvar	Description	Mat Code	Mat Spec	Weight
Typ	Cat	Zone	Var/Matl. Description	GRP	Assy. Remarks	Fab Wt	
16			41440401012 00 00	AA1011819074	AA10119	32.0	
4(4)			SHEET		BOR 01440401003		
MF	DR						
17			31440401012 00 00	AA1010308580	AA10108	3.125	
4(4)			FLAT		BOR 01440401003		
MF	DR						
18				AA1011819171	AA10119	12.7	
4(4)			STRIP 32X60X842				
MF	DR		ST-FE410 WB-PLATE				
19			41440401038 00 00	AA1011819171	AA10119	8.0	
2(2)			STRIP		BOR 01440401003		
MF	DR						
20				HW1041046839	AA10446	1.017	
1(1)			TUBE 33.7X2.6X510				
MF	DR		ST-BQ-A1-CDS-TUBE				
21			31440401144 00 00	AA1011808030	AA10108	24.353	
1(1)			SHEET				
MF	DR						
22			31440401016 00			13.85	
1(1)			SUPPORT		BOR 01440401003		
MF	DR				N		
23			31440401017 00 00	AA1011808056	AA10108	30.42	
1(1)			SHEET		BOR 01440401003		
MF	DR						
24			41440401040 00 00	AA1011808056	AA10108	13.52	
1(1)			SHEET		BOR 01440401003		
MF	DR						
25				AA7121123371	AA7121123	0.039	
58(58)			SCRU HEX A- 8.8				
SI	DR		M12X35				
26				HW7169098024	HW7169098	0.005	
58(58)			WASHER LOCK WITH LUG-ST				
SI	DR		13				
27				AA7151115040	AA7151115	0.017	
58(58)			NUT HEX. A-8				
SI	DR		M12				
28			41440401312 00 00	AA1011715112	AA10115	0.71	
2(2)			SHEET		TECHNOLOGICAL		
MF	DR						
29			31440401146 00 00	AA1011715112	AA10115	2.182	
2(2)			SHEET		TECHNOLOGICAL		
MF	DR						
30			31440401070 00 00	AA1011819155	AA10119	2.39	
1(1)			FLANGE		CBOM01440401011		
MF	DR						

ENGG

Initial Date

Worked By tgeessm 01.07.2010
Checked By tgeessm 01.07.2010
Approved By tgevk 05.08.2010



BILL OF MATERIAL

Printed
On:09.09.2024

BOM No: 11440401023

Var: 00

Revno: 1

Rev Date: 22.11.2002

Printed By:

Description: COVER(WELDED)

Tot wt: 64.64

Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
0			11440401023 00			64.64
1(1)			COVER(WELDED)			
MF	DR				N	
1			31440401068 00 00	AA1012508056	AA10108	2.81
2(2)			ANGLE			
MF	DR					
2			41440401177 00 00	AA1011808056	AA10108	12.26
2(2)			SHEET			
MF	DR					
3			31440401069 00 00	AA1012508056	AA10108	5.57
1(1)			ANGLE			
MF	DR					
4			41440401178 00 00	AA1011808056	AA10108	24.36
1(1)			SEGMENT			
MF	DR					
5			31440401074 00 00	AA1011808013	AA10108	2.0
1(1)			PLATE			
MF	DR					
6			31440401075 00 00	AA1011808013	AA10108	1.0
2(2)			PLATE			
MF	DR					

ENGG

Initial Date

Worked By tgevk 11.09.2001
Checked By tgevk 11.09.2001
Approved By tgekr 12.11.2001



BILL OF MATERIAL

Printed
On:09.09.2024

BOM No: 11440401039
Description: COVER (WELDED)

Var: 00

Revno: 2

Rev Date: 31.01.2015

Printed By:

Tot wt: 64.64

Item No	Drawingno	Var	Mvar	Mat Code	Mat Spec	Weight
Qty(Total)	Description				Assy. Remarks	
Typ	Cat	Zone	Var/Matl. Description		GRP	Fab Wt
0			11440401039 00			64.64
1(1)			COVER (WELDED)			
MF	DR				N	
1			31440401068 00 00	AA1012508056	AA10108	2.81
2(2)			ANGLE		CBOM01440401011	
MF	DR					
2			41440401177 00 00	AA1011808056	AA10108	12.26
2(2)			SHEET		CBOM01440401011	
MF	DR					
3			31440401069 00 00	AA1012508056	AA10108	5.57
1(1)			ANGLE		CBOM01440401011	
MF	DR					
4			41440401310 00 00	AA1011808056	AA10108	24.36
1(1)			PLATE			
MF	DR					
5			31440401074 00 00	AA1011808013	AA10108	2.0
1(1)			PLATE		CBOM01440401011	
MF	DR					
6			31440401075 00 00	AA1011808013	AA10108	1.0
2(2)			PLATE		CBOM01440401011	
MF	DR					
7			31440401150 00			0.86
1(1)			PIPE ASSY.			
MF	DR				N	

ENGG

Initial Date

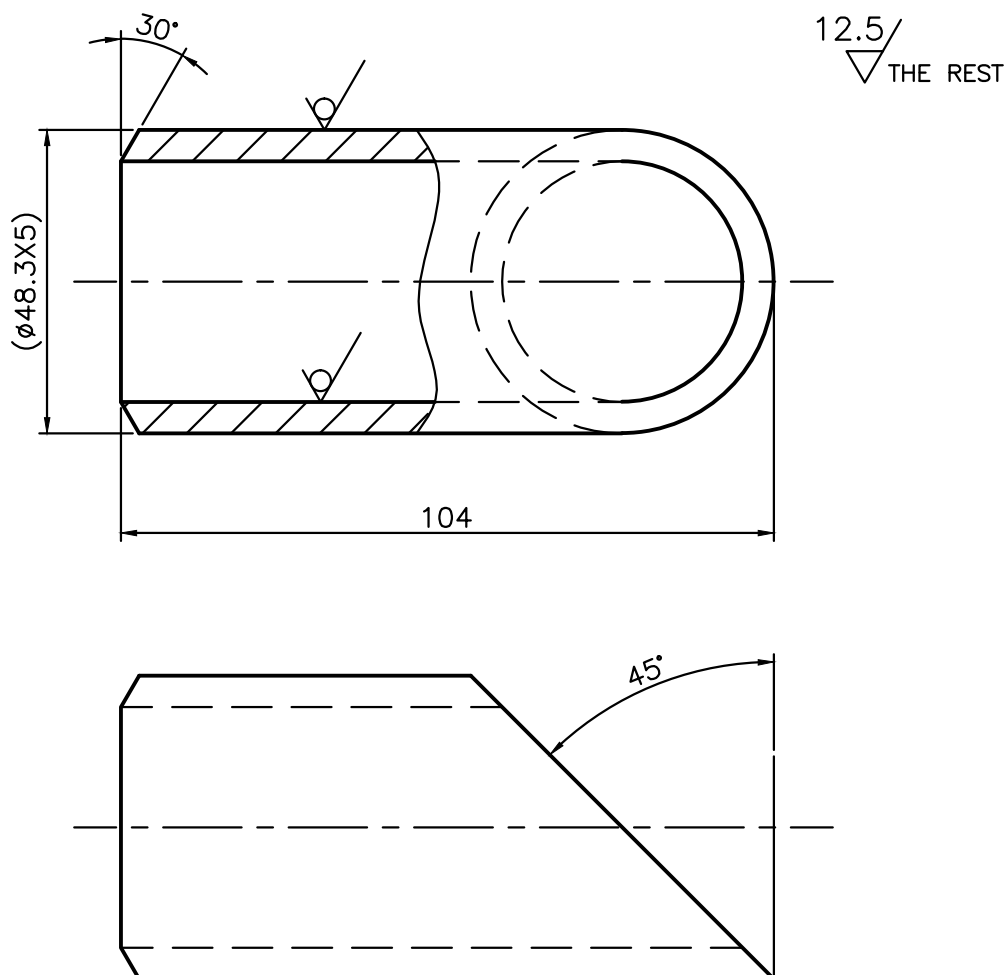
Worked By tguessm 01.07.2010
Checked By tguessm 01.07.2010
Approved By tgevk 05.08.2010

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	CBOM No. 01440401029		STATUS OF DRG	
						AGREED DEPT.	NAME	SIGN	DATE
						WTX	AWTXIS	AWTXIS	28/08/2010

GRADE OF UNTOL.DIM.M/CGZ/M/F.AA0230208 WELDING-A/B/C/D AA0621104 GAS CUTTING-T3 AA0621101

**TECHNICAL REQUIREMENT:**


1. MARK IDENTIFICATION ACCORDING TO HW 0400397.

26-5607-124522/003
REF.DRG.No.

SIGN & DATE

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	05/08/2010	
CHD	STGESSM	STGESSM	05/08/2010	
APD	ATGEVK	ATGEVK	01/10/2010	

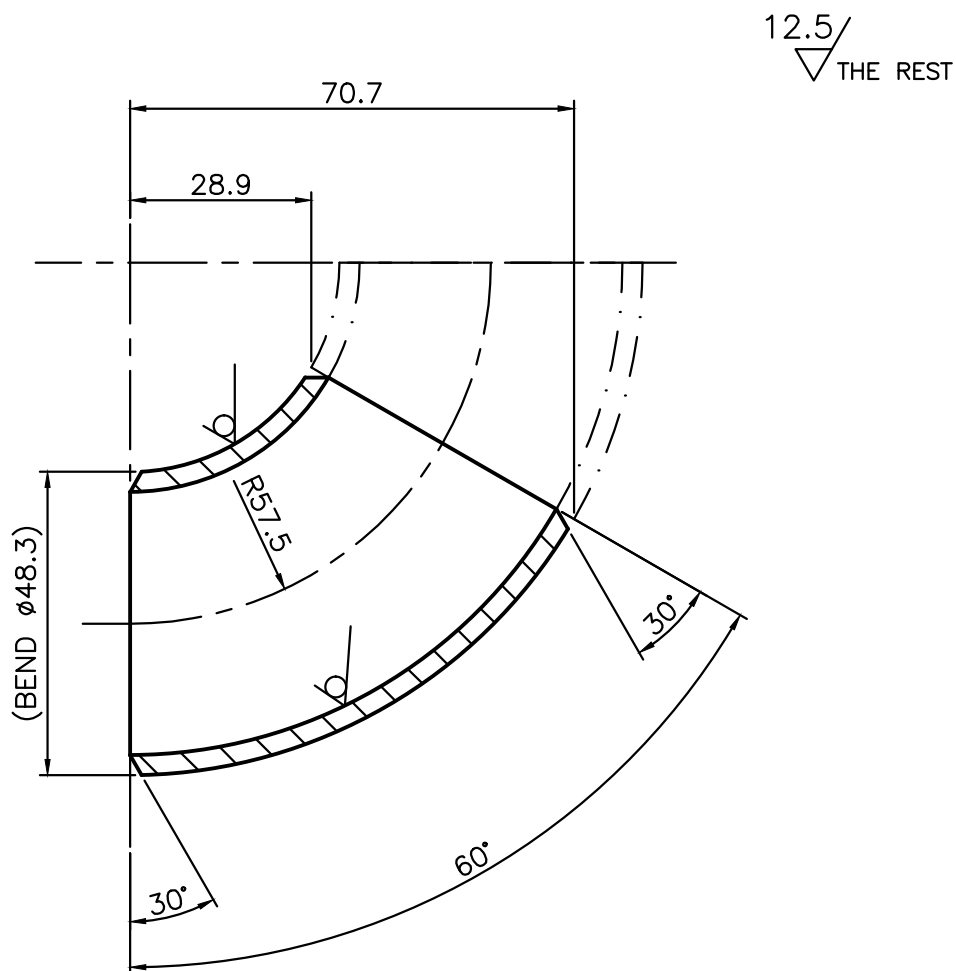
INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS	
	CODE 4133		1:1	.42	31440401150	003		
	TITLE				DRAWING No.			
	PIPE				41440401314			
	(B'LESS EXCITER FOR 800MW TG)				SHEET No.1		No.OF SHEETS1	

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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	CBOM No. 01440401029		STATUS OF DRG	
						AGREED DEPT.	NAME	SIGN	DATE
						WTX	AWTXIS	AWTXIS	28/08/2010
GRADE OF UNTOL.DIM.M/CGZ/M/F.AA0230208			WELDING-A/B/C/D AA0621104			GAS CUTTING-T3 AA0621101			

**TECHNICAL REQUIREMENT:**


1. MARK IDENTIFICATION ACCORDING TO HW 0400397 AT BHEL WORKS.

26-5607-124522/002
REF.DRG.No.

SIGN & DATE

BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	STGEVK	STGEVK	15/07/2010	
CHD	STGESSM	STGESSM	05/08/2010	
APD	ATGEVK	ATGEVK	01/10/2010	

INVENTORY No.	DEPT.TGE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS
	CODE 4133		1:1	.2	31440401150	002	
	TITLE <div>BEND</div> <div>(B'LESS EXCITER FOR 800MW TG)</div>				DRAWING No. <div>41440401315</div>		
					SHEET No.1	No.OF SHEETS1	

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BHARAT HEAVY ELECTRICALS LIMITED

HEEP-HARIDWAR, UTTARAKHAND (249403)

General Instructions and Standard Terms & Conditions for bidding against Tender Enquiry (GISTC)

For Indian Bidders (Version May-2024, Rev: 07)

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1. GENERAL.

These general terms & conditions shall apply to all the Tender Enquiries, notice inviting tenders, request for quotations concerning the supply of goods and / or rendering of services to Bharat Heavy Electricals Ltd., HEEP, Haridwar (hereinafter referred to as BHEL or the Purchaser). In case of placement of order these conditions will become part of Purchase Order (P.O) until unless the deviations are specifically agreed by BHEL.

2. ORIGIN OF QUOTATION.

"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:

- they have controlling partner (s) in common; **or**
- they receive or have received any direct or indirect subsidy/ financial stake from any of them; **or**
- they have the same legal representative/agent for purposes of this bid; **or**
- 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
- 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
- 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:
 - The principal manufacturer directly or through one Indian agent on his behalf; and
 - Indian/foreign agent on behalf of only one principal;**or**
- 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**
- 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 sister/ common business/ management units in same/similar line of business. "

3. SUBMISSION OF TENDER.

- Bid / Quotation must be enclosed in sealed cover on which tender enquiry number and the due date MUST BE written and be invariably sent under REGISTERED POST / SPEED POST / COURIER / Dropped in the Tender Box: addressed as follows:

Quotation against Enquiry No. _____

Dated: _____

Due on: _____

To,

**THE HEAD OF MATERIALS MANAGEMENT,
Heavy Electrical Equipment Plant,
Bharat Heavy Electricals Limited,
HARIDWAR-249403 (Uttarakhand), INDIA.**

- TENDER ROOM is located at: Room No. - 415, 4th Floor, Main Admin. Building, BHEL-HEEP, Haridwar.



BHARAT HEAVY ELECTRICALS LIMITED

HEEP-HARIDWAR, UTTARAKHAND (249403)

General Instructions and Standard Terms & Conditions for bidding against Tender Enquiry (GISTC)

For Indian Bidders (Version May-2024, Rev: 07)

- c) In case of Three / Two Part Bid, technical bid containing technical offer, duly signed and un-priced copy of the Price Bid should be kept in one envelope. Price Bid containing only the price should be kept in a separate envelope. All envelopes indicating Part-1 or Part-2 or Part-3 as the case may be to be put in a bigger envelope. Please note that un-priced bid should be the exact replica of price bid but without prices.
- d) The bid / quotation must be posted before due date, keeping allowance for postal transit time. Quotations sent by any mode but not received in time will be ignored. Tender received through authorized E-mail is also acceptable. However, in time submission of tender in tender box shall be the responsibility of the bidder, sent through any mode. Documents submitted with the offer / bid shall be signed and stamped in each page by authorized representative of the bidder.
- e) Any additional documents submitted by supplier / bidder, during processing of registration application / tender or after placement of order shall not be accepted unless it is submitted with forwarding letter and duly signed and stamped.
- f) The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, shall be rejected. The cutting / overwriting in the bid / offer must be duly attested by the signatories to the bid. The list of firms banned by BHEL is available on BHEL web site www.bhel.com.
- g) Being PMD vendor, if you are not quoting against this tender enquiry, please send your regret letter positively for our reference with valid reasons for not participating in the tender enquiry. Repeated lack of response on the part of bidder may lead to deletion such PMD vendor from BHEL's approved vendor list.
- h) The bidders will submit Integrity Pact, duly signed by its authorized signatory, along with their bids wherever estimated tender value is Rs. 2 Crore or more.
- i) In case of open tender, technically qualified unregistered bidders may apply online for registration through <http://www.bhel.com/index.php/vender>.
- j) BHEL reserves the right to award tendered quantities among more than one bidder (after acceptance of L1 price by the other bidders). BHEL can also consider awarding of part of the tendered quantity to other than L-1 bidder at L1 counter offered rates, if the quantity offered by the L-1 bidder is less than the quantity tendered for.
- k) In case of e-Tendering (Online bidding through e-portal), offline bid submitted in hard copy or in any other form by the vendor / supplier will not be accepted and will be rejected out rightly. Only e-portal bid will be accepted.

4. TENDER OPENING.

Tender opening is scheduled to start in the Tender Room at 2:00 PM, on the due date. Therefore, bid / quotations must reach this office / tender Box latest by 1:45 PM on due date. Only participating bidders are allowed to attend tender opening. **TENDERS RECEIVED AFTER THE SPECIFIED TIME OF THEIR 'SUBMISSION' WILL BE TREATED AS LATE TENDERS AND SHALL NOT BE CONSIDERED UNDER ANY CIRCUMSTANCES.** The bidders or their authorized representatives may be allowed to attend tender opening if duly authorized by their principals, through a tender specific letter on that particular day. General authorization letter is not acceptable.

Note: - Foreign bidders willing to attend the bid opening has to provide the requisite documents to the concerned Purchase executives for arranging gate pass for them.

5. SPECIFICATION, DRAWINGS & STANDARD.

- a) Bidders must give their detailed specification in the quotation along with relevant technical literature / catalogue etc. against the tender enquiry.
- b) The Bid should be accompanied with relevant copies of catalogues, drawings or specification as per tender enquiry.



BHARAT HEAVY ELECTRICALS LIMITED

HEEP-HARIDWAR, UTTARAKHAND (249403)

General Instructions and Standard Terms & Conditions for bidding against Tender Enquiry (GISTC)

For Indian Bidders (Version May-2024, Rev: 07)

If these documents are not furnished, the offer is liable to be rejected.

- c) Wherever national / international (N/IN) standards are referred, the latest N/IN standards are to be followed. Mention year & date of standard revision that shall be followed for the supply.
- d) All Drawings and Standards are proprietary of BHEL. It must not be used in anyway detrimental to the interest of BHEL or without permission of BHEL.

6. PRICE SCHEDULE.

- a) Kindly quote your prices in figures and words both. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 status.
- b) Prices quoted should not be more than the prices quoted to any other BHEL units / offices / divisions. Vendor to submit copy of latest Purchase Order placed by any unit of BHEL for similar items in the technical bid. In case no order has been placed on such items, specific confirmation that no order has been placed on such items should be provided.
- c) Prices should be quoted on F.O.R. Destination basis. Transit insurance shall be arranged by BHEL and not to be included in the prices. The offers quoted on other than F.O.R destination basis may result in non-consideration of such bids.
- d) In case BHEL accepts the EX-Works prices, such offers will be loaded by 1.5% of EX-Works value towards freight or with actual freight charges as per BHEL freight rate contract whichever is higher.
- e) In case of Indigenous items covered by DGS & D Rate Contract, the bidders should submit latest valid copy of the rate contract along with bid / quotation
- f) Applicable **IGST / CGST / SGST** and any other statutory levy should be indicated separately and clearly in the bid / quotation.

- g) Bidders can dispatch goods through any Indian Bank Association approved transporters having their branch at HARIDWAR / destination. If material is dispatched through other than Indian Bank Association approved transporter, material to be delivered on door delivery BHEL Stores basis.
- h) In case of dispatch of material through any other unapproved transporter, payment shall be made only after receipt of material and any additional charges payable to the transporter shall be to the bidder's account.
- i) Any demurrage / godown rent payable to the transporter / or to godown's owner due to any delay attributed by the supplier shall be recovered from supplier's account.
- j) Currency of Evaluation shall be INR.

NB: Financial evaluation of L1, L2Status will be on the basis of Landed Cost to BHEL.

7. REVERSE AUCTION.

Wherever RA is declared in the special terms and conditions of tender enquiry, following shall be applicable and Bidders to confirm the same:

"BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders.

Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of 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."

8. DELIVERY TERMS.

- a) Goods shall be delivered on 'FOR Destination' basis to the named destination unless otherwise called for in the tender enquiry.
- b) Loading on account of 3rd party inspection charges in case of Indian bidders shall be 0.20%.



BHARAT HEAVY ELECTRICALS LIMITED

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9. LIQUIDATED DAMAGES (LD) FOR LATE DELIVERY.

a) Where items of Purchase Order are independently usable.

Liquidated Damages (LD) for Late Deliveries shall be applicable @0.5% per week or part thereof on the value of respective delayed supplies subject to a maximum of 10% of the value of respective delayed supplies. Value of delayed supplies will mean the Gross Value payable to the vendor (Before LD) against such supplies excluding taxes and duties.

b) Where the total items are required for a main equipment and items are interdependent.

Liquidated Damages (LD) for Late Deliveries shall be applicable @0.5% per week or part thereof on total value of Purchase Order subject to maximum of 10% of the total value of Purchase Order. Purchase Order value for this purpose shall be the Total Gross Value payable to the vendor (Before LD) excluding taxes and duties.

c) Bidders are requested to quote the best delivery meeting the delivery requirements. BHEL reserves the right to reject the offers not meeting BHEL's delivery requirement.

d) Commencement of delivery period shall be reckoned from the date of PO / LOI or any other agreed milestone.

e) Bidder shall deliver the goods in the manner and schedule agreed under the terms and conditions of Purchase order.

f) DELIVERY IN CASE OF REJECTION: In case the material is rejected, then date of replacement will be considered as the actual date of delivery.

g) DELIVERY AGAINST BANK DOCUMENTS: In case payment terms quoted by bidder are documents through bank, and the delivery terms being "FOR Haridwar / FOR Transporter Go-down" then date of delivery will be date of intimation by transporter / bidder of delivery of material at Haridwar for the LD purpose.

h) Where the payments are through bank, the documents may be presented for negotiation to BHEL authorized / nominated bank.

i) Payment of Liquidated Damages (LD) shall not in any way relieve the vendor from any of its obligations & liabilities under the contract.

10. PAYMENT TERMS.

a) BHEL's standard payment term is Payment after receipt and acceptance of materials / items at HEEP, BHEL-Store or at desired destination unless otherwise specified in Special Terms attached to the tender enquiry.

b) BHEL reserves the right to accept or reject the offer of the bidder who quotes the payment term other than BHEL's standard payment term.

c) Loading on account of deviation in payment terms shall be done as per extant rules of BHEL-Haridwar.

d) 100% payment along with taxes, freight & insurance will be made after receipt and acceptance of material and within 75 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order. In case any discrepancy found in the documents, BHEL will notify the same to vendor within 7 days of receipt. Vendor has to clear all the discrepancies in one go within 7 days thereafter else the payment of vendor may get delayed.

e) For MSEs (covered under MSME Act) which are registered and periodically renewed with BHEL, the payment will be made within 45 days or as prescribed in the relevant act.

f) Adherence to the above time schedule of payment is contingent upon Vendor complying with GST Rules w.r.t availment of Input Tax Credit by BHEL.

g) In case GST credit is delayed / denied to BHEL, due to non / delayed receipt of goods and / or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reason not attributable to BHEL, GST amount shall be recoverable from Vendor along with interest levied / leviable on BHEL.

h) The taxes and duties that are reimbursed would be the ones applicable as on the contractual Purchase order delivery date or the amount actually paid whichever is less.



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i) The loading criteria for the different payment terms shall be as under:

Payment Terms	Days of Loading
After Receipt & Acceptance of material within 75 days of supply.	No Loading
Against Delivery at BHEL-Stores Haridwar.	45
Against documents through bank (CAD):	45
Letter of Credit (LC)	120
Usance LC	No Loading if usance period is > 120 Days.
	Loading of days' difference i.e. difference between 120 days and usance period if the usance period is < 75 days.
Advance	Delivery Period + 120 Days - Advance Payment Days.

11. TAXES & DUTIES.

- a) The bidder to specify in their offer (part 1 bid) the category of their registration under GST like Registered, Unregistered and composite dealer.
- b) The provisional GST registration number of Bharat Heavy Electrical Ltd, Heavy Electricals Equipment Plant, Ranipur, Haridwar is "05AAACB4146P1ZL" with state Code as "05" and State Name as "Uttarakhand".
- c) Please quote our provisional GST registration number in all invoices raised for supply of goods and services under GST regime and also ensure filing of timely return and payment of tax and compliance of other applicable provisions on supplier under GST regime.
- d) No GST will be reimbursed to unregistered or composite dealer. In the event, any GST is quoted by composite dealer, the same shall be added to the cost of supply in evaluating the bid.
- e) Since, input credit of GST will be available to BHEL-Haridwar only after correct filing of return and payment of applicable GST by supplier, reimbursement of GST shall be made by

BHEL-Haridwar on matching of vendor inputs at GST portal, ensuring availability of input credit to BHEL Haridwar. Payment of GST will be made to vendor after matching of input credit and vendor to ensure submission of their invoices along with consent to accept payment of tax after such matching in all cases where bills are submitted directly to BHEL-Haridwar or through bank or under LC or through any other mode.

- f) In the event of any disallowance of input credit or applicability of interest or any other financial liability arises on BHEL-Haridwar due to any default of supplier under GST, such implication shall be to supplier's account.
- g) In the event of any change in the status of the vendor after the submission of the bid but before the supply, GST applicable at the time of supply or in the bid, based on the registration status of the vendor, whichever is lower shall be payable.
- h) Where ever applicable If PAN (Permanent Account Number) of the recipient is not available, income tax is deductible either at the normal rate or at the rate of 20 percent, whichever is higher as per Section 206AA of Indian Income Tax Act 1961.
- i) The bidder shall clearly indicate HSN (*Harmonised System Nomenclature*) / SAC (*Service Accounting Code*), its description and applicable rate of GST for each item in his techno-commercial bid.
- j) Statutory Variation in Taxes & duties as applicable at the time of supply shall be payable. However, in the event of no change in law but bidder quoting certain tax structure in bid document which is lower than the applicable one, such amount shall be the maximum amount of tax that can be claimed by bidder.
- k) **IMPORTED GOODS OFFERED BY INDIAN BIDDERS AGAINST DEALER INVOICE:** Wherever the material being offered is imported, the bidder must quote the prices inclusive of IGST. The rate and value of IGST as included in the price must be indicated separately. In case quantum of IGST is not mentioned by the bidder the same will not be considered for



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evaluation. However, bidder will have to pass on the benefit of IGST to BHEL at the time supply.

- l) In case of directly dispatchable items to Customer's Site, BHEL-Haridwar will inform the GST registration number of the respective customer which must be mentioned on the vendor's invoice. Vendor to ensure availability of such information from BHEL-Haridwar before dispatch of any material. However, while filing GSTN-1, BHEL Haridwar GSTN number to be quoted.

Note: - Vendors must ensure compliance of all the applicable rules and procedure as envisaged in the GST Regime. Any loss to BHEL-Haridwar due to fault / non-compliance by the vendor will be to the vendor's account.

12. BANK GUARANTEE.

In case the bank guarantees are required to be deposited towards security deposit/performance guarantee or for any other purpose as per the terms of this tender enquiry, such bank guarantees of the requisite value in the denominated currency of the purchase order should be from one of the Indian branch of BHEL consortium banks and the bank guarantee should be in the proforma as prescribed by BHEL. The proforma of bank guarantee and the list of consortium banks are displayed at BHEL website www.bhelhwr.co.in. However, in case the bank guarantee is not from BHEL consortium banks, then the bidder has to get the bank guarantee confirmed from one of the Indian branch of BHEL consortium banks and the bank charges for such confirmation will be borne by the bidder.

13. GUARANTEE / WARRANTY AND CORRESPONDING REPAIRS / REPLACEMENT OF GOODS.

Goods shall comply with the specifications for material, workmanship and performance. Unless otherwise specified, the warranty shall be for a period of 18 months from the date of receipt. If the delivery is found non-compliant during the warranty period, leading to rejection, the Seller shall arrange free replacement / repair of goods, within one month from the date of intimation or any mutually agreed period. The rejected goods shall be taken away by the Seller at his cost and

replaced on Delivered Duty Paid (DDP) (FOR - BHEL Stores / designated destination basis) within such period. In the event of the Seller's failure to comply, Purchaser may take action as appropriate, including Repair / Replenish rejected goods & disposal of rejections, at the risk & cost of the Seller. In case the defects attributable to Seller are detected during processing of the goods at BHEL or at our subcontractor's works, the Seller shall be responsible for free replacement / repair of the goods as required by BHEL.

- b) **RETURN OF REJECTED MATERIAL FOR REPLACEMENT:** The bidder shall have to pay 5% incidental charges while taking back supplied material if it is found rejected on receipt. The rejected material shall be sent back only after receipt of replacement / submission of BG / refund of amount paid.

14. QUALITY REQUIREMENT.

Your bid / quotation should have specific confirmation regarding meeting all our quality requirements such as. (i) Test Certificate (TC), (ii) Guarantee Certificate (GC) / Warranty Certificate (WC), (iii) Quality Plan (QP) (if applicable); and (iv) Pre-Dispatch Inspection at your works (if applicable).

15. VALIDITY.

The quotation should be valid for a minimum period of 90 days effective from the date of opening of tender, unless otherwise specified in the tender enquiry.

16. RIGHT OF ACCEPTANCE.

- a) **BHARAT HEAVY ELECTRICALS LIMITED HARIDWAR** reserves the right to reject any or all the bids / quotations without assigning any reason thereof. BHEL also reserves the right to increase or decrease the tendered quantities. Bidders should be prepared to accept order for reduced quantity without any extra charges.
- b) Any discount / revised offer / bids submitted by a bidder on its own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders.



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- c) Unsolicited discounts / revised offers / bids given after Part-1 bid opening shall not be accepted. No change in price will be permitted within the validity period asked for in the tender enquiry.
- d) In case of changes in scope and / or technical specification and / or commercial terms & conditions having price implication, techno-commercially acceptable bidders shall be asked by BHEL to submit the impact of such changes on their price bids. In case a bidder opts to submit revised price bid instead of impact called for then the latest price bid shall prevail. However, in both situations, original price bid will be necessarily opened.
- e) The bidder whose bid is technically not accepted will be informed & EMD wherever submitted shall be returned after finalization of contract. EMD shall be forfeited in the event of bidder opting out after tender opening.
- f) BHEL reserves the right to short close the existing Purchase Order / Rate Contract / Work Order or any extension thereof at any stage.

17. TRANSIT INSURANCE.

- a) Transit Insurance will be covered by BHEL under its open Insurance Policy. Seller shall inform dispatch particulars (Purchase Order, RR /GR, Invoice value etc.) to "Finance department (Store bill Section), BHEL Ranipur, Haridwar (Uttarakhand-India) with value of consignment to the Purchaser within 07 days of dispatch for BHEL to arrange insurance coverage in its policy. Failure on the part of seller to inform dispatch particulars will make him liable to pay for any transit damages / losses suffered by the Purchaser.
- b) If Quoted Prices are inclusive of transit insurance, no weightage shall be given while evaluating the bids for Cost of Insurance, being in BHEL Scope.

18. RISK PURCHASE.

In case of abnormal delays (beyond the maximum late delivery period as per LD clause) in supplies / defective supplies or non-fulfillment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / alternative source at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract or under General Law.

19. FORCE MAJEURE CLAUSE.

Notwithstanding any other thing contained anywhere else in the contract or PO (Purchase Order), In case the discharge of obligation under the contract by either party is impeded or made unreasonably onerous, neither party shall be considered in breach of the contract to the extent that performance of their respective obligation is prevented by an event of Force Majeure that arises after the effective date (PO date).

In the above clause, Force Majeure means an event beyond the control of the parties to the contract which prevents a party from complying with any obligation of the contract including but not limited to:

- a) Act of God (Such as but not limited to earthquake, drought, tidal waves, floods etc.).
- b) War (whether war be declared or not), Hostilities Invasion, Act of foreign enemy etc.
- c) Rebellion, revolution, insurrection, civil war etc.
- d) Contamination of Radio Activity from any nuclear fuel or from any other nuclear waste or any other hazardous materials.
- e) Riots, commotions, strike unless restricted to the employees of supplier.
- f) Acts of terrorism.



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- g) Other unforeseeable circumstances beyond the control of the parties and which the affected party cannot avoid even by using its best efforts.
- h) Cancellation of contract by customer.
- i) Change in law / government. Regulation making the performance impossible.
- j) Pandemic or Epidemic.

The party claiming to be affected by force majeure shall notify the other party in writing immediately without delay on the intervention and on the cessation of such circumstances.

Irrespective of any extension of time, if an event of force majeure occurs and its effect continues for more than 180 days the affected party shall have right to cancel the contract.

As soon as reasonably practicable following the date of commencement of a Force Majeure Event, and within a reasonable time following the date of termination of a Force Majeure Event, either Party invoking it shall submit to the other Party reasonable proof of the nature of the Force Majeure Event and of its effect upon the performance of the Party's obligations under this Agreement.

The party shall, and shall ensure that its Subcontractors shall, at all times take all reasonable steps within their respective powers and consistent with Good Operating Practices (but without incurring unreasonable additional costs) to:

- a) Prevent Force Majeure Events affecting the performance of the party's obligations under this Agreement.
- b) mitigate the effect of any Force Majeure Event and
- c) Comply with its obligations under this Agreement.

If the war like situation has developed in a country where a seller's works is located in this P.O. or there is political instability and Indian Embassy located in that country forbids or advises for not having any business dealing with the sellers located in such zone / region/ country, then BHEL reserves the right to cancel the order.

20. NON-DISCLOSURE AGREEMENT.

All Drawing and Technical Documents relating to the product or it's manufacture submitted by one party to the other, prior or

subsequent to the formation of contract, shall remain property of the submitting party. Drawing, technical documents or other technical information received by one party, shall not without the consent of the other party, be used for any other purpose than that, for which they were provided. Such technical information shall not without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to a third party. Patterns supplied by BHEL will remain BHEL's property which shall be returned by the bidder on demand to BHEL. Bidder shall in no way share or use such intellectual property of BHEL to promote his own business with others or to gain a commercial advantage. BHEL reserves the right to claim damages from the bidder, or take appropriate action as deemed fit against the bidder, for any infringement of the provisions contained herein as available under law or equity.

21. SETTLEMENT OF DISPUTES / ARBITRATION.

In case of any dispute arising out of as in connection with this contract, the same shall be referred to arbitration under Arbitration & Conciliation Act 1996 of a sole arbitrator who shall be appointed by mutual consent of the parties. The seat & venue of arbitration shall be Haridwar.

The proceedings shall be conducted in English. The Governing law of contract shall be the substantive law of India.

22. WHARFAGE / DEMURRAGE RESPONSIBILITY.

In the event of delay in receipt of documents by Manager (Stores-Shipping) BHEL-Haridwar and in case where dispatches are made through Unapproved Transporter the sole responsibility for wharfage / demurrage for such delay shall be that of supplier.

23. CONDITIONS FOR AVAILING MICRO & SMALL ENTERPRISES (MSE'S) BENEFITS.

- a) "MSE Suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (**five years** from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate



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(Format enclosed at annexure-1 where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two-part bid) or vendor has to give Udyog Adhar Memorandum (UAM). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents is found or the requisite documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer. **UAM need not required to be notarized or attested.**

b) Any new supplier will be eligible for registration with BHEL as MSE supplier provided at least any one of the following documents are submitted along with application for registration: -

1. Udyog Adhar Memorandum (UAM).
2. Valid National Small Industries Commission (NSIC) Certificate.
3. Entrepreneurs Memorandum part II (EM II) certificate (valid based on deemed validity of 5 years) or
4. EM II certificate along with attested copy of CA Certificate (as per prescribed format at annexure-A) applicable for the relevant financial year (latest audited), where the deemed validity of EM II is over.
5. However, credentials of all MSE suppliers will be verified before advancing the intended benefits.
6. MSE bidders claiming SC/ST status will have to submit SC/ST certificate of the Proprietor from competent authority. Attested (notarized or attested by Gazetted officer) copy to be submitted along with the offer.
7. In case techno-commercial accepted bidders include MSE source and their prices (based on landed cost – considering quoted prices) are within the price band of 15% w.r.t. L-1 bidder, then BHEL can offer **25%** of quantity of respective item (rounded off to nearest number) to MSE bidders at L-1 price and in case, more than one MSE bidder is in 15 % band and the same is accepted by more than one MSE bidders then **25%** quantities of respective items will be considered for ordering on proportionate basis amongst MSE bidders.

8. There will be minimum of **3%** reservation for women owned MSEs within the above mentioned 25% reservation.
9. The reservation for MSEs owned by SC/ST will be **6.25%** { 25% out of target of 25% - refer para 4 of Public Procurement Policy for the Micro and Small Enterprises(MSEs)}.
10. The definition of MSEs owned by Women Entrepreneurs is clarified as under:
 - a) In case of proprietary MSE, proprietor shall be Woman.
 - b) In case of partnership MSE, the Woman partners shall be holding at least 51% of share in the unit.
 - c) In case of Private Limited companies, at least 51% share shall be held by Women promoters.
11. The definition of MSEs owned by SC/ST is clarified as under:
 - a) In case of proprietary MSE, proprietor(s) shall be SC/ST.
 - b) In case of partnership MSE, the SC/ST partners shall be holding at least 51% of shares in the unit.
 - c) In case of Private Limited companies, at least 51% share shall be held by SC/ST promoters.
12. While distributing the **25%** quantity amongst MSE bidders the decimal points in quantity shall be ignored for all the bidders except the L-1 amongst MSE bidders. Balance quantity after allocating the quantity to other MSE bidders ignoring the quantities in decimal, shall be given to L-1 (amongst MSE) bidder. However, if there are more than one MSE bidder at the same price level than preference for additional quantities due to ignoring off the decimal (as mentioned above) shall be given to the bidder offering favorable terms to BHEL and if the conditions offered are also same then preference will be given to the bidder having high SPR rating.
13. In case there are more than one MSE bidders (with different landed cost to BHEL) within 15% price band of lowest bidder and quantity to be offered is 1 no. only, then preference shall be given to the MSE bidder with lowest landed cost.
14. In case there are more than one MSE bidders (with same landed cost to BHEL) within 15% price band of lowest bidder and quantity to be offered is 1 no. only, then preference shall be given first, based on the favorable terms in the bid and in case terms are also same, the bidder with high SPR rating shall be given preference.
15. If L1 bidder is MSE bidder, entire quantity will be given to such MSE bidder only.



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16. Note: It may however be noted that MSE guidelines as on date (Date of Technical Bid Opening Part-1) shall prevail.

17. "As per the OM No. F.No. 1(2)(1)/2016-MA dtd. 09.02.2017 issued from the Office of Development Commissioner (Micro, Small & Medium Enterprises), "Traders and agents should not be allowed to avail the benefits extended under the PP Policy."

In view of this, it is clarified that benefits of MSE (such as EMD Waiver, Tender fee exemption, Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. No MSE benefits shall be provided to Agents / Stockists / Dealers / Traders etc. for the items offered but not manufactured by themselves."

24. INFORMATION TO THE BIDDERS.

a) Purchase related information is available at our Business-to-Business (B2B) Portal available on our website <https://hwr.bhel.com>. The user ID & password can be obtained by sending a request to concerned purchase executives.

b) Intimate your change in mail address or communication address or changes, if any, by email to AGM (SDX/MM) giving your bidder Code.

c) Please resolve your rejections and unexecuted overdue purchase order immediately which are posted at our B2B Portal, which can be visited through our site <https://hwr.bhel.com>

d) Copy of this Tender Enquiry is being sent through the post.

e) 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.

f) Supplier must upload digitally signed e-Invoice on B2B portal for processing of Bills.

In other cases, inked signed hard copy of Invoice to be submitted for processing of Bills.

25. MAKE IN INDIA (GOVT-NOTIFICATION).

A. This tender enquiry shall be governed by notification no. P-45021/2/2017-PP (BE-II) dated 04.06.2020 of government of INDIA and subsequent circulars issued afterwards. Accordingly, the minimum local content, the margin of purchase preference and the procedure for preference to make in INDIA shall be adhered.

B. The margin of purchase preference shall be 20%.

- 'Class-I local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under this order.
- 'Class-II local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this order.
- 'Non- local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%, as defined under this order.

C. Vendor to specifically confirm if they are Class-I or Class-II local supplier or not as per above mentioned notification.

Accordingly, the 'Class-I local supplier' / 'Class-II local Supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier' / 'Class-II local Supplier', as the case may be. They shall also give details of the location(s) at which the local value addition is made.

D. In cases of Procurement for a Value in Excess of Rs. 10 Crores, the 'Class-I local supplier' / 'Class-II local Supplier' shall be required to provide a Certificate from the Statutory Auditor or Cost Auditor of the Company (in the case of companies) or from a practicing Cost Accountant or practicing Chartered Accountant (in respect of suppliers other than companies) giving the percentage of Local Content.



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E. Requirement of Purchase Preference:

Purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified hereunder -

- a. In the procurements of goods or works, which are covered by para 3(b) of mentioned Govt. circular and which are divisible in nature, the 'class-I local supplier' shall get purchase preference over 'Class-II supplier' as well as 'Non-local supplier', as per following procedure:
 - i. Among All qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
 - ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local supplier, then such balance quantity may also be ordered on the L1 bidder".
- b. In the procurements of goods or works, which are covered by para 3(b) of mentioned Govt. circular and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'class-I local supplier' shall get purchase preference over 'Class-II supplier' as well as 'Non-local supplier', as per following procedure:
 - i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
 - ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling

within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.

- iii. In case such lowest eligible 'Class-I local supplier', fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 prices, the contract may be awarded to the L1 bidder.

- c. 'Class-II local supplier' will not get purchase preference in any procurement, undertaken by procuring entities.

- F. For this procurement, the local content to categorize a supplier as a Class-I local supplier/ Class-II local supplier/ Non-local supplier and purchase preference to Class-I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
- G. Procurements where estimated value to be procured is less than Rs. 5 lakhs shall be exempted from GOI order No. P-45021/2/2017-PP (BE-II) dated 04.06.2020.
- H. For procurement of Goods & Services which are divisible in nature, following shall be operated for **MSE bidders** under Public procurement Policy for the Micro and Small Enterprises (MSEs) Amendment Order, 2019, Ref. No. AA: SSP: MSE: Amndt, dtd. 30.11.2018, Circular No. 44 of 2018-19;-
 - a. If L1 bid is not from "Class-I local Supplier" and price quoted by MSE bidder falls within the margin of Purchase preference (L1+15% for MSEs), then 25 % of total order quantity of respective item (rounded off to nearest number) shall be awarded to MSE bidder, subject to MSE bidder matching the L1 Price. Out of Remaining 75% quantity, distribution shall be operated as per below sub-clause (2) –
 - b. If "Class- I Local Supplier" (Next to L1, other than MSE) quoted price falling within the Margin of Purchase Preference, and "Class-I local supplier" matches the L1 price,



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then 50% of remaining Quantity (after allocation of 25% to MSE) i.e. 37.5% shall be awarded to local supplier and 37.5% shall be awarded to foreign bidder.

Note: L1 Price refers to lowest evaluated / landed cost to Company.

For Further details, please refer GOI order no. P-45021 / 2 / 2017 - PP (BE-II) dated 04.06.2020.

26. RESTRICTIONS UNDER RULE 144(XI) OF THE GENERAL FINANCIAL RULES (GFRs), 2017

All provisions of Order No. F.No.6/18/2019-PPD of Department of Expenditure (DoE) shall be applicable for this tender enquiry (Order copy is available at <https://doe.gov.in/procurement-policy-divisions>). Accordingly, any bidder from a country which shares a land border with India (except the countries to which the Govt. of India has extended lines of credit or in which the Govt. of India is engaged in development projects for which list is available at <https://www.mea.gov.in/>) will be eligible to bid in this tender only if the bidder is registered with the Competent Authority as specified in Annex I of the said Order of DoE.

Updated list of the countries to which lines of credit have been extended or in which development projects are undertaken are available on the Ministry of External affairs website (<https://www.mea.gov.in/>)

For the purpose of this order, definition of Bidder from a country which shares a land border with India shall be same as defined in the Annex III of the said order.

Registration with the competent authority as stipulated in the said order is responsibility of bidder. Bidder has to submit a certificate certifying following along with offer:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India;

I certify that bidder (.... Name of Bidder) is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that bidder (.....Name of bidder) fulfils all requirements in this regard and is eligible to be considered"

If the bidder is from such country which shares a land border with India evidence of valid registration by the Competent Authority shall also be attached along with offer."

27. NOTE.

- a) Special conditions of enquiry, if enclosed by BHEL, will supersede the respective standard / general terms of enquiry.
- b) Any other Standard terms and Conditions of the bidder attached / referred against the tender enquiry will be treated as null and void ab initio.
- c) In order to protect the commercial interests of BHEL, it becomes necessary to take action against suppliers / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business / money / reputation, indulged in malpractices, cheating, bribery, fraud or any other misconducts or formation of cartel so as to influence the bidding process or influence the price etc. Guidelines for Suspension of Business Dealings with Suppliers / Contractors shall prevail over which is available at BHEL website <http://www.bhel.com>
- d) The bidder along with its associate / collaborators / sub-contractors / sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL-Management about any fraud or suspected fraud as soon as it comes to their notice.
- e) "BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life / permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below;
 1. **Victim:** Any person who suffers permanent disablement or dies in an accident as defined below.
 2. **Accident:** Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious



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occurrence caused during the manufacturing / operation and works incidental thereto at BHEL factories/ **offices and precincts** thereof , project execution , erection and commissioning, services, repairs and maintenance, trouble shooting, serving , overhaul, renovation and retrofitting , trial operation, performance guarantee testing undertaken by the company or during any works / during working at BHEL Units/ Offices/ townships and premises/ project sites.

3. Compensation in respect of each of the victims:

- (i) In the event of death or **permanent disability** resulting from **Loss of both limbs**: Rs. 10,00,000/-(Rs. Ten Lakh).
- (ii) In the event of **other permanent disability**: Rs. 7,00,000/- (Rs. Seven Lakh).

4. Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to Section 2(l) of the Employees Compensation Act, 1923."

f) The bidder shall be in compliance with applicable laws, rules and regulations throughout the terms of the contract for conducting its business generally and to perform its obligations under this contract.