

TENDER ENQUIRY NO.: X/6620/2023/0361/E/1

SUB:- TERMS & CONDITIONS FOR FORMING OF FLANGE(OD/ID)

NIT-Notice Inviting Tender

Salient Details of Notice Inviting Tender (NIT)		
Sl. No.	Issue	Description
1.	Item details	As per Enquiry Annexure X/6620/2023/0361/E/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: 14-09-2023 Time: 13:45 hrs https://eprocurebhel.co.in/nicgep/app <i>Offer to be submitted in online only through e-procurement Portal.</i> (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: 14-09-2023 Time: 14.00 Hrs Notes: <i>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.</i>
5.	Cost of Tender	INR 2000/- (If hard copy of tender document is required from BHEL otherwise not applicable.)
6.	EMD (Earnest Money Deposit)	NIL
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.06)**. 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.

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E-Procurement Portal Inputs

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.

TERMS & CONDITIONS FOR CUTTING ONLY ONLY OF FLANGE OD/ID

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 all reference drawings are also enclosed for having a general idea of the tender.

1. **SCOPE OF WORK:** - This enquiry is for Cutting of following items with BHEL Material as per drg., QP & other specifications.

Sl. No.	Item Description	Drg. No.	Total Qty.
1 to 85	FLANGE OD/ID	2214011860103 to 4214012010200 (all 85 items list attached below)	5701 Nos.

Remark-

- I. Vendor to provide 5mm machining allowance on OD/ID for each drg.

- Total weight of all flange blank (OD/ID) covered in this enquiry is 59165 kg.
- The rate (s) should be quoted in **Rupees/Pc.**
- S/R, S/B before final Assembly, if reqd., will be done at BHEL.
- Cleaning of parts, removal of mill scale from components prior to assembly will be in scope of vendor.
- CHP Clearance may be obtained from NTPC/LLOYD/RITES/NPC at party's end.
- Final Assembly shall undergo cleaning to ensure that all parts are free from dents, mills, spatters.
- Customer's seal (if Any on supplied Material) to be transferred.
- Copies of the relevant certificates to be supplied to the receiving shop.
- Quality plan (if any) to be followed for Material induction and CHP.
- All special tests viz., UT, RT, HYDRAULIC & KEROSENE etc. are to be performed as per drg. requirements.
- Aesthetic appearance shall also be ensured and inspected before delivery to BHEL.

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.	TOTAL Qty.	Delivery
1 to 85	FLANGE OD/ID	2214011860103-4214012010200 (all 85 items list attached below)	5701 Nos.	As mentioned below list

- 6. Bank Guarantee/Indemnity Bond: -** 25% Bank Guarantee and 75% 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. (excluding NPC) 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. 06, 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 12 %. However, it will be as applicable as per Govt. guidelines/circulars.

12. Quality Requirement: -

- a) Sub-contractor to provide a summary sheet of documents/TCs provided for correlation.
- b) Sub-contractor to mention relevant QP clauses on all TCs/ reports for every lot.
- c) Inspection by BHEL/BHEL nominated inspection agency as per drawing /Standard and quality plan requirements.
- d) Quality plan no. QP/QA/232086 rev. 00 dated 29.07.2023 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. Total Value wise evaluation will be applicable for this enquiry.

In the course of evaluation, if more than one bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from respective L1 bidders. In case more than one bidder happens to occupy the L1 status even after soliciting discounts, the 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. GENERAL INSTRUCTIONS: -

15.1 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.

15.2 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.

15.2.1 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.

15.3 Please refer general instructions and standard terms & conditions (GISTC) for bidding against tender enquiry (version June-2021, Rev:06) the bidder/vendor must ensure compliance of these GISTC (version June-2021, Rev:06). Please refer <https://hwr.bhel.com>.

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

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

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

15.6.1 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.

15.7 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.

15.8 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.

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

15.10 Following MSE conditions shall be followed: -

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. 06, June 2021.

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

16. 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.

17. 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 MSTC Bulletin/any other document under category of scrap MELTING SCRAP. 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.

18. 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.

19. 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

Action against Bidders / vendor / supplier / contractor in case of default:

In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / 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, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc.

Suspension of Business Dealings could be in the form of "Hold" or "Banning" a supplier/ contractor or a bidder and shall be as per "Guidelines for Suspension of Business Dealings with Suppliers/ Contractors" available at BHEL's website "<https://www.bhel.com/guidelines-suspension-business-dealingssupplierscontractors>."

20. Conflict of interest: -

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

- a) they have controlling partner (s) in common; or
- b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
- c) they have the same legal representative/agent for purposes of this bid; or
- d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
- e) Bidder participates in more than one bid in this bidding process.

Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid; or

- f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:

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

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

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.

- In view of present situation, 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**PRE-FAB. M/C & FAB. ONLY OF INNER TOP COVER,
OUTER TOP COVER & DISCHARGE VALVE DOOR**

OpenTender Enquiry No.: X/6620/2023/0361/E/1

Sl. No.	Item Description	MATERIAL BY	Quoted/Not Quoted (Price not to quoted here)
1 to 85	FLANGE OD/ID (all 85 items list attached below)	BHEL MATERIAL (BM)	

Authorised Signature:
(with date & seal of company)
Name of Supplier: -

TOTAL LIST

Sl. No.	Item Description	Drg. No.	Qty.	DELIVERY (Qty: Delivery period)
1	FLANGE WITH SEAL GROOVE	2214011860103	64	For Qty.28 = 30 DAY FROM LAST MAT. SENT For Qty.36= 45 DAY FROM LAST MAT. SENT
2	FLANGE WITH SEAL GROOVE CLS300	3210171840204	24	30 DAY FROM LAST MAT. SENT
3	FLANGE WITH SEAL GROOVE CLS300	3210171840206	276	For Qty.144= 30 DAY FROM LAST MAT. SENT For Qty.132= 45 DAY FROM LAST MAT. SENT
4	FLANGE WITH SEAL GROOVE CLS300	3210171840207	24	30 DAY FROM LAST MAT. SENT
5	FLANGE WITHOUT SEAL GROOVE	3210171840306	112	30 DAY FROM LAST MAT. SENT
6	FLANGE WITHOUT SEAL GROOVE	3210171840307	24	30 DAY FROM LAST MAT. SENT
7	FLANGE WITH SEAL GROOVE CLS150	3210171840401	80	30 DAY FROM LAST MAT. SENT
8	FLANGE WITH SEAL GROOVE CLS150	3210171840402	40	30 DAY FROM LAST MAT. SENT
9	FLANGE WITH SEAL GROOVE CLS150	3210171840404	80	30 DAY FROM LAST MAT. SENT
10	FLANGE WITH SEAL GROOVE CLS150	3210171840406	148	30 DAY FROM LAST MAT. SENT
11	FLANGE WITH SEAL GROOVE CLS150	3210171840407	42	For Qty.24= 30 DAY FROM LAST MAT. SENT For Qty.18= 45 DAY FROM LAST MAT. SENT
12	FLANGE WITH SEAL GROOVE CLS150	3210171840408	208	30 DAY FROM LAST MAT. SENT
13	FLANGE WITHOUT SEAL GROOVE	3210171840501	200	For Qty.80= 30 DAY FROM LAST MAT. SENT For Qty.120= 45 DAY FROM LAST MAT. SENT
14	FLANGE WITHOUT SEAL GROOVE	3210171840502	100	For Qty.40= 30 DAY FROM LAST MAT. SENT For Qty.60= 45 DAY FROM LAST MAT. SENT
15	FLANGE WITHOUT SEAL GROOVE	3210171840504	80	30 DAY FROM LAST MAT. SENT
16	FLANGE WITHOUT SEAL GROOVE	3210171840506	100	30 DAY FROM LAST MAT. SENT
17	FLANGE WITHOUT SEAL GROOVE	3210171840508	160	30 DAY FROM LAST MAT. SENT
18	BLANK FLANGE (CLASS 300)	3210171840606	16	30 DAY FROM LAST MAT. SENT
19	BLANK FLANGE (CLASS 300)	3210171840607	8	30 DAY FROM LAST MAT. SENT
20	BLANK FLANGES (CLASS 150)	3210171840701	20	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.12= 45 DAY FROM LAST MAT. SENT
21	BLANK FLANGES (CLASS 150)	3210171840702	20	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.12= 45 DAY FROM LAST MAT. SENT
22	BLANK FLANGES (CLASS 150)	3210171840704	16	30 DAY FROM LAST MAT. SENT
23	BLANK FLANGES (CLASS 150)	3210171840706	16	30 DAY FROM LAST MAT. SENT
24	BLANK FLANGES (CLASS 150)	3210171840708	16	30 DAY FROM LAST MAT. SENT

25	SEAL FLANGE NB80	3210171840900	60	30 DAY FROM LAST MAT. SENT
26	SLIP FLANGE (CLASS 300)	3210171841005	32	30 DAY FROM LAST MAT. SENT
27	BACKING FLANGE (CLASS 300)	3210171841105	32	30 DAY FROM LAST MAT. SENT
28	SLIP FLANGES (CLASS 150)	3210171841203	32	30 DAY FROM LAST MAT. SENT
29	SLIP FLANGES (CLASS 150)	3210171841205	48	30 DAY FROM LAST MAT. SENT
30	BACKING FLANGES (CLASS 150)	3210171841303	32	30 DAY FROM LAST MAT. SENT
31	BACKING FLANGES (CLASS 150)	3210171841305	48	30 DAY FROM LAST MAT. SENT
32	FLANGE WITH SEAL GROOVE CLS300	3210171841400	48	30 DAY FROM LAST MAT. SENT
33	FLANGE WITH SEAL GROOVE CLS600	3210171841601	60	For Qty.48= 30 DAY FROM LAST MAT. SENT For Qty.12= 45 DAY FROM LAST MAT. SENT
34	FLANGE WITH SEAL GROOVE CLS600	3210171841602	20	30 DAY FROM LAST MAT. SENT
35	FLANGE WITHUT SEAL GROOVE CL600	3210171841701	52	For Qty.40= 30 DAY FROM LAST MAT. SENT For Qty.12= 45 DAY FROM LAST MAT. SENT
36	FLANGE WITHUT SEAL GROOVE CL600	3210171841702	20	30 DAY FROM LAST MAT. SENT
37	BLANK FLANGE (CLASS 600)	3210171841801	8	30 DAY FROM LAST MAT. SENT
38	BLANK FLANGE (CLASS 600)	3210171841802	16	30 DAY FROM LAST MAT. SENT
39	FLG 100NB WITH SEAL GRV.CL600	3210181840100	200	For Qty.140= 30 DAY FROM LAST MAT. SENT For Qty.60= 45 DAY FROM LAST MAT. SENT
40	FLANGE CL300 WITH SEAL GROOVE	3210181840201	40	30 DAY FROM LAST MAT. SENT
41	FLANGE CL300 WITH SEAL GROOVE	3210181840202	36	30 DAY FROM LAST MAT. SENT
42	FLANGE 80NB CL-600	3210181850102	112	For Qty.64= 30 DAY FROM LAST MAT. SENT For Qty.48= 45 DAY FROM LAST MAT. SENT
43	FLANGE 250NB	3214011450300	28	For Qty.16= 30 DAY FROM LAST MAT. SENT For Qty.12= 45 DAY FROM LAST MAT. SENT
44	FLANGE CL150 WITHUT SEAL GROOV	3230294901402	108	45 DAY FROM LAST MAT. SENT
45	FLANGE CL150 WITHUT SEAL GROOV	3230294901404	150	45 DAY FROM LAST MAT. SENT
46	FLANGE CL150 WITHUT SEAL GROOV	3230294901405	42	For Qty.24= 30 DAY FROM LAST MAT. SENT For Qty.18= 45 DAY FROM LAST MAT. SENT
47	FLANGE CL150 WITHUT SEAL GROOV	3230294901407	390	45 DAY FROM LAST MAT. SENT
48	FLANGE CL150 WITHUT SEAL GROOV	3230294901409	14	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.6= 45 DAY FROM LAST MAT. SENT
49	CIRCULAR FLANGE ANSI CLASS 300	3230294901502	28	30 DAY FROM LAST MAT. SENT
50	CIRCULAR FLANGE ANSI CLASS 300	3230294901507	200	For Qty.32= 30 DAY FROM LAST MAT. SENT For Qty.168= 45 DAY FROM LAST MAT. SENT
51	FLANGE CIRCULAR ANSI CL600	3230294901602	140	For Qty.80= 30 DAY FROM LAST MAT. SENT For Qty.60= 45 DAY FROM LAST MAT. SENT

52	FLANGE CIRCULAR ANSI CL600	3230294901603	58	For Qty.28= 30 DAY FROM LAST MAT. SENT For Qty.30= 45 DAY FROM LAST MAT. SENT
53	FLANGE CIRCULAR ANSI CL600	3230294901604	84	For Qty.48= 30 DAY FROM LAST MAT. SENT For Qty.36= 45 DAY FROM LAST MAT. SENT
54	FLANGE CIRCULAR ANSI CL600	3230294901605	172	For Qty.112= 30 DAY FROM LAST MAT. SENT For Qty.60= 45 DAY FROM LAST MAT. SENT
55	BLANK FLANGE ANSI CLASS 150	3230294901702	12	45 DAY FROM LAST MAT. SENT
56	BLANK FLANGE ANSI CLASS 150	3230294901704	12	45 DAY FROM LAST MAT. SENT
57	BLANK FLANGE ANSI CLASS 150	3230294901705	14	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.6= 45 DAY FROM LAST MAT. SENT
58	BLANK FLANGE ANSI CLASS 150	3230294901707	12	45 DAY FROM LAST MAT. SENT
59	BLANK FLG CIRCULAR ANSI CL300	3230294901802	8	30 DAY FROM LAST MAT. SENT
60	BLANK FLG CIRCULAR ANSI CL300	3230294901807	26	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.18= 45 DAY FROM LAST MAT. SENT
61	BLANK FLG CIRCULAR ANSI CL 600	3230294901902	14	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.6= 45 DAY FROM LAST MAT. SENT
62	BLANK FLG CIRCULAR ANSI CL 600	3230294901903	8	30 DAY FROM LAST MAT. SENT
63	BLANK FLG CIRCULAR ANSI CL 600	3230294901904	28	For Qty.16= 30 DAY FROM LAST MAT. SENT For Qty.12= 45 DAY FROM LAST MAT. SENT
64	BLANK FLG CIRCULAR ANSI CL 600	3230294901905	21	For Qty.12= 30 DAY FROM LAST MAT. SENT For Qty.9= 45 DAY FROM LAST MAT. SENT
65	BLANK FLG CIRCULAR ANSI CL 600	3230294901907	6	45 DAY FROM LAST MAT. SENT
66	SPECIAL FLANGE 50NB	4210171840200	56	For Qty.32= 30 DAY FROM LAST MAT. SENT For Qty.24= 45 DAY FROM LAST MAT. SENT
67	FLG25NB WITHOUT SEAL GRV CL600	4210181810200	180	45 DAY FROM LAST MAT. SENT
68	FLG 25NB WITH SEAL GRV CL600	4210181810300	180	45 DAY FROM LAST MAT. SENT
69	BLANK FLANGE 25NB CLASS600	4210181810400	6	45 DAY FROM LAST MAT. SENT
70	FLANGE 20NB CLASS 300	4210181840200	124	For Qty.64= 30 DAY FROM LAST MAT. SENT For Qty.60= 45 DAY FROM LAST MAT. SENT
71	FLG 20NB WITH SEAL GRV CL300	4210181840300	132	For Qty.72= 30 DAY FROM LAST MAT. SENT For Qty.60= 45 DAY FROM LAST MAT. SENT
72	BLANK FLANGE 20NB CL300	4210181840400	14	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.6= 45 DAY FROM LAST MAT. SENT
73	FLANGE 15NB CLASS 600	4210181840500	166	For Qty.160= 30 DAY FROM LAST MAT. SENT For Qty.6= 45 DAY FROM LAST MAT. SENT
74	FLG 15NB WITH SEAL GRV CL600	4210181840600	174	For Qty.168= 30 DAY FROM LAST MAT. SENT For Qty.6= 45 DAY FROM LAST MAT. SENT
75	BLANK FLANGE 15NB CL600	4210181840700	14	For Qty.8= 30 DAY FROM LAST MAT. SENT For Qty.6= 45 DAY FROM LAST MAT. SENT

76	FLANGE 25NB CLASS600	4210181840800	60	30 DAY FROM LAST MAT. SENT
77	FLG 25NB WITH SEAL GRV CL600	4210181840900	60	30 DAY FROM LAST MAT. SENT
78	BLANK FLANGE 25NB CLASS 600	4210181841000	8	30 DAY FROM LAST MAT. SENT
79	FLANGE-1 SIZE 300NB	4214011810300	7	For Qty.4= 30 DAY FROM LAST MAT. SENT For Qty.3= 45 DAY FROM LAST MAT. SENT
80	SLIP FLANGE	4214011810500	7	For Qty.4= 30 DAY FROM LAST MAT. SENT For Qty.3= 45 DAY FROM LAST MAT. SENT
81	BACKING FLANGE 300NB	4214011810600	7	For Qty.4= 30 DAY FROM LAST MAT. SENT For Qty.3= 45 DAY FROM LAST MAT. SENT
82	FLANGE -II 300NB	4214011810700	7	For Qty.4= 30 DAY FROM LAST MAT. SENT For Qty.3= 45 DAY FROM LAST MAT. SENT
83	FLANGE 50NB CL-600	4214011810800	140	For Qty.80= 30 DAY FROM LAST MAT. SENT For Qty.60= 45 DAY FROM LAST MAT. SENT
84	SPECIAL FLANGE 300NB	4214012010100	7	For Qty.4= 30 DAY FROM LAST MAT. SENT For Qty.3= 45 DAY FROM LAST MAT. SENT
85	ADAPTOR FLANGE 300NBCL-150	4214012010200	7	For Qty.4= 30 DAY FROM LAST MAT. SENT For Qty.3= 45 DAY FROM LAST MAT. SENT
TOTAL QTY.			5701	

***DELIVERY:** - WITHIN 30 DAYS FROM LAST MATERIAL SENT TO VENDOR BY BHEL FOR 4 SET OF KALESHWARAM PROJECT.

***DELIVERY:** - WITHIN 45 DAYS FROM LAST MATERIAL SENT TO VENDOR BY BHEL FOR 3 SETS OF PALAMURU PROJECT.

TERMS AND CONDITIONS FOR Enquiry No. X/6620/2023/0361/E/1

SL.	TERMS	VENDOR'S ACCEPTANCE/ REMARKS
1	Scope of Work: - Cutting 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 of Terms and Conditions)	
3	Submission of offers (as per clause no. 3 of Terms and Conditions)	
4	Quoted rates are on F.O.R. sub-contract store, HEEP, Haridwar basis.(as per clause no. 4 of Terms and Conditions)	
5	Delivery schedule as per clause 5 of T& C of enquiry.	
6	Bank Guarantee/Indemnity Bond: 25% BG & 75% Indemnity bond (as per clause 6 of T& C of enquiry)	
7	Inspection shall be done (as per clause no. 7 of Terms and Conditions of Enquiry)	
8	Guarantee Certificate shall be valid for 18 months. (as per clause no. 8 of Terms and Conditions of Enquiry)	
9	90% after acceptance & final clearance of SRIV, 10% after FTS and final accountal of material (as per clause no. 9 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 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 of Terms and Conditions of Enquiry).	
12	Quality Requirements (as per clause no. 12 of Terms and Conditions of Enquiry).	
13	We accept Reverse Auction(RA) clause as per standard policy of BHEL (as per clause no. 13 of Terms and Conditions of Enquiry).	
14	Evaluation of bids (as per clause no. 14 of Terms and Conditions of Enquiry).	
15	We have read clause no. 15 of terms and conditions of Enquiry and confirm to abide the same.(Clause 15.1 to 15.10)	
16	Transportation:We accept Transportation clause. (as per clause no. 16 of Terms and Conditions of Enquiry).	
17	Scrap :Confirm acceptance of Clause 17 of T & C of Enq.	
18	Rectification:We accept Rectification clause. (as per clause no. 18 of Terms and Conditions of Enquiry).	
19	We accept Risk Purchase clause. (as per clause no. 19 of Terms and Conditions of Enquiry).	
20	Conflict of Interest: Confirm acceptance of Clause 20 of T & C of Enq.	
21	We have submitted Make in India (duly filled & signed and attached.)	
22	We have submitted GISTC Rev.06 (duly filled & signed and attached.)	
23	We have submitted MSE Certificate (if applicable)	
24	Rates have been quoted in indian Rupees on per Pc.basis.	

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 : All Items of Indent no: 20230361

PRE-QUALIFICATION REQUIREMENT

01.00	TECHNICAL REQUIREMENT	Required	Vendor's Offer
01.01	Vendors should have experience of cutting plate of thickness 56mm and above or Vendor should have experience of fabrication of components which involved cutting of plate thickness 56mm and above and supplying such cut components or supplied atleast 1 no. fabricated assembly which involved cutting of plate thickness 56mm and above as mentioned above in last 7 years from the date	Vendor to Comply & submit suitable evidence	
01.02	Facilities Required: i) Lifting facility and capacity at vendor works must be EOT crane 10 Tons and above. ii) Vendor must have cutting area : Length= 8,500mm and Breadth=3,000mm and above to cut plates (iii) Vendor must have cutting facility to cut plate of thickness 60 mm and above of Mild Steel/Carbon Steel material.	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 cut segments of plate of thickness 56mm and above or fabricated components which involved cutting of plate thickness 56mm 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 cut segments of plate of thickness 56mm and above or fabricated components which involved cutting of plate thickness 56mm 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

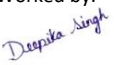
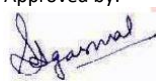
1
02/08/2023
[Ravi Deshpande]
Mge/WT

Santosh
21/8/23
[Santosh Gond]
Mge/WT

B2
02.08.2023
(BS Am)
AGN (FON/WT)

Manufacturer Name and Address		MANUFACTURING QUALITY PLAN				APPLICABILITIES TO	
BHEL Haridwar accepted sub-contractors only	ITEM/EQUIPMENTS	FLANGE WITH SEAL GROOVE, BLANK FLANGE, SEAL FLANGE, BACKING FLANGE, SLIP FLANGES, FLG WITH SEAL GRV., CIRCULAR FLANGE, FLANGE, BLANK FLG CIRCULAR, SPECIAL FLANGE, ADAPTOR FLANGE	Q.P. NO	QP/QA/232086	PROJECT		
			DATE	29.07.2023			
	W.O. NO.	20275T20201, 20277T20201, 20281T20201, 20279T20201, 20269T20201, 20271T20201, 20273T20201	REV. NO.	00	CONTRACTOR	BHEL (HEEP) HWR	
			PAGE NO.	Page 1 of 2	Indent	20230361 rev 00	

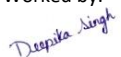
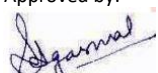
S. No.	COMPONENT OPERATION	CHARACTERISTIC CHECKED	CATEGORY	TYPE/METHOD OF CHECKED	QUANTITY OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE DOCUMENT	FORMAT OF RECORD	AGENCY				REMARK
									D	M	B	C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.0	Material Receiving Inspection at sub-contractor's work	Verification of identification of material	Major	Visual inspection	100 %	As per Drg./ Standard	As per Drg./ Standard	PPMIV/ Q.no.	✓	P	V	-	Material will be supplied by BHEL, transfer of identification to be ensured.
		Verification of dimensions and visual Inspection	Major	Measurement	100 %	As per drg./ Standard	As per drg./ Standard	Obs. Sheet	-	P	-	-	
2.0	INPROCESS-INSPECTION												
2.1	Dimensions	Verification of dimensions & visual inspection.	Major	Visual & measurement	100%	As per drg./ Standard	As per drg./ Standard	Obs. Sheet	✓	P	W-Random /V	-	W-Random for drg. no. 3210171840206, 3210171840207, 3210171840306, 3210171840307, 3210171840606, 3210171840607, 3210171841005, 3210171841105, 3210171841400, 3210171841601, 3210171841602, 3210171841701, 3210171841702, 3210171841801, 3210181840201, 3214011450300, 3230294901409, 3230294901507, 3230294901807, 3230294901905, 3230294901907, 4214011810300, 4214011810500, 4214011810600, 4214011810700, 4214012010100, 4214012010200. V for rest.

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	
		Worked by:  Deepika Singh, (QAX)	Approved by:  Sugandh Agarwal, DM (QAX)

Manufacturer Name and Address		MANUFACTURING QUALITY PLAN				APPLICABILITIES TO	
BHEL Haridwar accepted sub-contractors only	ITEM/EQUIPM-ENTS	FLANGE WITH SEAL GROOVE, BLANK FLANGE, SEAL FLANGE, BACKING FLANGE, SLIP FLANGES, FLG WITH SEAL GRV., CIRCULAR FLANGE, FLANGE, BLANK FLG CIRCULAR, SPECIAL FLANGE, ADAPTOR FLANGE	Q.P. NO	QP/QA/232086	PROJECT		
	W.O. NO.		DATE	29.07.2023			
			REV. NO.	00	CONTRACTOR	BHEL (HEEP) HWR	
			PAGE NO.	Page 2 of 2	Indent	20230361 rev 00	

3.0		Completeness of Job, Documentation	Major	Visual	100%	As per drg./ Standard	As per drg./ Standard	Record	✓	P	V	-	Item shall be dispatched to BHEL after acceptance by BHEL/ BHEL nominated agency after duly identifying by P.O.No., drg no. Plant Order No. and I.R.No
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1. All requirements of P.O., standard and drawing shall be fulfilled.
2. Preservation of machined surfaces to be done with grease or oil (as per indent).
3. BHEL reserves the right for conducting repeat test, if required.

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	
		Worked by:  Deepika Singh, (QAX)	Approved by:  Sugandh Agarwal, DM (QAX)

Self-certification

As per Government Public procurement order no. P-45021/2/2017-BE-II dt.15.06.2017 & P-45021/2/2017-PP(BE-II) dated 28.05.2018,29.5.2019 & 04.6.2020, it is hereby certifying that we

.....
(supplier name) are(Class-I/Class-II) local supplier and will meet the requirement of minimum local content of (50%/20%) as defined in public procurement order dated 04.6.2020 for material against Enquiry no.

X/6620/2023/0286/E/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.

Seal & Signature of Supplier



BHARAT HEAVY ELECTRICALS LIMITED

HEEP-HARIDWAR, UTTARAKHAND (249403)

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

For Indian Bidders (Version June-2021, Rev: 06)

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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.

- The quotation should preferably be from the principal bidder. However tender specific authorized registered dealer/agent can also submit the bid on their behalf, failing which the quotation is liable to be ignored. BHEL prefers to deal directly with the principal manufacturers.
- An agent cannot quote on behalf of more than one principal in the same Tender Enquiry.

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.

Quotations / Bids not in accordance with General Instructions and Standard Terms & Conditions are likely to be ignored.



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- 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.



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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, L2 Status 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

HEEP-HARIDWAR, UTTARAKHAND (249403)

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

For Indian Bidders (Version June-2021, Rev: 06)

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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General Instructions and Standard Terms & Conditions for bidding against Tender Enquiry (GISTC)**For Indian Bidders (Version June-2021, Rev: 06)****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 its 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 require document 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.

- Special conditions of enquiry, if enclosed by BHEL, will supersede the respective standard / general terms of enquiry.
 - Any other Standard terms and Conditions of the bidder attached / referred against the tender enquiry will be treated as null and void ab initio.
 - 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. Guide- lines for Suspension of Business Dealings with Suppliers / Contractors shall prevail over which is available at BHEL website <http://www.bhel.com>
 - 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.
 - "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;
- Victim:** Any person who suffers permanent disablement or dies in an accident as defined below.
 - Accident:** Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious

Quotations / Bids not in accordance with General Instructions and Standard Terms & Conditions are likely to be ignored.



BHARAT HEAVY ELECTRICALS LIMITED

HEEP-HARIDWAR, UTTARAKHAND (249403)

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

For Indian Bidders (Version June-2021, Rev: 06)

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."

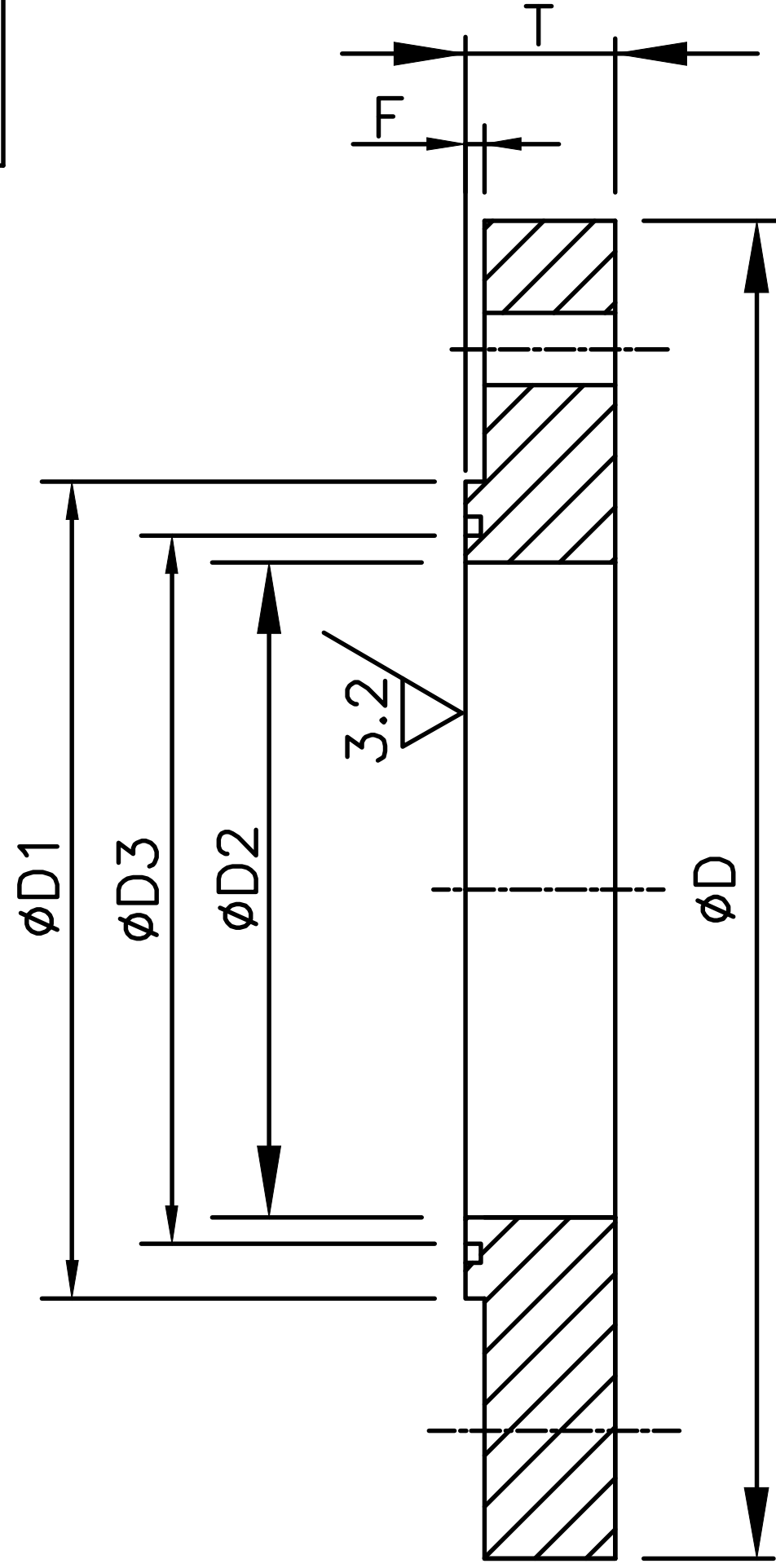
f) The bidder shall be in compliance with applicable laws, rules and regulations throughout the terms of the contract for conducting its business generally and to perform its obligations under this contract.

FIRST ANGLE PROJECTION

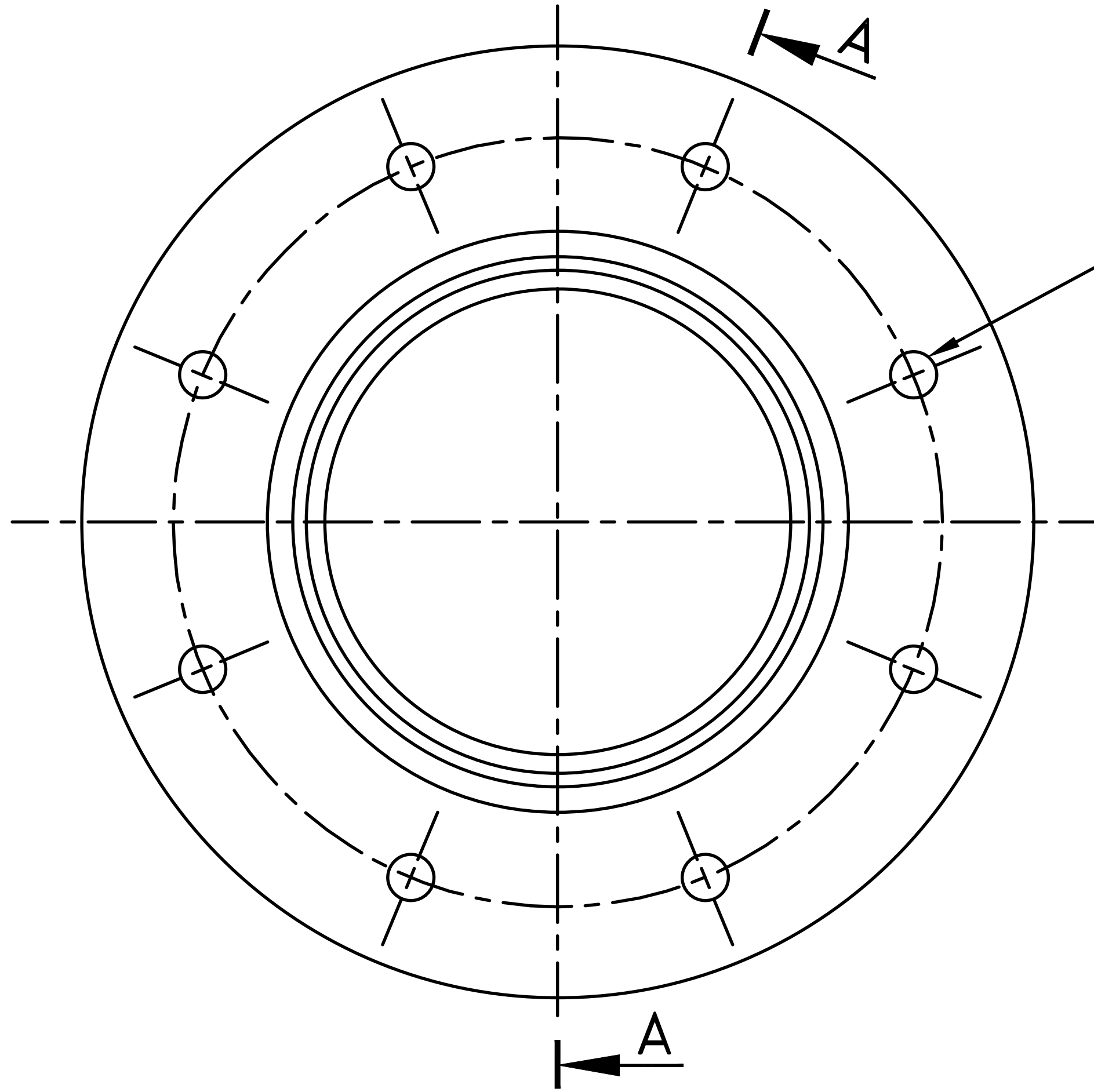
(ALL DIMENSIONS ARE IN mm)

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

DRG. NO. 3 210 17 18402



SECTION-AA

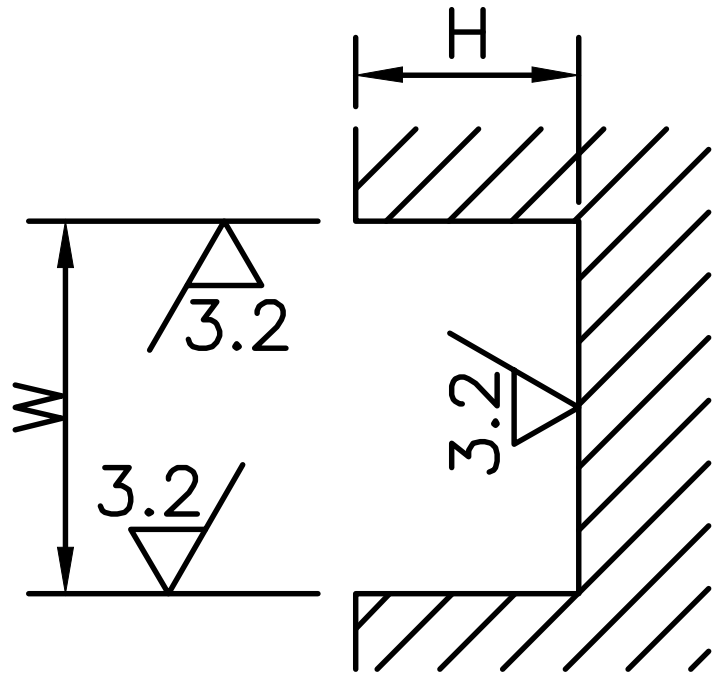


'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

6.3/
ALL OVER UNLESS OTHERWISE STATED.

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.



GROOVE DETAIL

ITEM NO.	MATL CODE	NOM. BORE	Ø D (O/D)	Ø D1 RAISED FACE	Ø D2 (I/D)	Ø D3 SEAL GROOVE	P (PCD)	F	T	E	N	W	H	WEIGHT Kg.	REMARKS
	MATL SPEC														
1.	AA1011808153 25 TK, AA10108	40	156	73	50	56	114	1.6	21	22	4	$5^{+0.3}_0$	3 ± 0.05	2.50	Ø4 SEAL
2.	AA1011808153 25 TK, AA10108	50	165	92	62	70	127	1.6	22	20	8	$7.5^{+0.3}_0$	4.5 ± 0.05	3.00	Ø6 SEAL
3.	AA1011808161 28 TK, AA10108	65	191	105	75	83	149	1.6	25	22	8	$7.5^{+0.3}_0$	4.5 ± 0.05	4.50	Ø6 SEAL
4.	AA1011808170 32 TK, AA10108	80	210	127	91	102	168	1.6	29	22	8	$7.5^{+0.3}_0$	4.5 ± 0.05	6.00	Ø6 SEAL
5.	AA1011808188 36 TK, AA10108	100	255	157	116	127	200	1.6	32	22	8	$10^{+0.3}_0$	6 ± 0.05	10.00	Ø8 SEAL
6.	AA1011808196 40 TK, AA10108	150	318	216	170	183	270	1.6	37	22	12	$10^{+0.3}_0$	6 ± 0.05	16.00	Ø8 SEAL
7.	AA1011808200 45 TK, AA10108	200	380	270	222	236	330	1.6	42	26	12	$10^{+0.3}_0$	6 ± 0.05	24.50	Ø8 SEAL
8.	AA1011808226 56 TK, AA10108	250	445	324	275	290	387	1.6	48	30	16	$10^{+0.3}_0$	6 ± 0.05	35.00	Ø8 SEAL

REF. DRG. NO.

SIGN. & DATE

INVENTORY NO.

DRAWING REVIEW			
DEPT.	NAME	SIGN.	DATE

ADDITIONAL INFORMATION

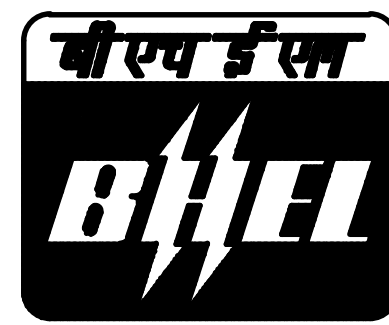
STATUS OF DRAWING U

DISTRIBUTION OF PRINTS

HTE-2 FGM-7 THX-1
WTM(P)-1 WTM(S)-4

TYPE OF PRODUCT OR
NAME OF CUSTOMER/PROJECT

PRANAHITA-VI LIS
(6x124.4 MW)



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DRN	NAME	SIGN	DATE	NO. OF VAR.
AB			18.7.16	
CKD	ND		18.7.16	
APPD	SK		18.7.16	

REV.	DATE	ALTERED
		CHECKED
		APPD.

REV.	DATE	ALTERED
		CHECKED
		APPD.

REV.	DATE	ALTERED
01	24.9.16	AB
		CHECKED ND
		APPD. SK

DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE NTS	WEIGHT(K.G.) SEE TABLE
CODE 402	REFER DRG, 32000049014			

TITLE FLANGE WITH SEAL GROOVE
(CLASS 300)

REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM
02101718401	—	008

DRAWING NO.
3 210 17 18402

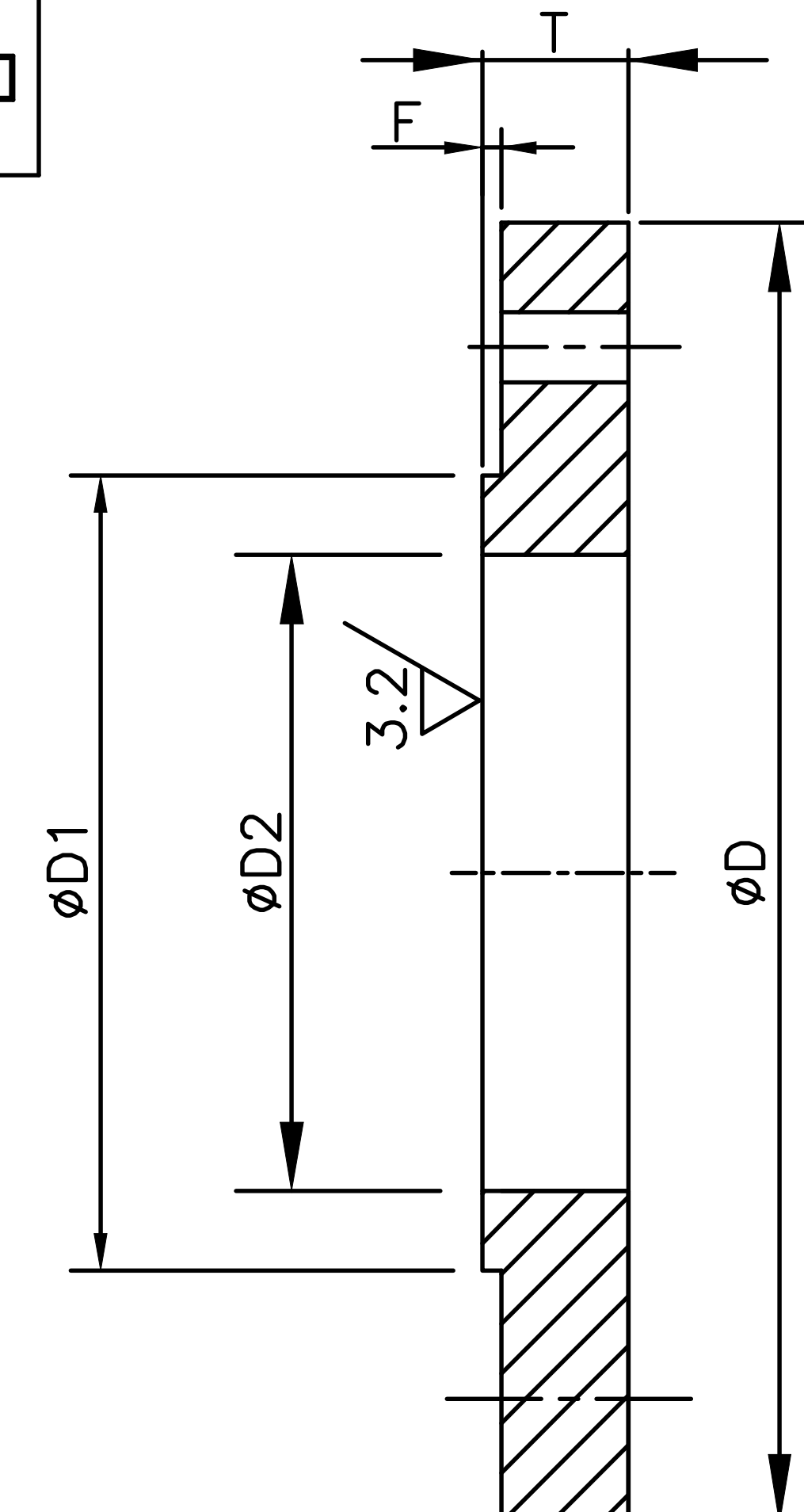
SHT. NO. 1 NO. OF SHT. 1

A3 SIZE

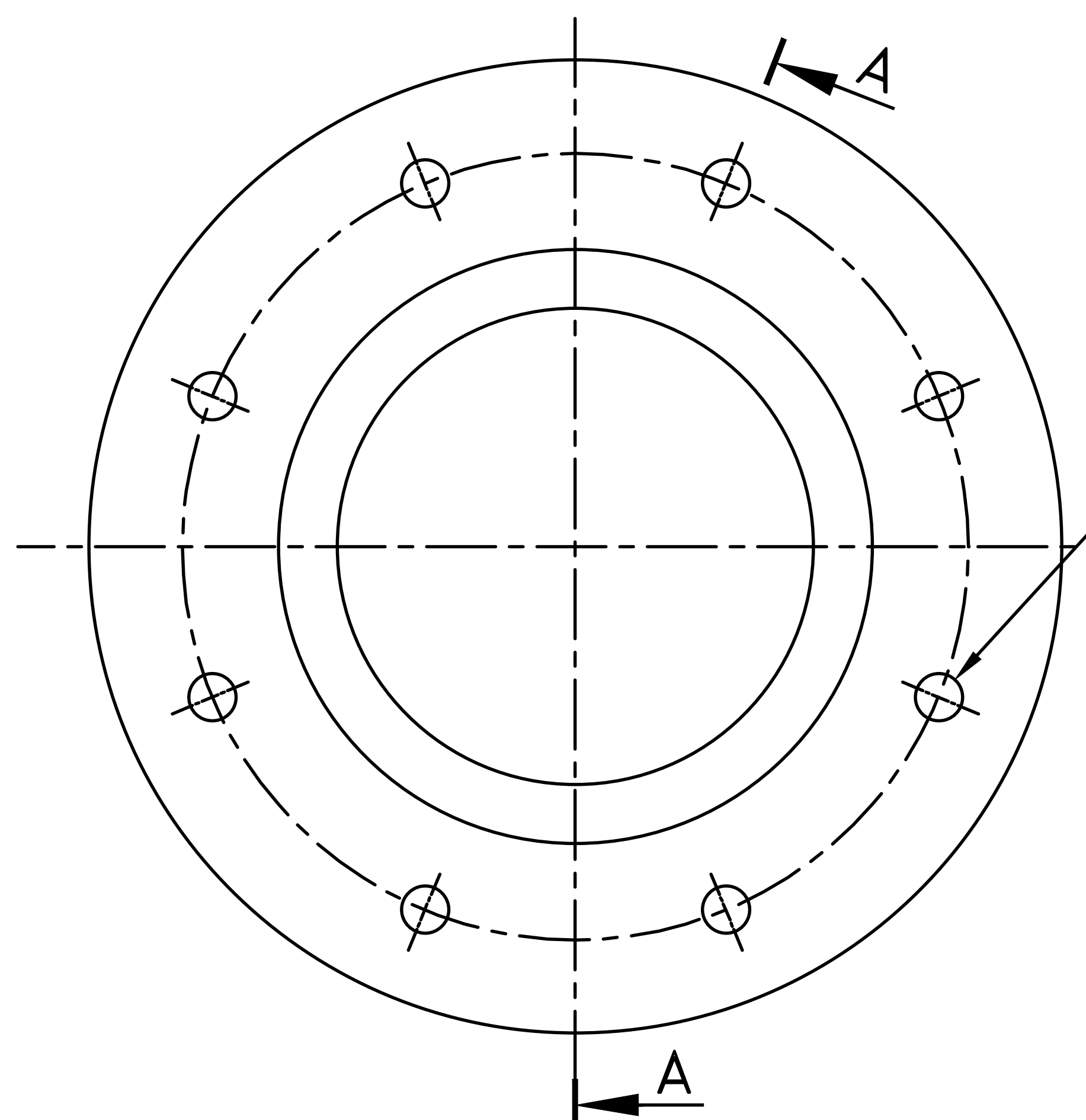
(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3 210 17 18403

6.3/
▽ ALL OVER UNLESS OTHERWISE STATED.



SECTION-AA



‘N’ HOLES EQUISPACED
OFF-CENTRES DRILL
THRO’ DIA ‘E’ ON ‘P’ PCD

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.

ITEM NO.	MATL CODE MATL SPEC	NOM. BORE	Ø D (O/D)	Ø D1 RAISED FACEØ	Ø D2 (I/D)	P (PCD)	F	T	E	N	WEIGHT Kg.
1.	AA1011808153	40	156	73	50	114	1.6	21	22	4	2.50
	25 TK, AA10108										
2.	AA1011808153	50	165	92	62	127	1.6	22	20	8	3.00
	25 TK, AA10108										
3.	AA1011808161	65	191	105	75	149	1.6	25	22	8	4.50
	28 TK, AA10108										
4.	AA1011808170	80	210	127	91	168	1.6	29	22	8	6.00
	32 TK, AA10108										
5.	AA1011808188	100	255	157	116	200	1.6	32	22	8	10.00
	36 TK, AA10108										
6.	AA1011808196	150	318	216	170	270	1.6	37	22	12	16.00
	40 TK, AA10108										
7.	AA1011808200	200	380	270	222	330	1.6	42	26	12	24.50
	45 TK, AA10108										
8.	AA1011808226	250	445	324	275	387	1.6	48	30	16	35.00
	56 TK, AA10108										

DRAWING REVIEW			
DEPT.	NAME	SIGN.	DATE

ADDITIONAL INFORMATION

STATUS OF DRAWING	U
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DISTRIBUTION OF PRINTS	
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HTE-2	FGM-7	THX-1
WTM(P)-1		WTM(S-4)

[illegible]

PRANAHITA-VI LIS
(6x124.4 MW)

 BHARAT HEAVY ELECTRICALS LTD. BHOPAL	DRN	NAME	SIGN	DATE	NO. OF VAR.
		AB		18.7.16	
	CKD	ND		18.7.16	
	APPD	SK		18.7.16	

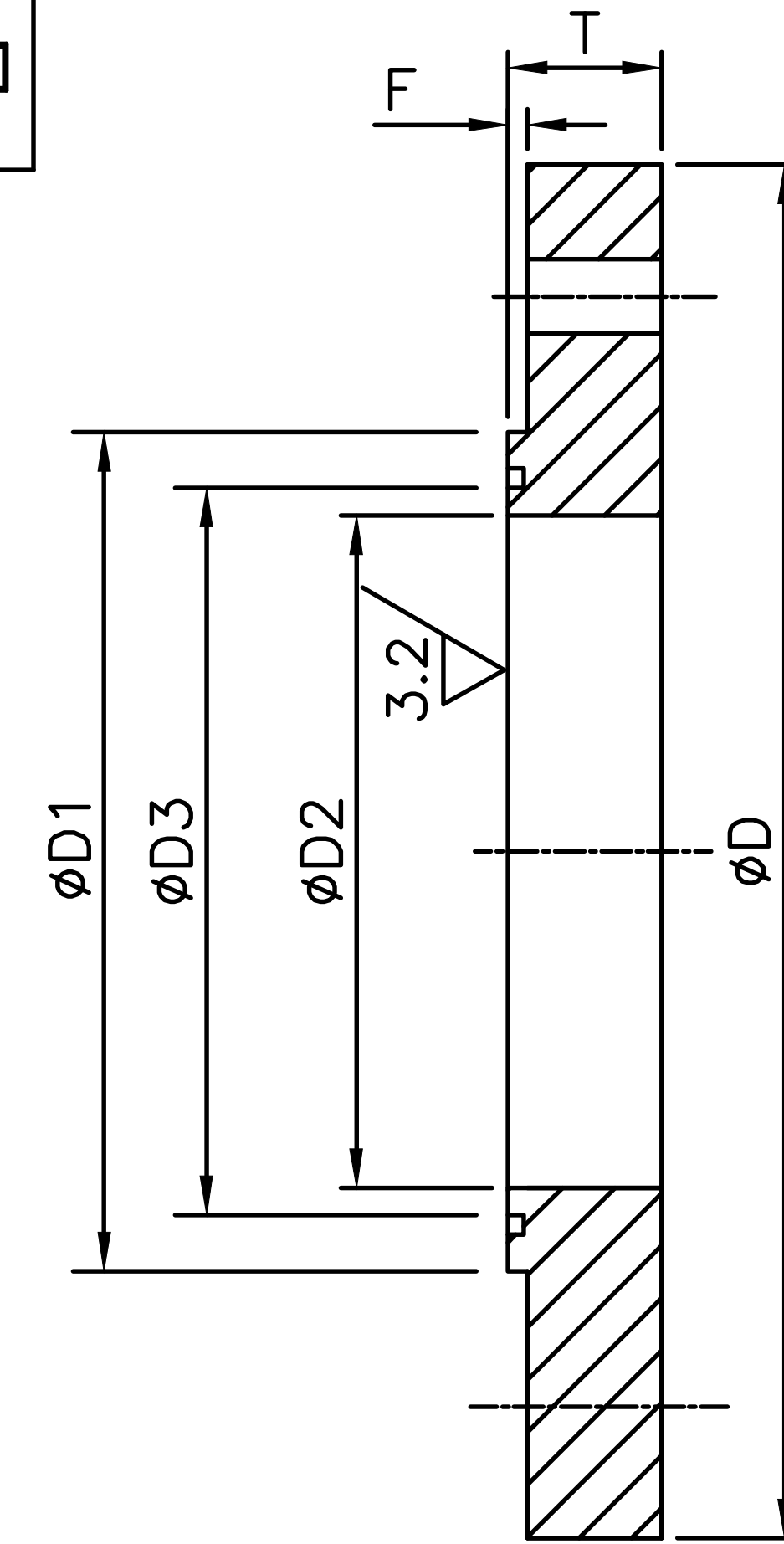
REV.	DATE	ALTERED CHECKED APPD.	REV.	DATE	ALTERED CHECKED APPD.	REV.	DATE	ALTERED AB CHECKED ND APPD. SK	DEPT. H.T.E.	UNTOL. DIMS. GR. REFER DRG, 32000049014		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG. 02101718401	ITEM NO.	NO.OF ITEM 008
							MATERIAL SPCN. CHANGE.		TITLE <u>FLANGE WITHOUT SEAL GROOVE</u> <u>(CLASS 300)</u>				DRAWING NO. 3-210-17-18403		REV. 01	
													SHT. NO. 1	NO. OF SHT. 1		

A3 SIZE

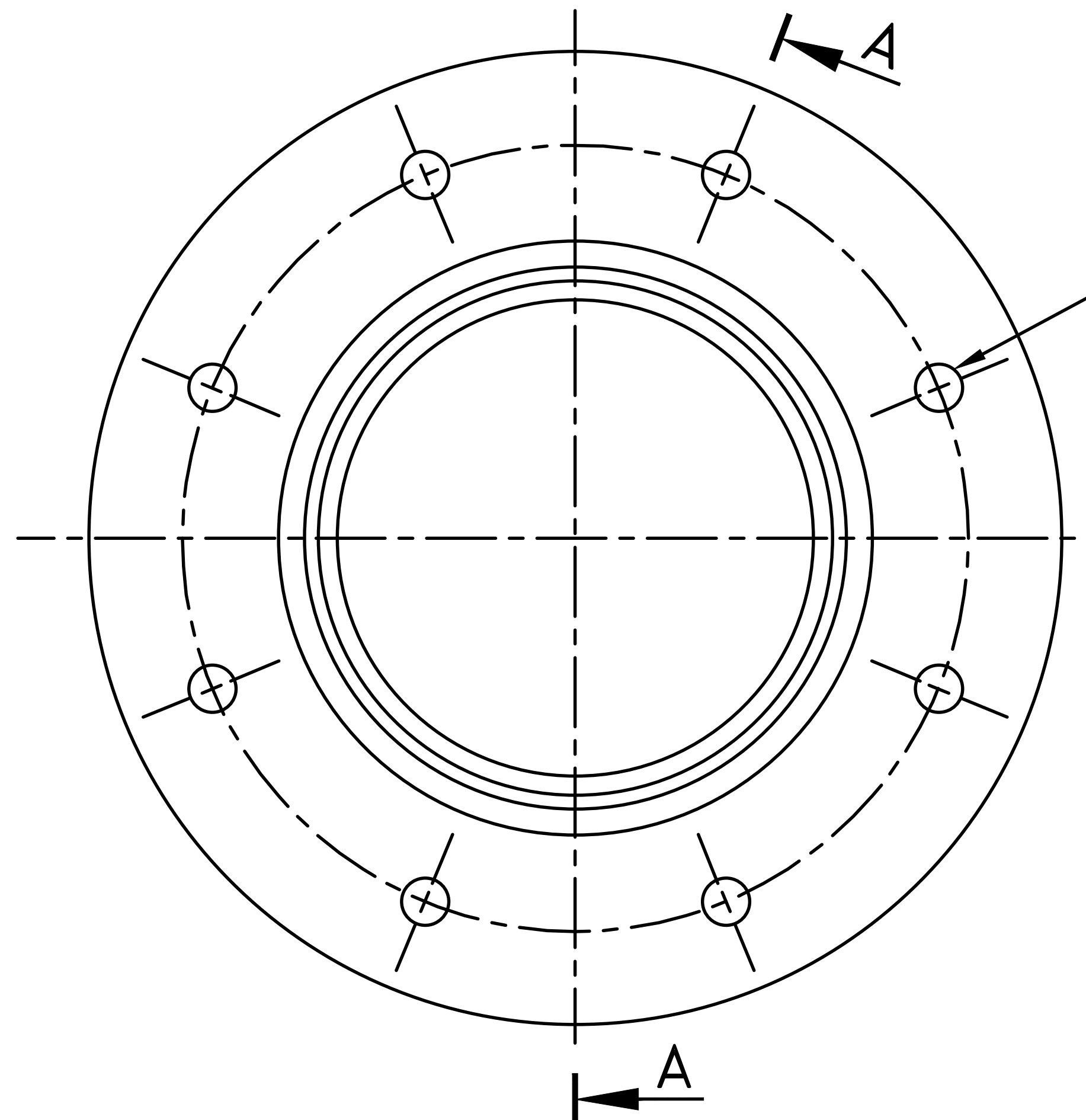
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3-210-17-18404



SECTION-AA

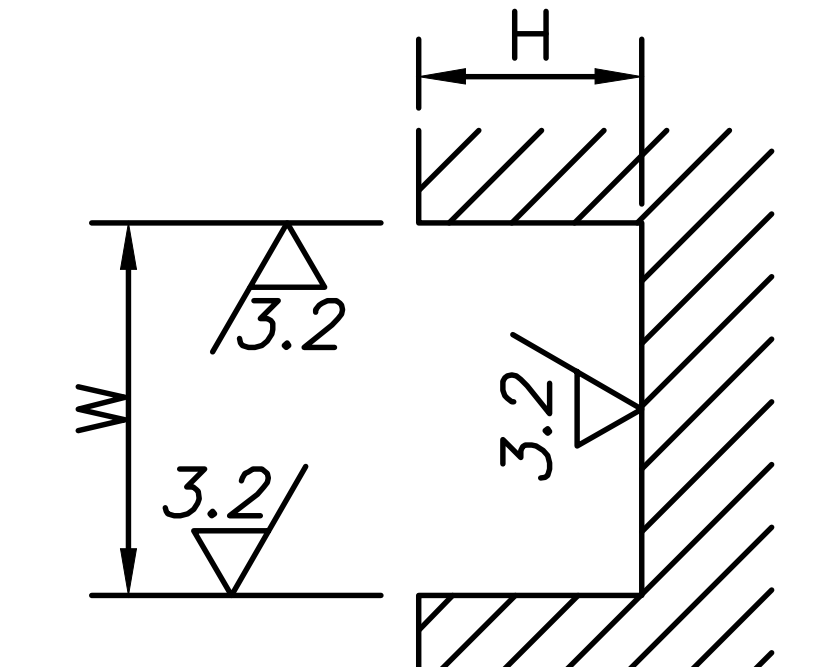


6.3/
ALL OVER UNLESS OTHERWISE STATED.

'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.
2. PAINT AND PROTECT AS PER PRODUCT
STD. HT 00005 CAT. 'G'.

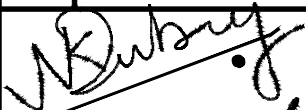
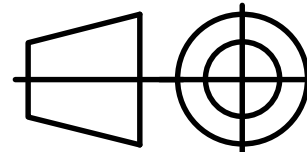


GROOVE DETAIL

ITEM NO.	MATL CODE	NOM. BORE	Ø D (O/D)	Ø D1 RAISED FACE	Ø D2 (I/D)	Ø D3 SEAL GROOVE	P (PCD)	F	T	E	N	W	H	WEIGHT Kg.	REMARKS
	MATL SPEC														
1.	AA1011808110	20	98	50	28	34	70	1.6	13	16	4	$+0.3$ 50	3 ± 0.05	0.50	Ø4 SEAL
	16 TK-AA 10108														
2.	AA1011808110	25	108	58	35	41	79.4	1.6	14	16	4	$+0.3$ 50	3 ± 0.05	0.80	Ø4 SEAL
	16 TK-AA 10108														
3.	AA1011808145	40	127	73	50	56	98.4	1.6	18	19	4	$+0.3$ 50	3 ± 0.05	1.25	Ø4 SEAL
	22 TK-AA 10108														
4.	AA1011808145	50	152	92	62	70	120.6	1.6	18	19	4	$+0.3$ 7.5	4.5 ± 0.05	2.0	Ø6 SEAL
	22 TK-AA 10108														
5.	AA1011808153	65	178	105	75	83	139.7	1.6	22	19	4	$+0.3$ 7.5	4.5 ± 0.05	2.8	Ø6 SEAL
	25 TK-AA 10108														
6.	AA1011808153	80	191	127	91	101	152.4	1.6	22	19	4	$+0.3$ 7.5	4.5 ± 0.05	3.0	Ø6 SEAL
	25 TK-AA 10108														
7.	AA1011808161	100	229	157	116	126	190.5	1.6	24	19	8	$+0.3$ 10	6 ± 0.05	5.5	Ø8 SEAL
	28 TK-AA 10108														
8.	AA1011808170	150	279	216	170	182	241.3	1.6	26	24	8	$+0.3$ 10	6 ± 0.05	7.60	Ø8 SEAL
	32 TK-AA 10108														
9.	AA1011808188	200	343	270	221	235	298.4	1.6	29	24	8	$+0.3$ 10	6 ± 0.05	10.8	Ø8 SEAL
	36 TK-AA 10108														
10.	AA1011808188	250	406	324	275	289	361.9	1.6	31	28	12	$+0.3$ 10	6 ± 0.05	14.2	Ø8 SEAL
	36 TK-AA 10108														

DRAWING REVIEW			
DEPT.	NAME	SIGN.	DATE

ADDITIONAL INFORMATION			
STATUS OF DRAWING U			
DISTRIBUTION OF PRINTS			
HTE-2	FGM-7	THX-1	
WTM(P)-1		WTM(S-4)	

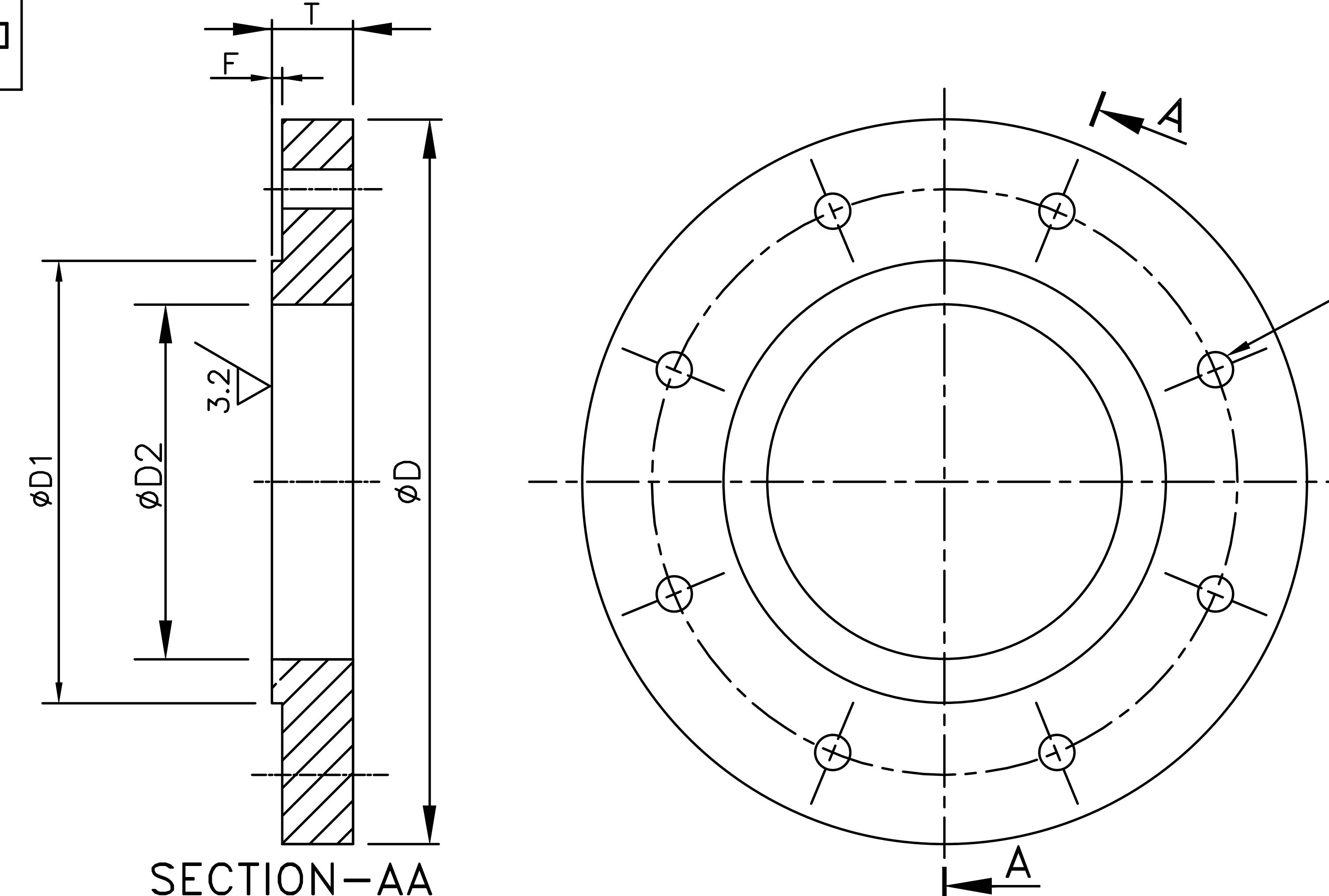
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT					PRANAHITA-VI LIS (6x124.4 MW)					
 BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.	
						AB		18.7.16		
						CKD	ND			18.7.16
						APPD	SK			18.7.16
DEPT. H.T.E.	UNTOL. DIMS. GR. REFER DRG, 32000049014		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG. 02101718401		ITEM NO —	NO.OF ITEM 010		
CODE 402										
TITLE FLANGES WITH SEAL GROOVE (150 CLASS)					DRAWING NO. 3-210-17-18404			REV. 00		
					SHT. NO. 1		NO. OF SHT. 1			

A3 SIZE

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3-210-17-18405

6.3/
▽ ALL OVER UNLESS OTHERWISE STATED.

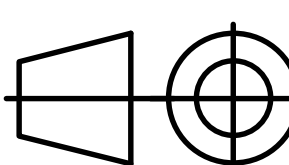


'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.
2. PAINT AND PROTECT AS PER PRODUCT STD. HT 00005 CAT. 'G'.

ITEM NO.	MATL CODE	NOM. BORE	ø D (O/D)	ø D1 RAISED FACE ø	ø D2 (I/D)	P (PCD)	F	T	E	N	WEIGH Kg.
	MATL SPEC										
1.	AA1011808110	20	98	50	28	70	1.6	13	16	4	0.5
	16 TK-AA 10108										
2.	AA1011808110	25	108	58	35	79.4	1.6	14	16	4	0.8
	16 TK-AA 10108										
3.	AA1011808145	40	127	73	50	98.4	1.6	18	19	4	1.25
	22 TK-AA 10108										
4.	AA1011808145	50	152	92	62	120.6	1.6	18	19	4	2.0
	22 TK-AA 10108										
5.	AA1011808153	65	178	105	75	139.7	1.6	22	19	4	2.8
	25 TK-AA 10108										
6.	AA1011808153	80	191	127	91	152.4	1.6	22	19	4	3.0
	25 TK-AA 10108										
7.	AA1011808161	100	229	157	116	190.5	1.6	24	19	8	5.5
	28 TK-AA 10108										
8.	AA1011808170	150	279	216	170	241.3	1.6	26	24	8	7.60
	32 TK-AA 10108										
9.	AA1011808188	200	343	270	221	298.4	1.6	29	24	8	10.8
	36 TK-AA 10108										
10.	AA1011808188	250	406	324	275	361.9	1.6	31	28	12	14.2
	36 TK-AA 10108										

DRAWING REVIEW				ADDITIONAL INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT							PRANAHITA-VI LIS (6x124.4 MW)				
DEPT.	NAME	SIGN.	DATE			BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.		
											CKD	ND					
											APPD	SK					
REV.	DATE	ALTERED		REV.	DATE	ALTERED		DEPT.	UNTOL. DIMS. GR.		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG. 02101718401		ITEM NO	NO.OF ITEM 010	
		CHECKED				CHECKED		H.T.E.	REFER DRG,								
		APPD.				APPD.		CODE	32000049014								
								402	TITLE FLANGES WITHOUT SEAL GROOVE (150 CLASS)				DRAWING NO. 3-210-17-18405		REV. 00		
												SHT. NO. 1		NO. OF SHT. 1			

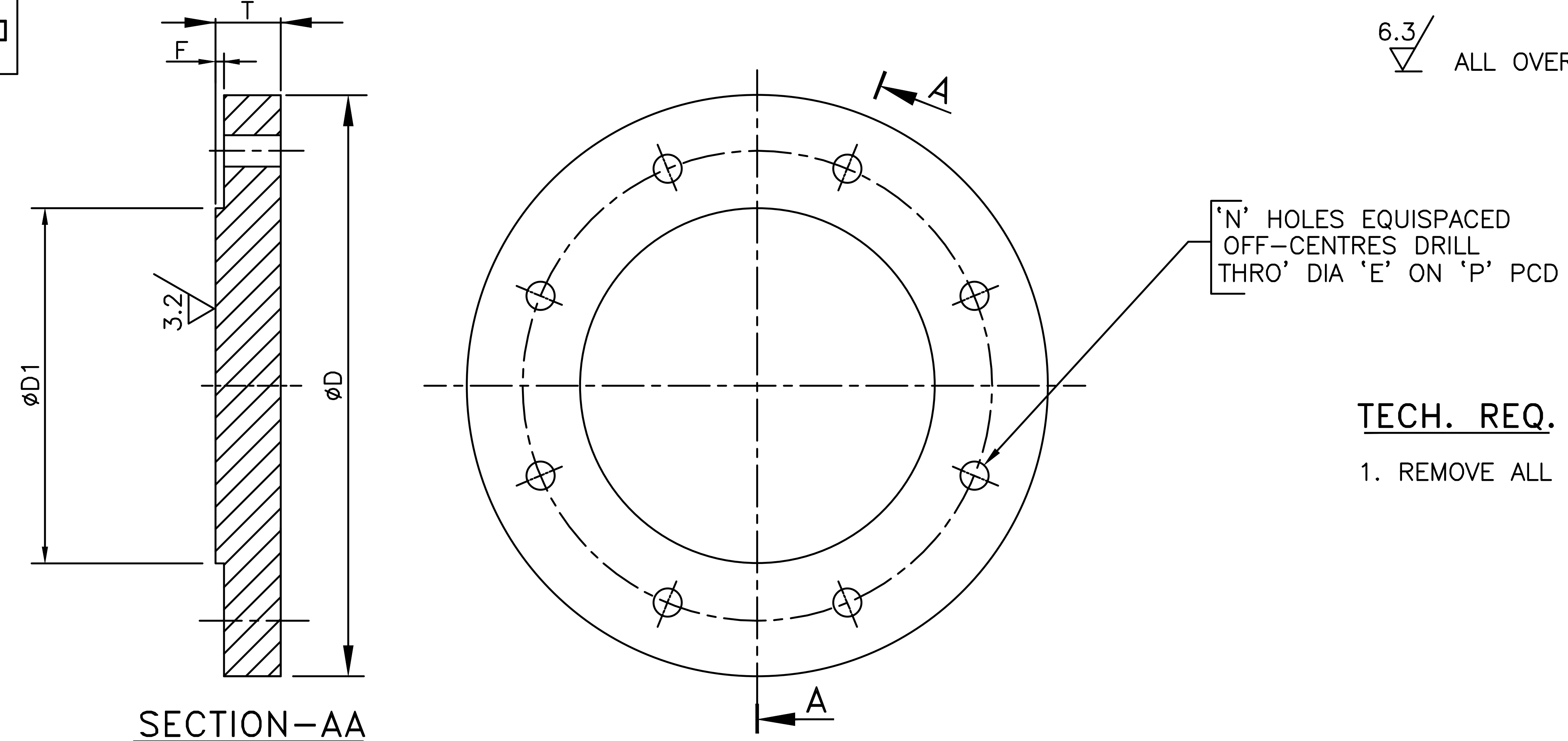
A3 SIZE

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3 210 17 18406

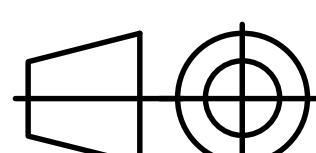
6.3/
▽ ALL OVER UNLESS OTHERWISE STATED.



TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.

ITEM NO.	MATL CODE	NOM. BORE	ø D (O/D)	ø D1 RAISED FACEø	P (PCD)	F	T	E	N	WEIGHT Kg.
	MATL SPEC									
1.	AA1011808153	40	156	73	114	1.6	21	22	4	2.80
	25 TK, AA10108									
2.	AA1011808153	50	165	92	127	1.6	22	20	8	3.25
	25 TK, AA10108									
3.	AA1011808161	65	191	105	149	1.6	25	22	8	5.25
	28 TK, AA10108									
4.	AA1011808170	80	210	127	168	1.6	29	22	8	7.30
	32 TK, AA10108									
5.	AA1011808188	100	255	157	200	1.6	32	22	8	12.00
	36 TK, AA10108									
6.	AA1011808196	150	318	216	270	1.6	37	22	12	21.50
	40 TK, AA10108									
7.	AA1011808200	200	380	270	330	1.6	42	26	12	36.00
	45 TK, AA10108									
8.	AA1011808226	250	445	324	387	1.6	48	30	16	56.5
	56 TK, AA10108									

DRAWING REVIEW				ADDITIONAL INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				PRANAHITA-VI LIS				
DEPT.	NAME	SIGN.	DATE							(6x124.4 MW)				
				STATUS OF DRAWING U		BHARAT HEAVY ELECTRICALS LTD. BHOPAL				DRN	NAME	SIGN	DATE	NO. OF VAR.
				DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(P)-1 WTM(S-4)						CKD	ND		18.7.16	
										APPD	SK		18.7.16	
REV.	DATE	ALTERED CHECKED APPD.		REV.	DATE	ALTERED AB CHECKED ND APPD. SK	DEPT. H.T.E.	UNTOL. DIMS. GR. REFER DRG, 32000049014		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG. 02101718401	ITEM NO.	NO.OF ITEM 008
				01	24.9.16		CODE 402	TITLE BLANK FLANGE (CLASS 300)				DRAWING NO. 3-210-17-18406		REV. 01
						MATERIAL SPCN. CHANGE.					SHT. NO. 1		NO. OF SHT. 1	

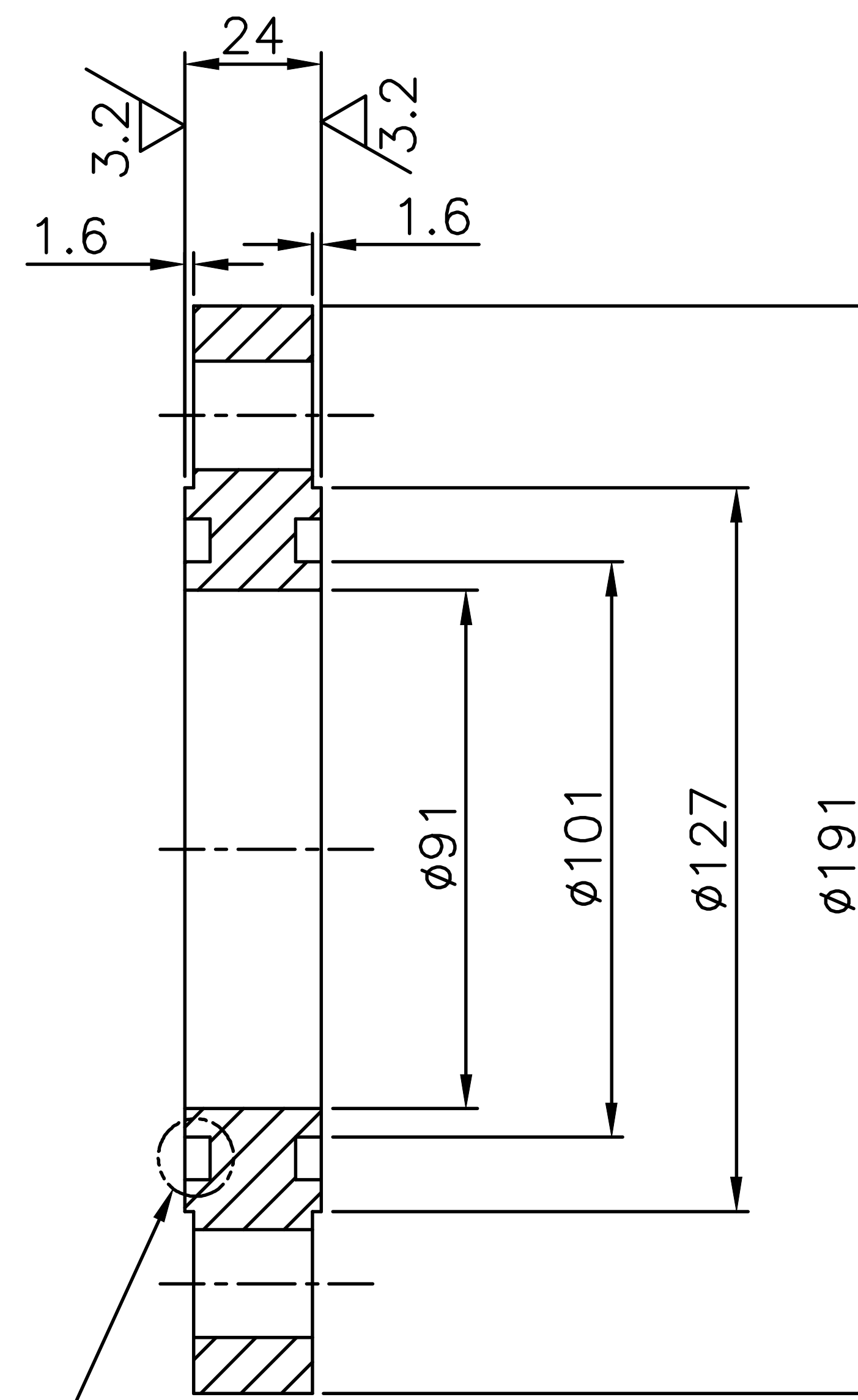
A3 SIZE

(ALL DIMENSIONS ARE IN mm)

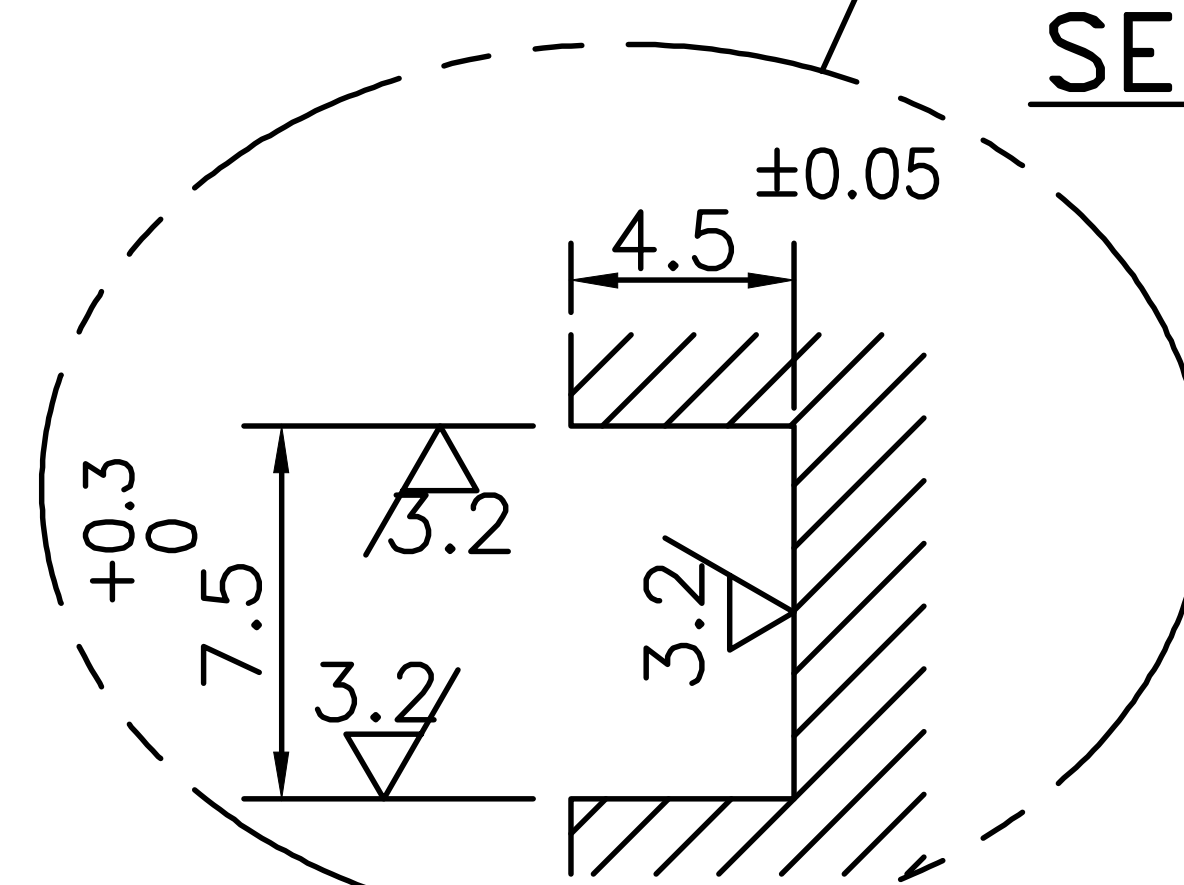
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DRG. NO. 3 210 17 18409

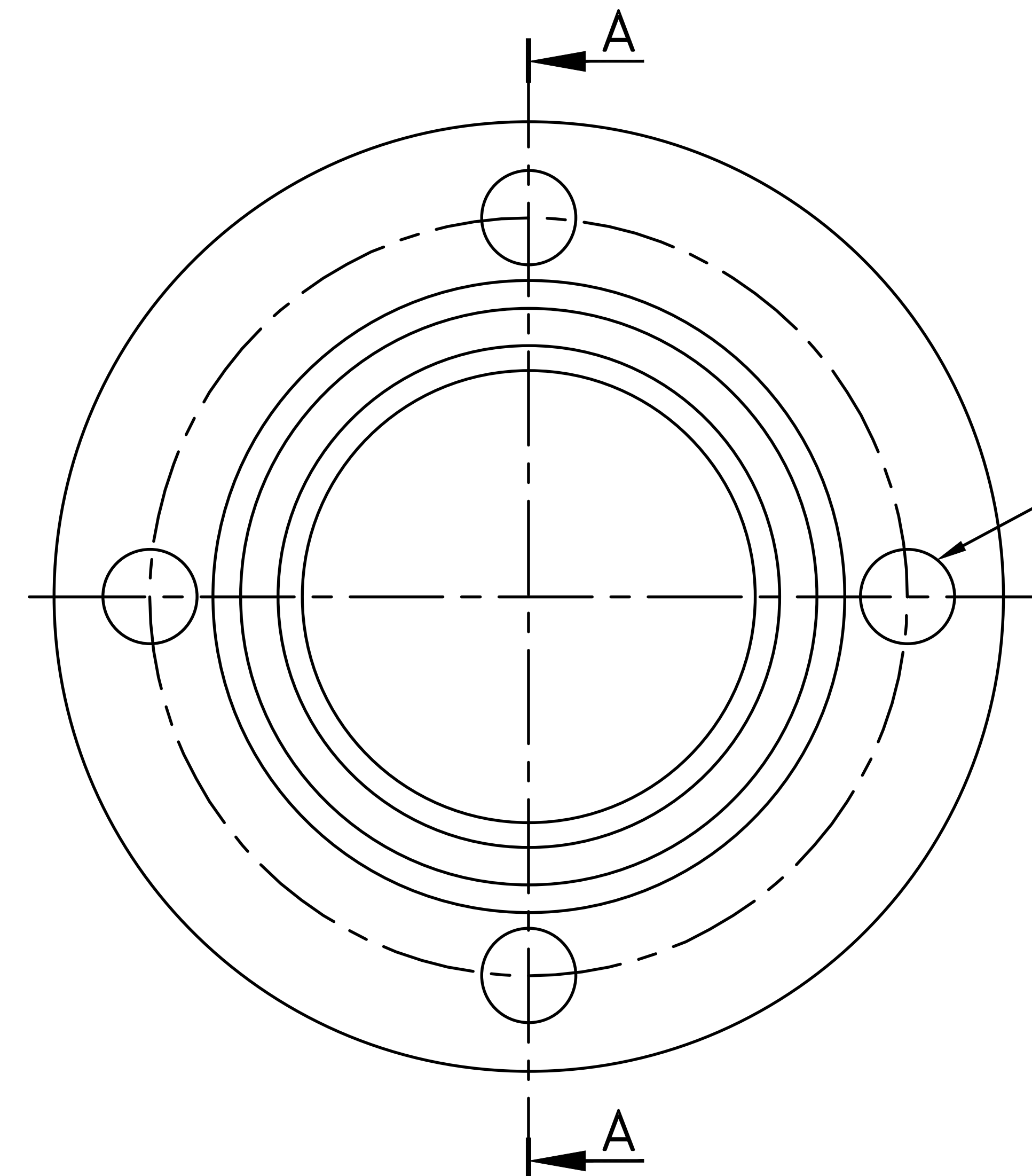
6.3/
▽ ALL OVER UNLESS OTHERWISE STATED.



SECTION-AA



GROOVE DETAIL



4 HOLES EQUISPACED
OFF-CENTRES DRILL THRO'
Ø19 ON PCD 152.4

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.
2. PAINT AND PROTECT AS PER PRODUCT STD. HT 00005 CAT. 'G'.

				28 TK								001				SEAL FLANGE 80NB								28 TK								AA1011808161								3.60															
																																AA 10108								001															
59	64	65	75	78	79	25	27	29	58	59	60	77	79	80	34	45	55	56	57	58	65	72																																	
VAR.OO				REMARKS				VAR NO.				ITEM NO.				DESCRIPTION				STD.				DRAWING NO.				IT.NO.				34 MATL. CODE				A				UNIT WT.				C											
																												32 VAR.				33 46 MATL. SPCN.				54				UNIT				68 QTY.				71				S			
28 → CARD TYPE-3												28 → CARD TYPE-1												28 → CARD TYPE-2																															

ADDITIONAL INFORMATION
STATUS OF DRAWING
DISTRIBUTION OF PRINTS HTE-2, THX-1, FGM-7 WTM(P)-1, WTM(S)-4

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	<u>PRANAHITA-VI</u> 6x124.4 MW
--	-----------------------------------

 BHARAT HEAVY ELECTRICALS LTD. BHOPAL	DRN	NAME	SIGN	DATE	NO. OF VAR.
		AB	<i>[Signature]</i>	19.7.16	
	CKD	ND	<i>[Signature]</i>	19.7.16	
	APPD	SK	<i>[Signature]</i>	19.7.16	

REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	DEPT. HTE	UNTOL. DIMS. GR.		SCALE 1:1	WEIGHT(K.G.) 3.60	REF.TO ASSY.DRG. 02101718401	ITEM NO 110	NO.OF ITEM 001
		CHECKED			CHECKED			CHECKED								
		APPD.			APPD.			APPD.								
									CODE 402	32000049014						
									TITLE SEAL FLANGE 80NB					DRAWING NO. 3 210 17 18409		REV. 00
														SHT. NO. 01	NO. OF SHT. 01	

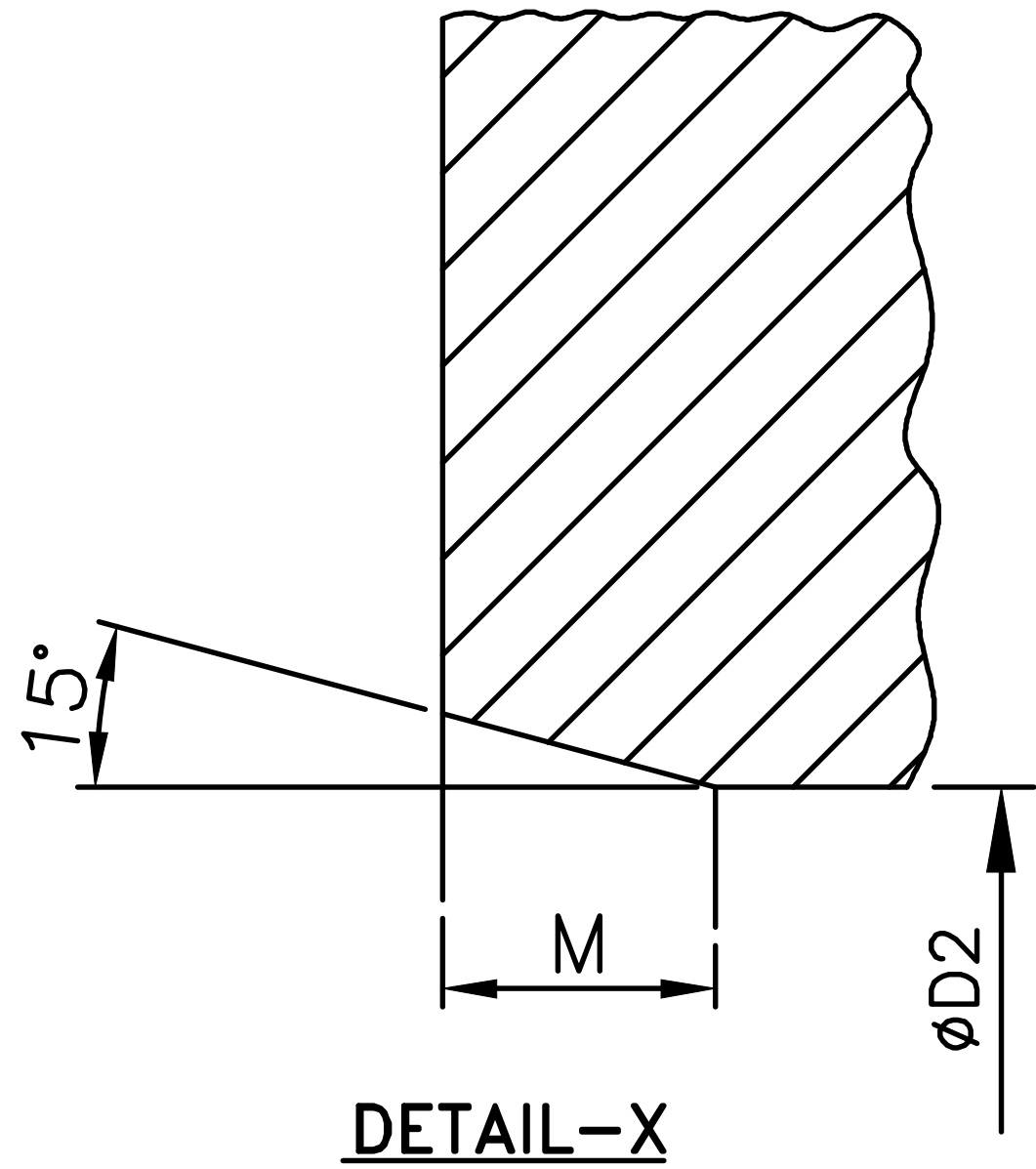
A3 SIZE

FIRST ANGLE PROJECTION

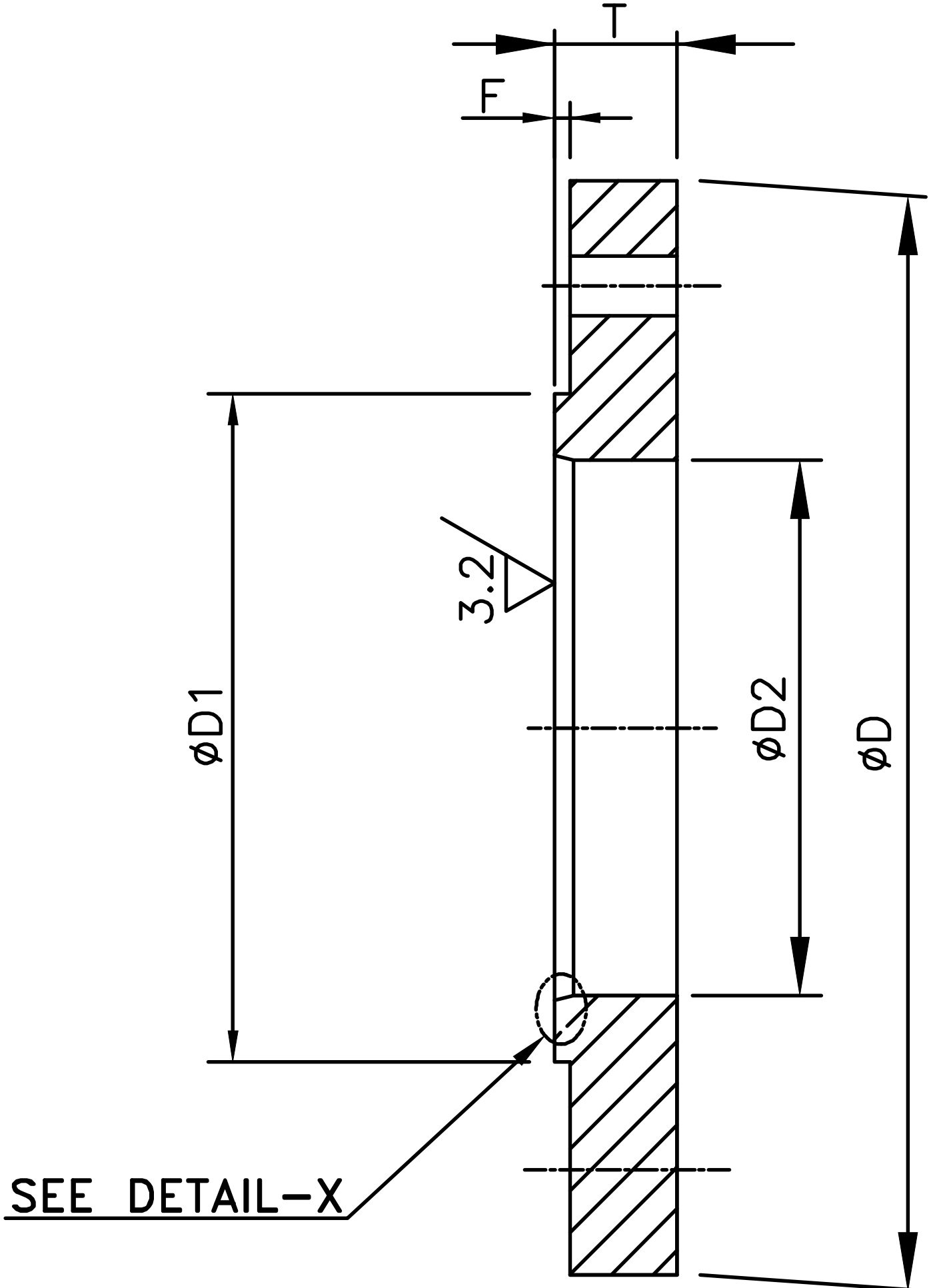
(ALL DIMENSIONS ARE IN mm)

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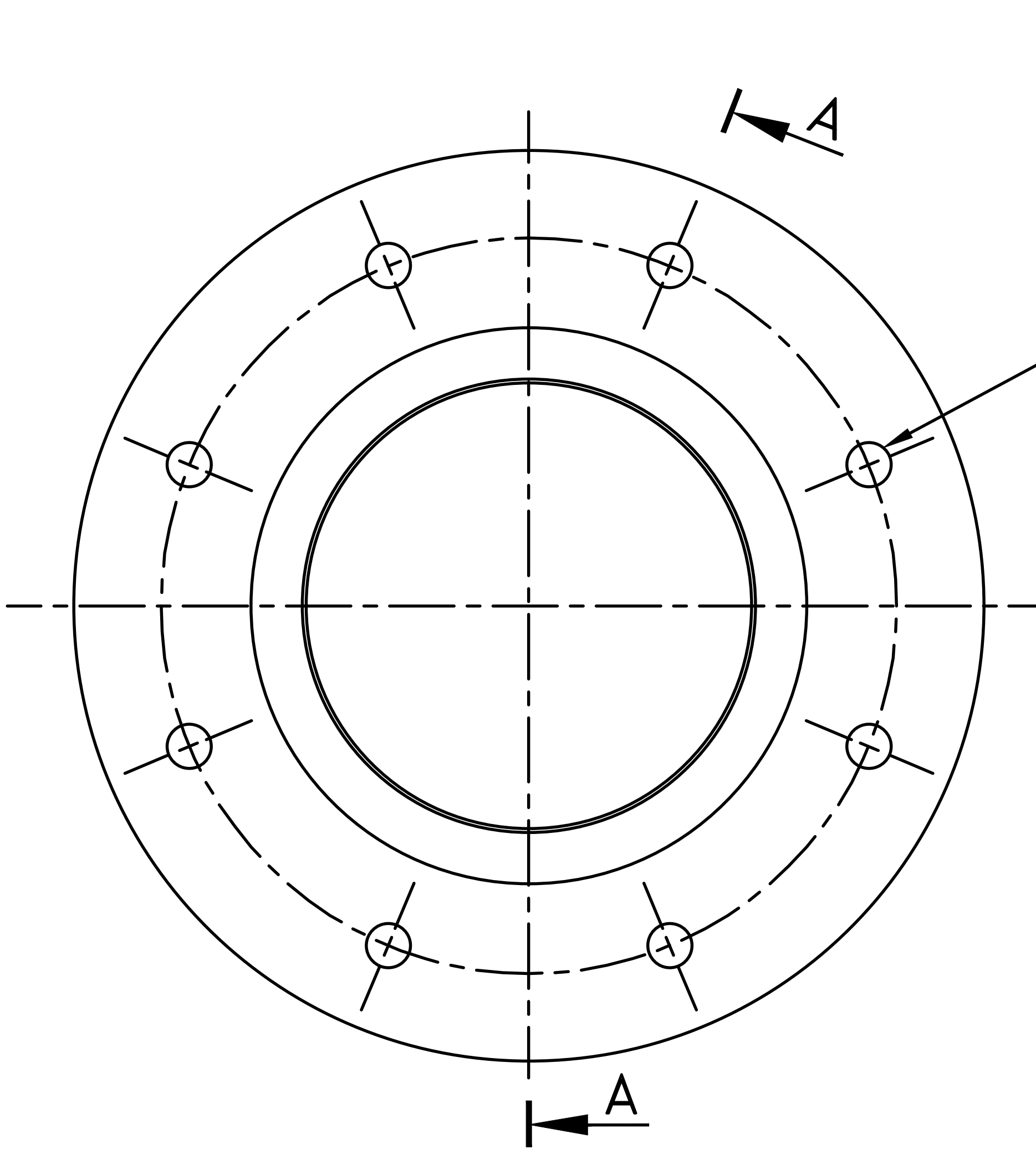
DRG. NO. 3 210 17 18410



DETAIL-X



SECTION-AA



6.3/ ALL OVER UNLESS OTHERWISE STATED.

'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.

ITEM NO.	MATL CODE	NOM. BORE	Ø D	Ø D1	Ø D2	P (PCD)	F	T	E	N	M	WEIGHT Kg.
	MATL SPEC											
1.	AA1011808153	50	165	92	58.3±0.1	127	1.6	22	20	8	3	3.00
	25 TK, AA10108											
2.	AA1011808161	65	191	105	73.3±0.1	149	1.6	25	22	8	3	4.50
	28 TK, AA10108											
3.	AA1011808170	80	210	127	86.3±0.1	168	1.6	29	22	8	3	6.00
	32 TK, AA10108											
4.	AA1011808188	100	255	157	112.3±0.1	200	1.6	32	22	8	4	10.00
	36 TK, AA10108											
5.	AA1011808196	150	318	216	164.3±0.1	270	1.6	37	22	12	4	16.00
	40 TK, AA10108											
6.	AA1011808200	200	380	270	216.4±0.1	330	1.6	41	26	12	5	24.50
	45 TK, AA10108											
7.	AA1011808226	250	445	324	270.4±0.1	387	1.6	48	30	16	5	35.00
	56 TK, AA10108											

DRAWING REVIEW			
DEPT.	NAME	SIGN.	DATE

ADDITIONAL INFORMATION

STATUS OF DRAWING U

DISTRIBUTION OF PRINTS

HTE-2 FGM-7 THX-1
WTM(P)-1 WTM(S-4)

TYPE OF PRODUCT OR
NAME OF CUSTOMER/PROJECT

PRANAHITA-VI LIS
(6x124.4 MW)



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DRN	NAME	SIGN	DATE	NO. OF VAR.
AB			19.7.16	
CKD	ND		19.7.16	
APPD	SK		19.7.16	

REV.	DATE	ALTERED
		CHECKED
		APPD.

REV.	DATE	ALTERED
		CHECKED
		APPD.

REV.	DATE	ALTERED
01	24.9.16	CHECKED ND
		APPD. SK

DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE NTS	WEIGHT(K.G.) SEE TABLE
CODE 402	REFER DRG, 32000049014			

TITLE
SLIP FLANGE
(CLASS 300)

REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM
02101718401		007

DRAWING NO.
3-210-17-18410

SHT. NO. 1 NO. OF SHT. 1

A3 SIZE

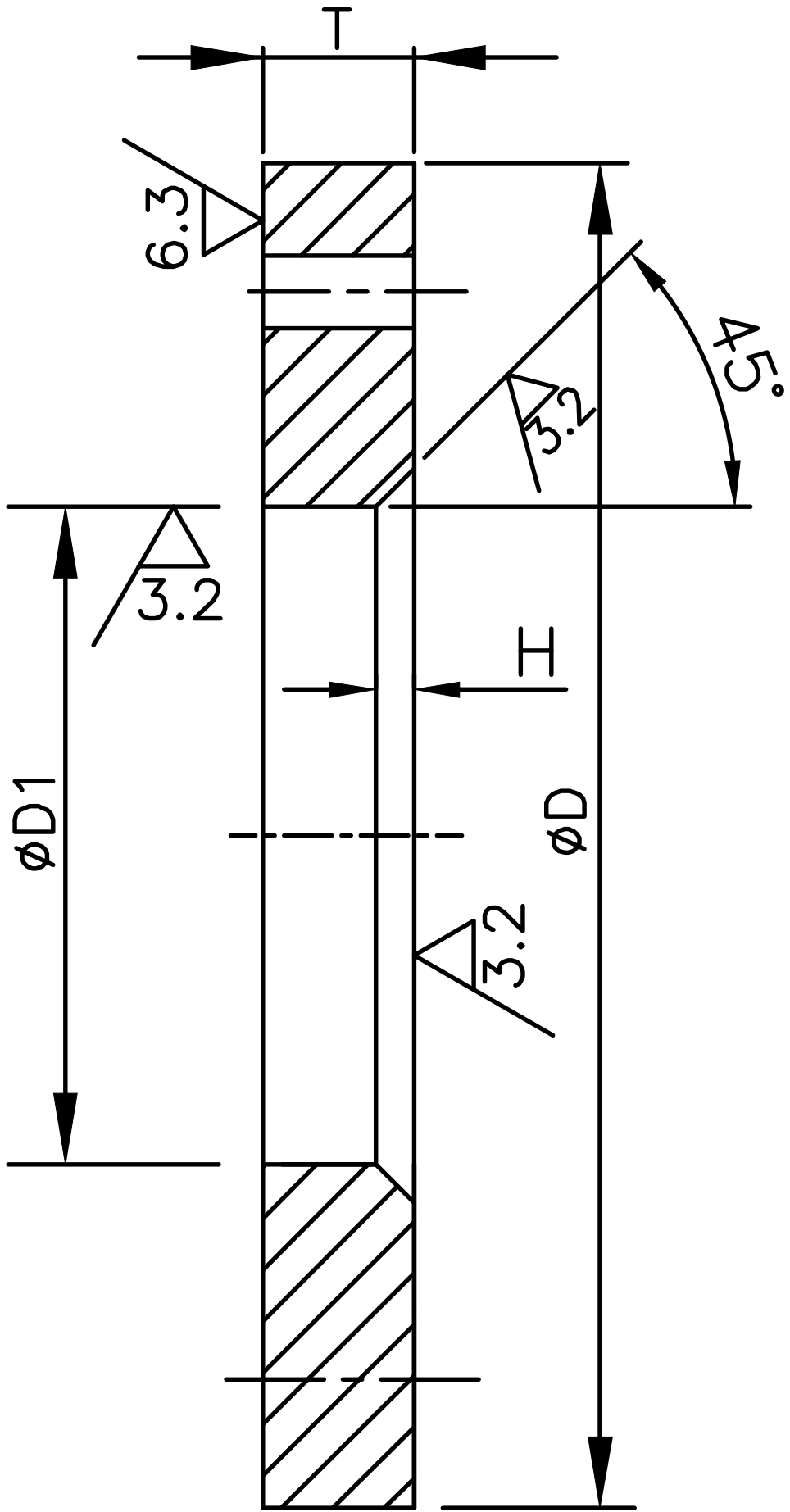
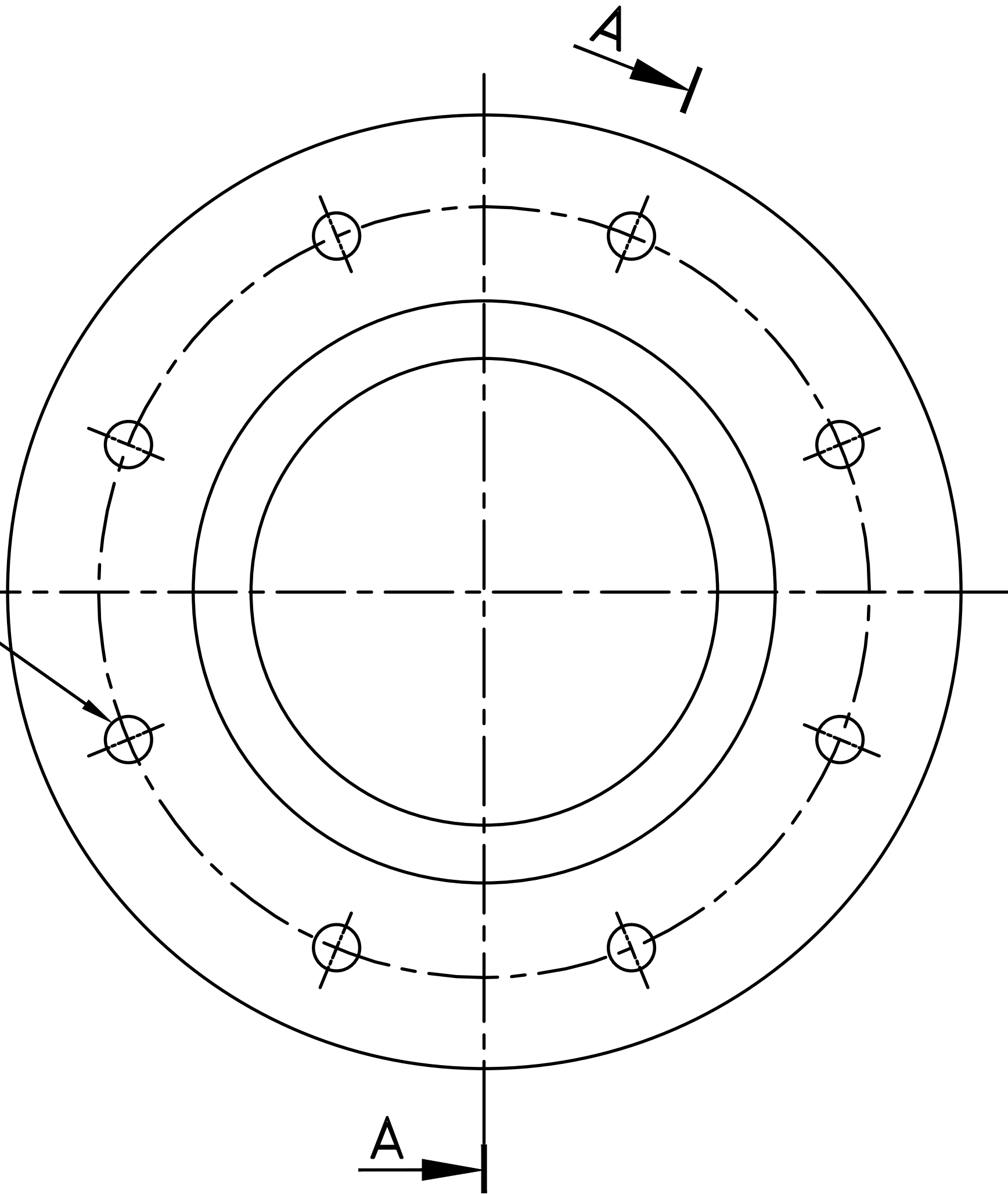
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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DRG. NO. 3 210 17 18411

'N' HOLES EQUISPACED
OFF-CENTRES DRILL THRO'
DIA 'E' ON 'P' PCD



SECTION-AA

6.3/
ALL OVER UNLESS OTHERWISE STATED.

- TECH. REQ.
- 1. REMOVE ALL BURRS & SHARP EDGES.

ITEM NO.	MATL CODE	NOM. BORE	ø D	ø D1	P (PCD)	H	T	E	N	WEIGHT Kg.
	MATL SPEC									
1.	AA1011808153	50	165	58.3±0.1	127	8.25 +0.1	22	20	8	3.00
	25 TK, AA10108									
2.	AA1011808161	65	191	73.3±0.1	149	8.25 +0.1	25	22	8	4.50
	28 TK, AA10108									
3.	AA1011808170	80	210	86.3±0.1	168	8.25 +0.1	29	22	8	6.00
	32 TK, AA10108									
4.	AA1011808188	100	255	112.3±0.1	200	11.0 +0.2	32	22	8	10.00
	36 TK, AA10108									
5.	AA1011808196	150	318	164.3±0.1	270	11.0 +0.2	37	22	12	16.00
	40 TK, AA10108									
6.	AA1011808200	200	380	216.4±0.1	330	11.0 +0.2	41	26	12	24.50
	45 TK, AA10108									
7.	AA1011808226	250	445	270.4±0.1	387	11.0 +0.2	48	30	16	35.00
	56 TK, AA10108									

REF. DRG. NO.

SIGN. & DATE

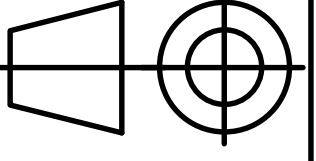
INVENTORY NO.

REV.	DATE	ALTERED
		CHECKED
		APPD.

DRAWING REVIEW			
DEPT.	NAME	SIGN.	DATE

ADDITIONAL INFORMATION			
STATUS OF DRAWING U			
DISTRIBUTION OF PRINTS			
HTE-2	FGM-7	THX-1	
WTM(P)-1		WTM(S-4)	

REV.	DATE	ALTERED	AB
01	24.9.16	CHECKED	ND
		APPD.	SK

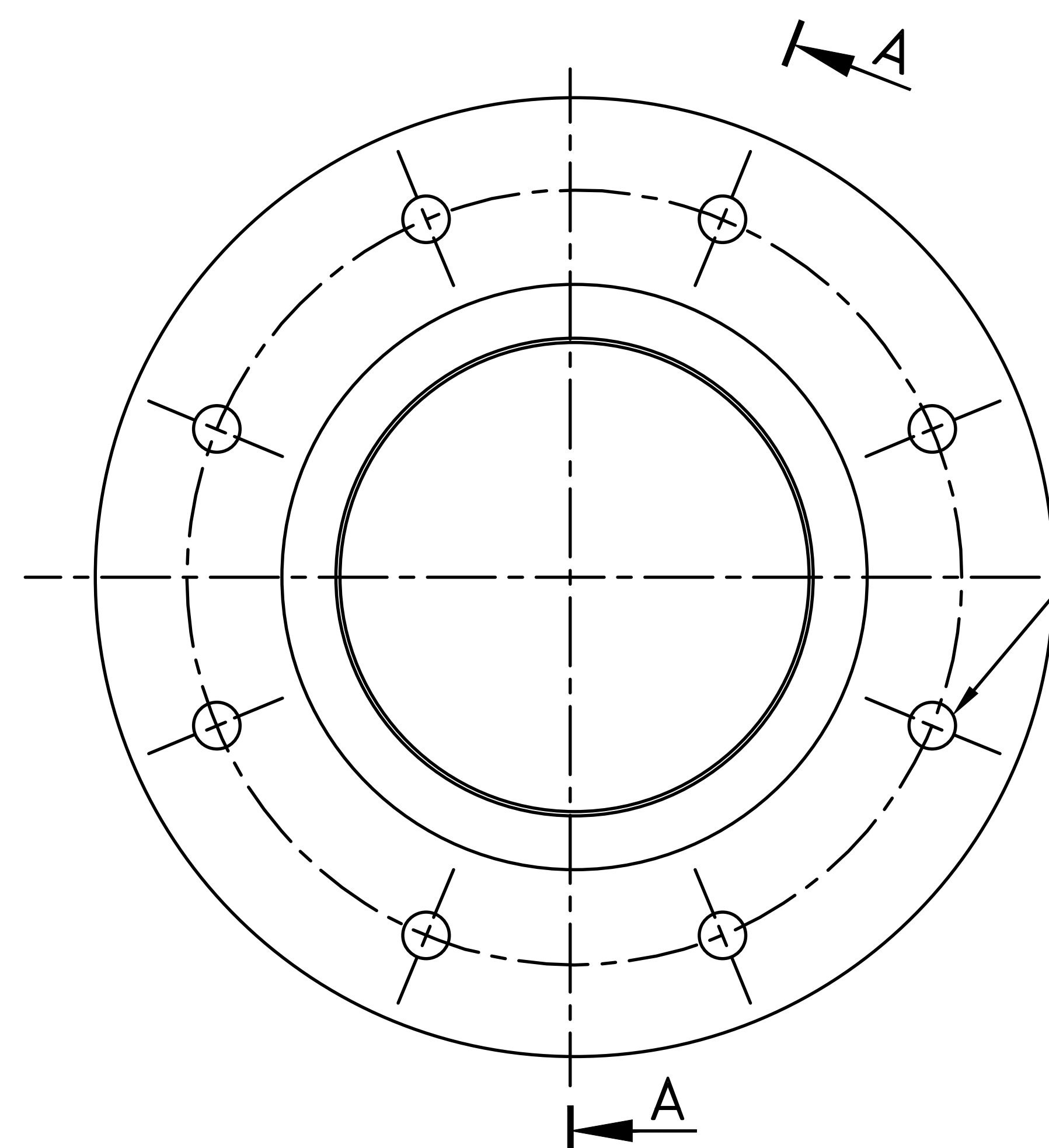
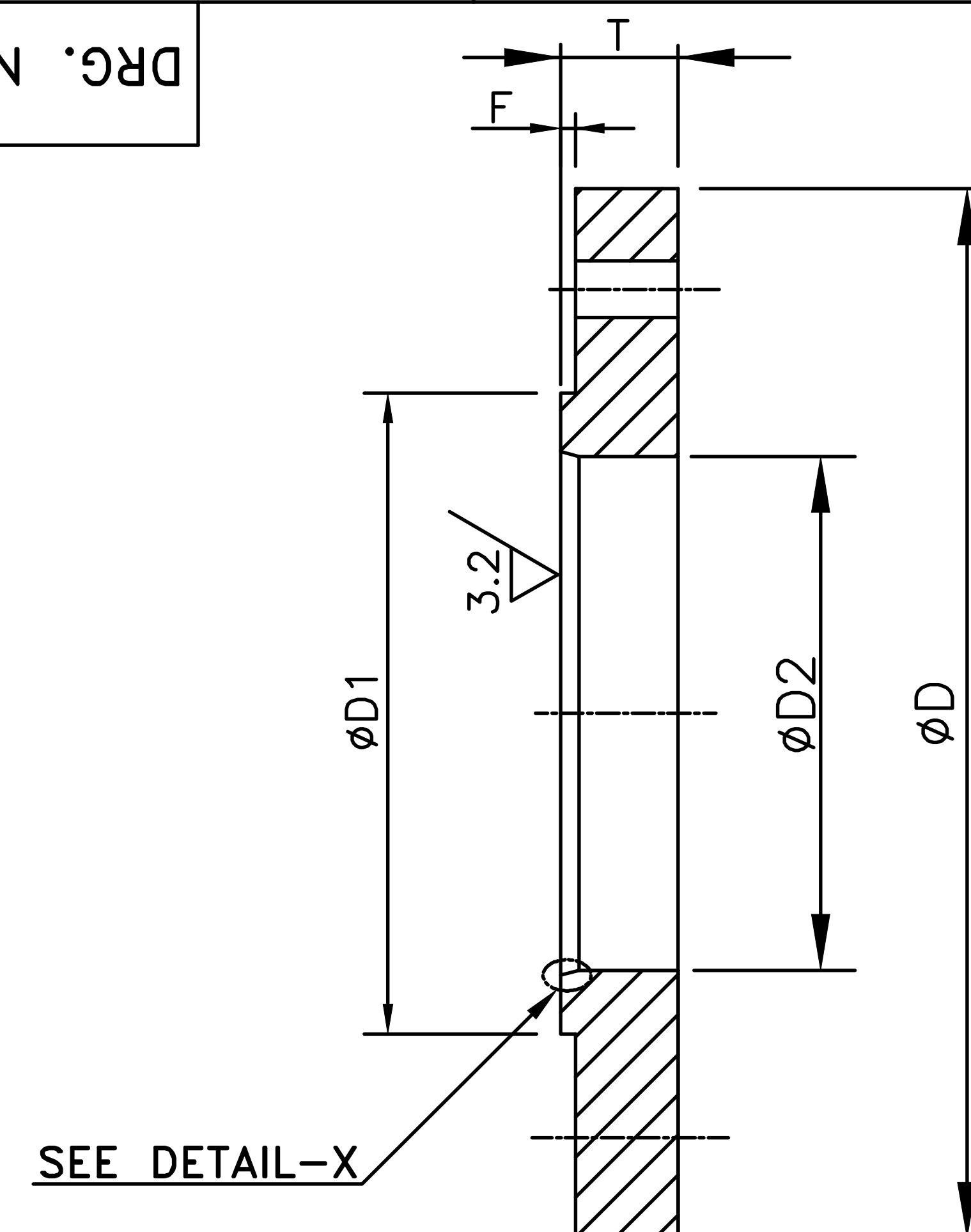
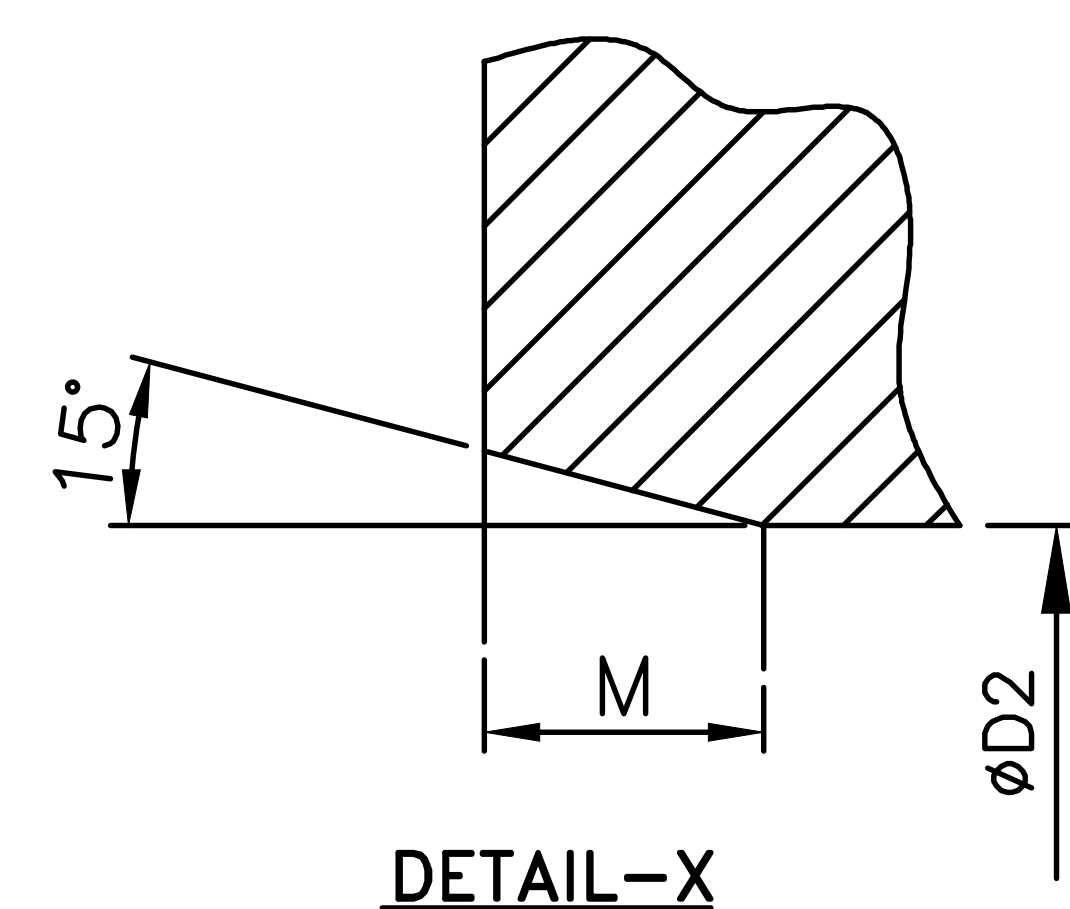
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				PRANAHITA-VI LIS (6x124.4 MW)			
 BHARAT HEAVY ELECTRICALS LTD. BHOPAL				DRN	NAME	SIGN	DATE
				CKD	ND	<i>[Signature]</i>	19.7.16
				APPD	SK	<i>[Signature]</i>	19.7.16
DEPT. H.T.E.	UNTOL. DIMS. GR.	SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.		ITEM NO.	
CODE 402	REFER DRG, 32000049014	 NTS	SEE TABLE	02101718401		007	
TITLE				DRAWING NO.		REV.	
BACKING FLANGE (CLASS 300)				3-210-17-18411		01	
				SHT. NO. 1	NO. OF SHT. 1		

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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DRG. NO. 3-210-17-18412



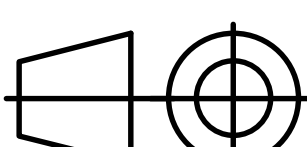
6.3/
▽ ALL OVER UNLESS OTHERWISE STATED.

'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.
2. PAINT AND PROTECT AS PER PRODUCT STD. HT 00005 CAT. 'G'.

ITEM NO.	MATL CODE	NOM. BORE	ø D	ø D1	ø D2	P (PCD)	F	T	E	M	N	WEIGHT Kg.
	MATL SPEC											
1.	AA1011808137	50	152	92	58.3±0.1	120.6	1.6	16	19	3	4	2.0
	20 TK-AA 10108											
2.	AA1011808153	65	178	105	73.3±0.1	139.7	1.6	22	19	3	4	2.8
	25 TK-AA 10108											
3.	AA1011808153	80	191	127	86.3±0.1	152.4	1.6	22	19	3	4	3.0
	25 TK-AA 10108											
4.	AA1011808161	100	229	157	112.3±0.1	190.5	1.6	24	19	4	8	5.5
	28 TK-AA 10108											
5.	AA1011808170	150	279	216	164.3±0.1	241.3	1.6	26	24	4	8	7.60
	32 TK-AA 10108											
6.	AA1011808188	200	343	270	216.4±0.1	298.4	1.6	29	24	5	8	10.8
	36 TK-AA 10108											
7.	AA1011808188	250	406	324	270.4±0.1	361.9	1.6	31	28	5	12	14.2
	36 TK-AA 10108											

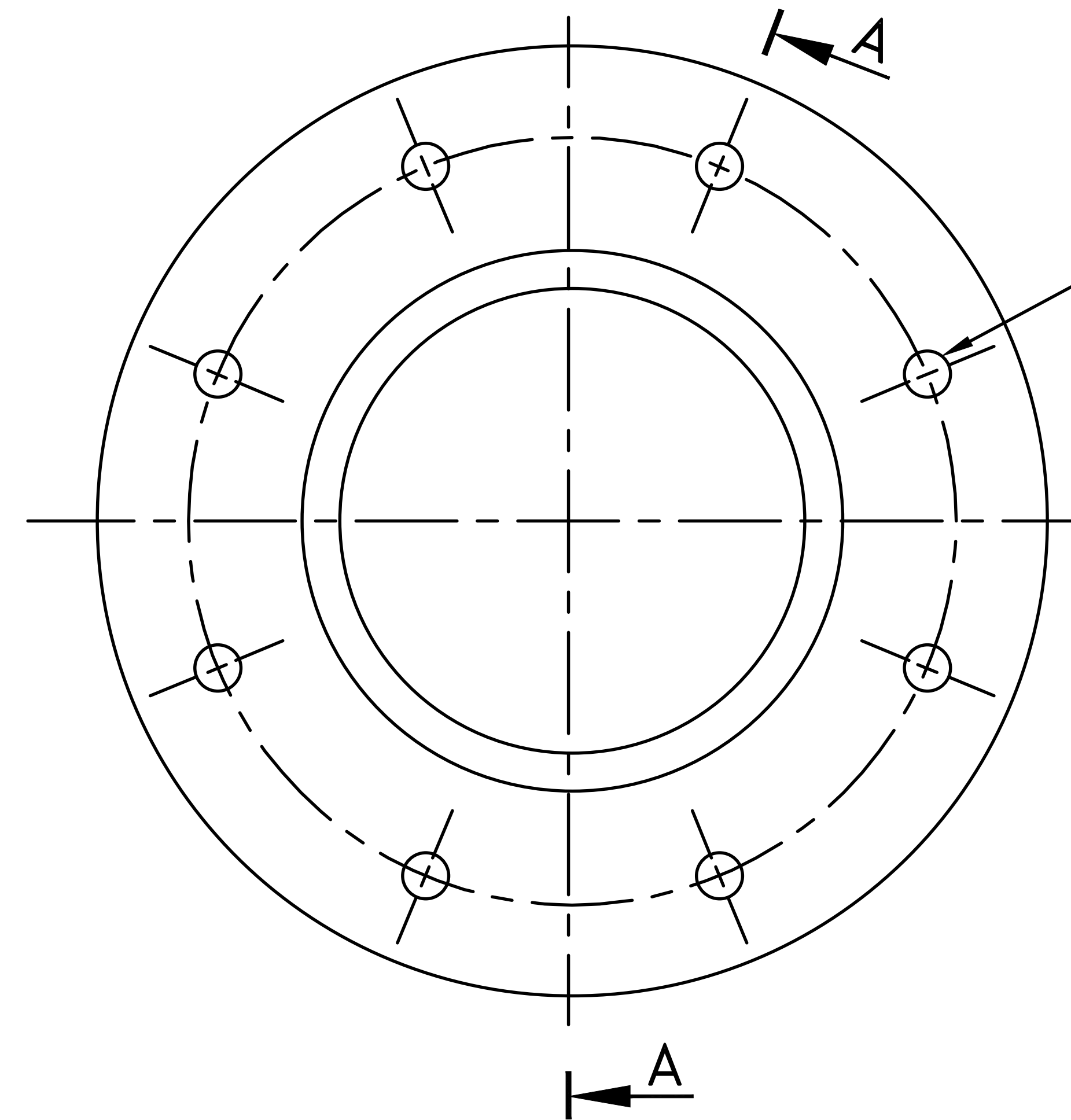
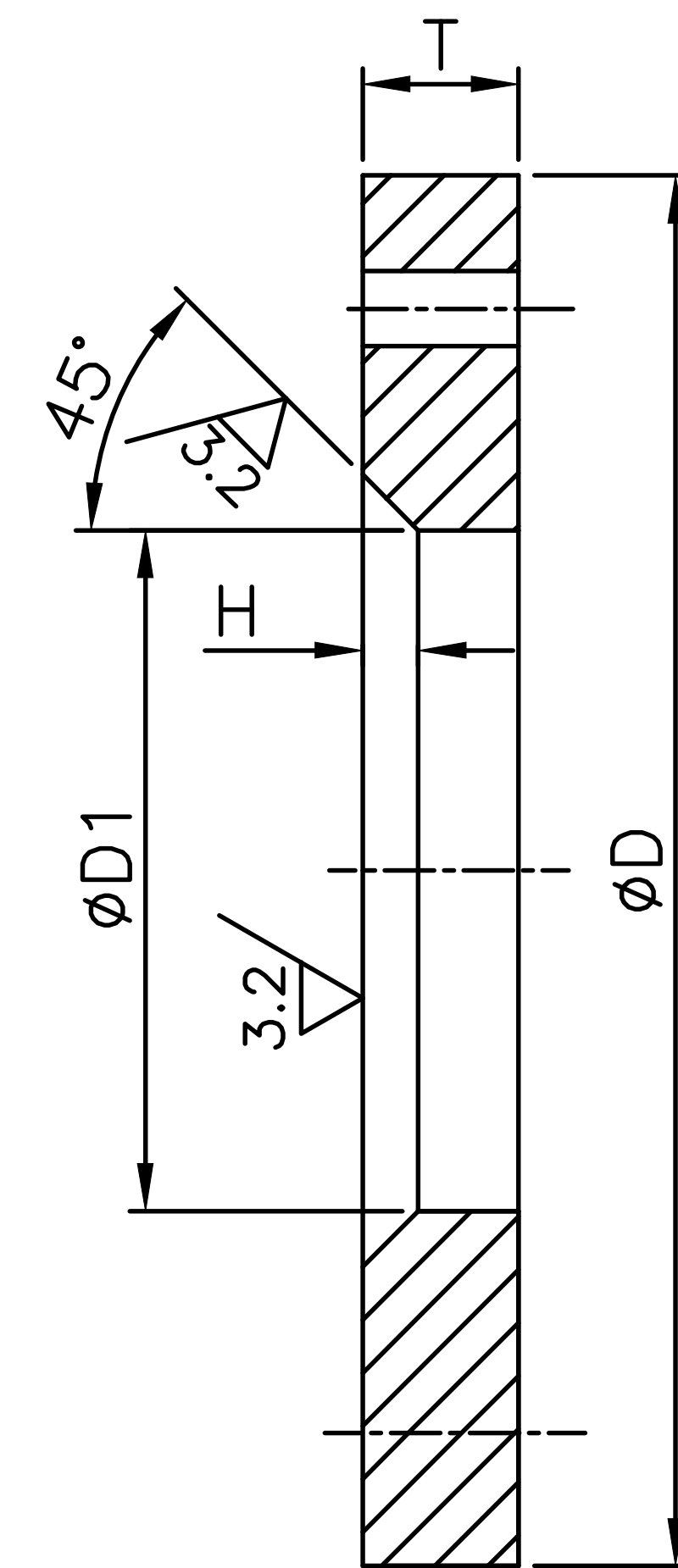
DRAWING REVIEW				ADDITIONAL INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT										
DEPT.	NAME	SIGN.	DATE			PRANAHITA-VI LIS (6x124.4 MW)										
				STATUS OF DRAWING U		BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.	
				DISTRIBUTION OF PRINTS							CKD	ND		19.7.16		
				HTE-2 FGM-7 THX-1 WTM(P)-1 WTM(S-4)							APPD	SK		19.7.16		
REV.	DATE	ALTERED CHECKED APPD.		REV.	DATE	ALTERED CHECKED APPD.		DEPT. H.T.E.	UNTOL. DIMS. GR. REFER DRG, 32000049014		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG. 02101718401	ITEM NO.	NO.OF ITEM 007	
								CODE 402	TITLE SLIP FLANGES (CLASS 150)					DRAWING NO. 3-210-17-18412		REV. 00
												SHT. NO. 1		NO. OF SHT. 1		

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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DRG. NO. 3-210-17-18413



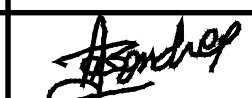
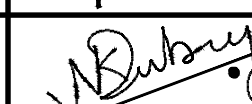
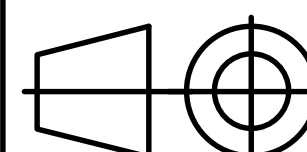
6.3/
▽ ALL OVER UNLESS OTHERWISE STATED.

'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.
2. PAINT AND PROTECT AS PER PRODUCT STD. HT 00005 CAT. 'G'.

ITEM NO.	MATL CODE	NOM. BORE	Ø D	Ø D1	P (PCD)	F	T	E	N	H	WEIGHT Kg.
	MATL SPEC										
1.	AA1011808145	50	152	58.3±0.1	120.6	1.6	16	19	4	8.25 ^{+0.1}	2.0
	22 TK-AA 10108										
2.	AA1011808155	65	178	73.3±0.1	139.7	1.6	22	19	4	8.25 ^{+0.1}	2.8
	25 TK-AA 10108										
3.	AA1011808161	80	191	86.3±0.1	152.4	1.6	22	19	4	8.25 ^{+0.1}	3.0
	28 TK-AA 10108										
4.	AA1011808161	100	229	112.3±0.1	190.5	1.6	24	19	8	11 ^{+0.2}	5.5
	28 TK-AA 10108										
5.	AA1011808170	150	279	164.3±0.1	241.3	1.6	26	24	8	11 ^{+0.2}	7.60
	32 TK-AA 10108										
6.	AA1011808188	200	343	216.4±0.1	298.4	1.6	29	24	8	11 ^{+0.2}	10.8
	36 TK-AA 10108										
7.	AA1011808188	250	406	270.4±0.1	361.9	1.6	31	28	12	11 ^{+0.2}	14.2
	36 TK-AA 10108										

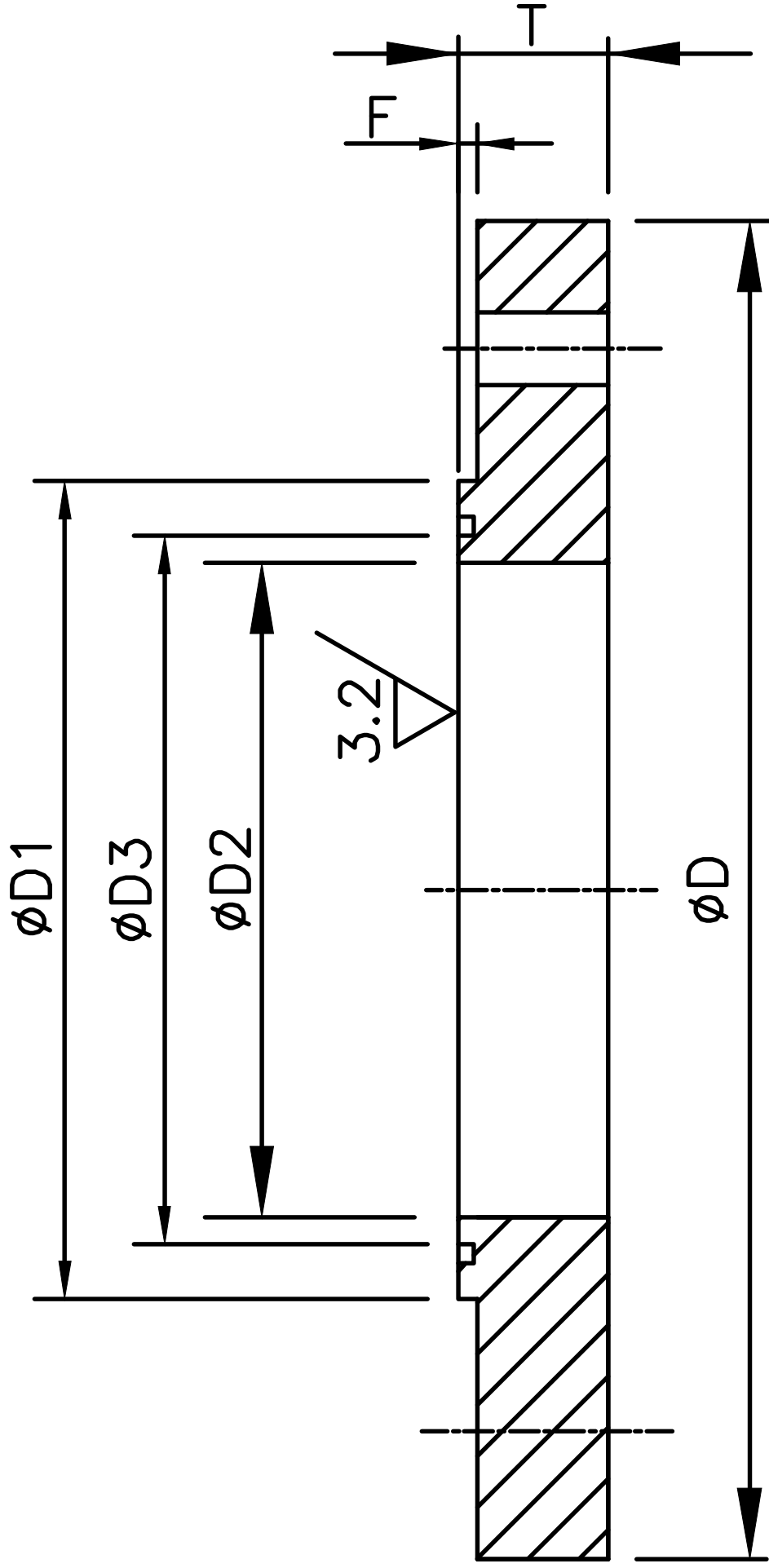
DRAWING REVIEW				ADDITIONAL INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				PRANAHITA-VI LIS (6x124.4 MW)					
DEPT.	NAME	SIGN.	DATE							STATUS OF DRAWING		U			
				DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(P)-1 WTM(S-4)		 BHARAT HEAVY ELECTRICALS LTD. BHOPAL		DRN	NAME	SIGN	DATE	NO. OF VAR.			
									AB		19.7.16				
									ND		19.7.16				
				SK					19.7.16						
REV.	DATE	ALTERED		REV.	DATE	ALTERED		DEPT. H.T.E.	UNTOL. DIMS. GR. REFER DRG, 32000049014		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG. 02101718401	ITEM NO.	NO.OF ITEM 007
		CHECKED				CHECKED									
		APPD.				APPD.									
								TITLE BACKING FLANGES (CLASS 150)				DRAWING NO. 3-210-17-18413		REV. 00	
												SHT. NO. 1		NO. OF SHT. 1	

FIRST ANGLE PROJECTION

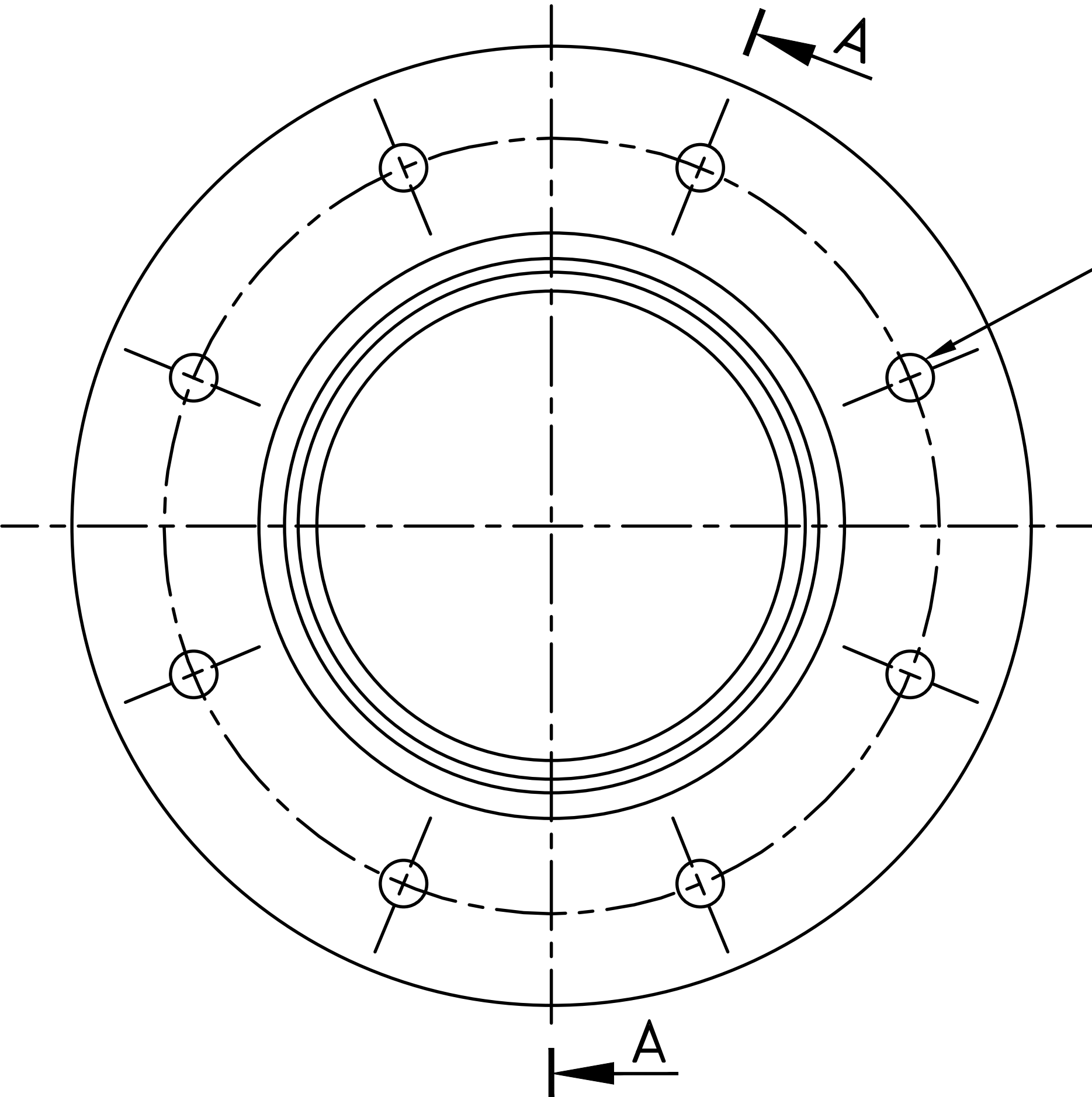
(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3 210 17 18414

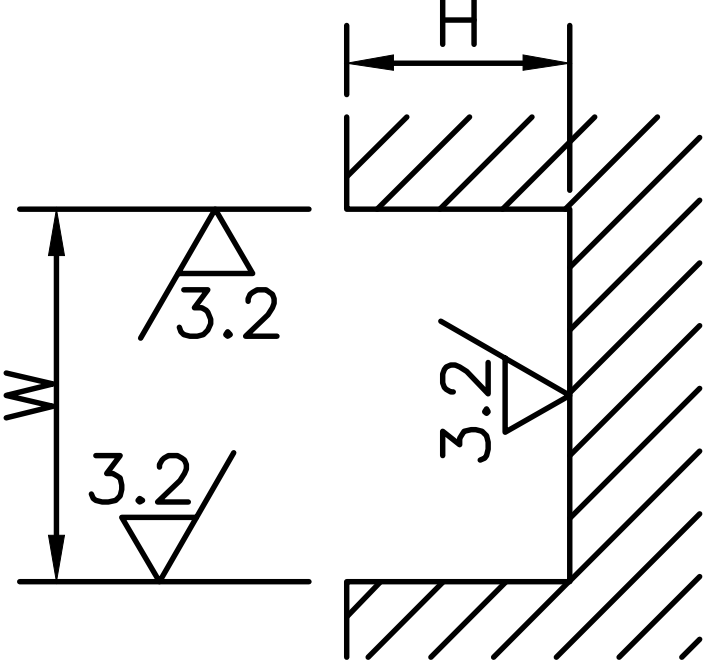
6.3/
ALL OVER UNLESS OTHERWISE STATED.



SECTION-AA



'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.



GROOVE DETAIL

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.

ITEM NO.	MATL CODE	NOM. BORE	Ø D (O/D)	Ø D1 RAISED FACE	Ø D2 (I/D)	Ø D3 SEAL GROOVE Ø	P (PCD)	F	T	E	N	W	H	WEIGHT Kg.	REMARKS
	MATL SPEC														
1.	AA1011808196	150	318	216	170	183	270	1.6	37	22	12	10 ^{+0.3} ₀	6 ^{±0.05}	16.00	Ø8 SEAL
	AA10108														

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IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REF. DRG. NO.

SIGN. & DATE

INVENTORY NO.

REV. DATE ALTERED
CHECKED
APPD.

REV. DATE ALTERED
CHECKED
APPD.

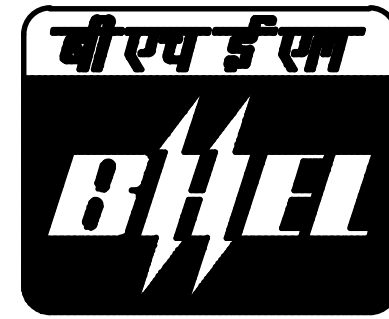
REV. DATE ALTERED
CHECKED
APPD.

DRAWING REVIEW			
DEPT.	NAME	SIGN.	DATE

ADDITIONAL INFORMATION
STATUS OF DRAWING U
DISTRIBUTION OF PRINTS
HTE-2 FGM-7 THX-1
WTM(P)-1 WTM(S)-4

TYPE OF PRODUCT OR
NAME OF CUSTOMER/PROJECT

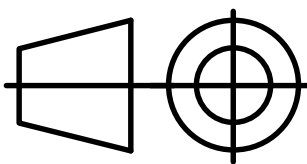
PRANAHITA-VI LIS
(6x124.4 MW)



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DRN	NAME	SIGN	DATE	NO. OF VAR.
AB			20.7.16	
ND			20.7.16	
APPD	SK		20.7.16	

DEPT. H.T.E. UNTO. DIMS. GR. REFER DRG, 32000049014
CODE 402



SCALE NTS
WEIGHT(K.G.) SEE TABLE

REF.TO ASSY.DRG.
02101718401

ITEM NO. 133
NO.OF ITEM 001

TITLE
CARBON STEEL FLANGE (CLASS 300)
WITH SEAL GROOVE

DRAWING NO.
3 210 17 18414

REV.
00

SHT. NO. 1

NO. OF SHT. 1

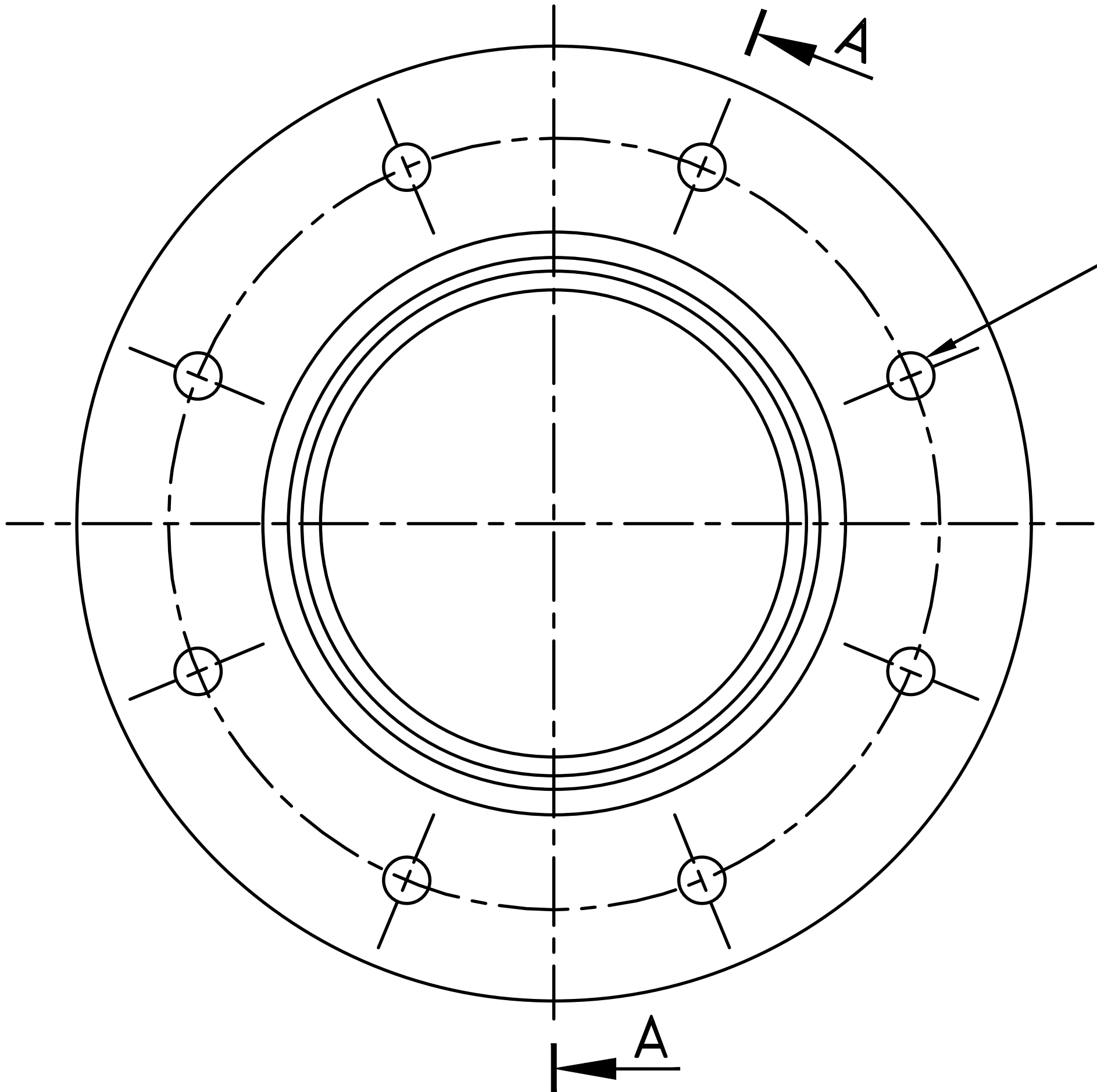
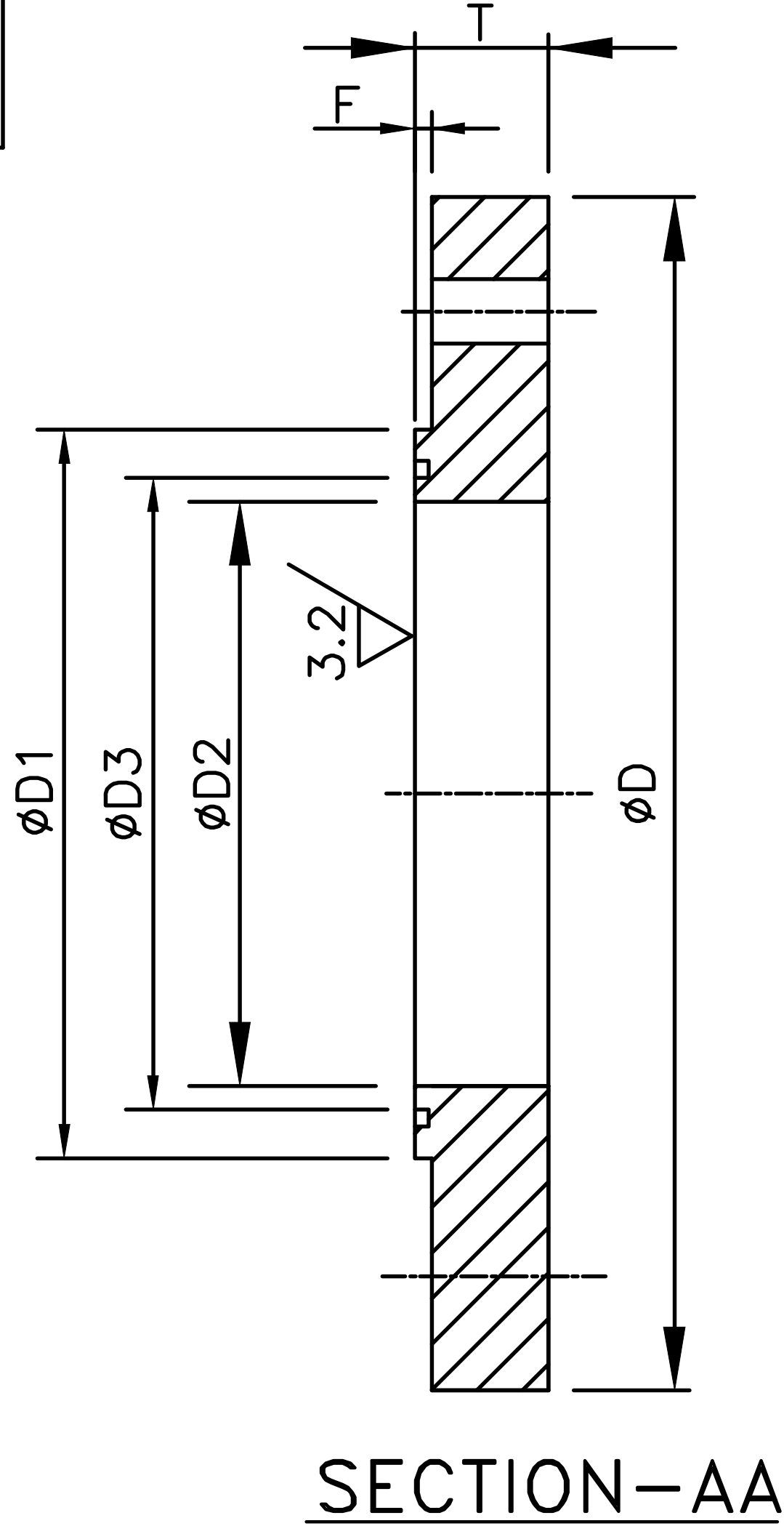
A3 SIZE

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

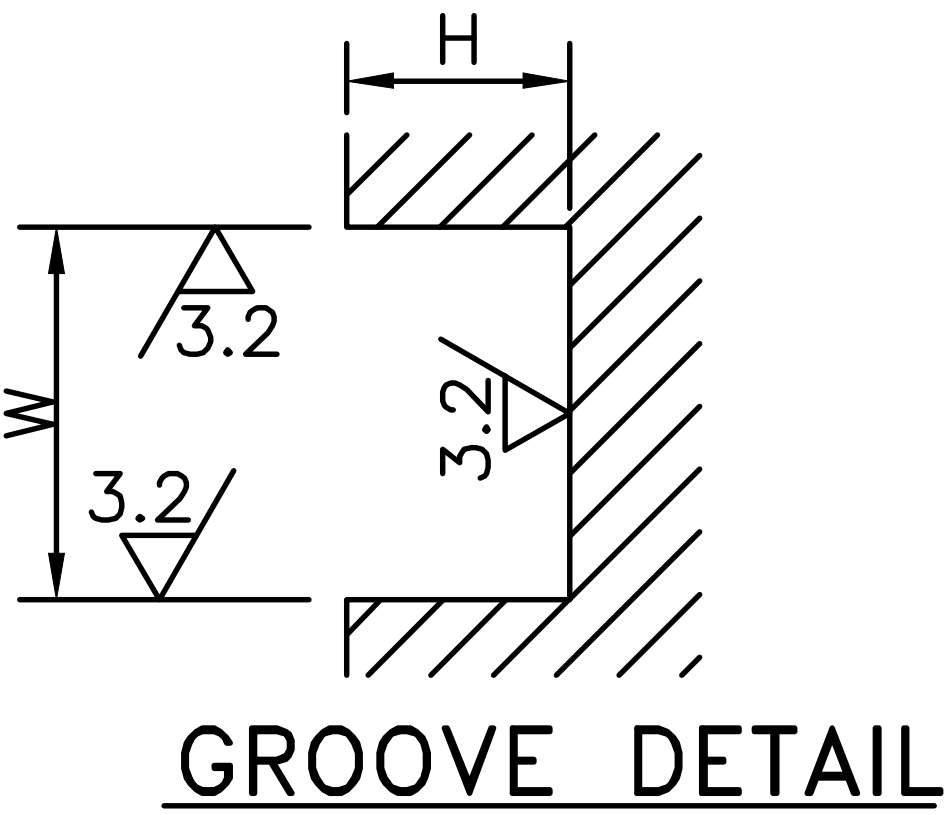
DRG. NO. 3 210 17 18416



'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

6.3/
ALL OVER UNLESS OTHERWISE STATED.

TECH. REQ.
1. REMOVE ALL BURRS & SHARP EDGES.



ITEM NO.	MATL CODE	NOM. BORE	ø D (O/D)	ø D1 RAISED FACE	ø D2 (I/D)	ø D3 SEAL GROOVE ø	P (PCD)	F	T	E	N	W	H	WEIGHT Kg.	REMARKS
	MATL SPEC														
1.	AA1011808226	150	356	216	170	183	292	6.4	48	30	12	10 ^{+0.3} ₀	6 ^{±0.05}	23.00	ø8 SEAL
	56 TK, AA10108														
2.	AA1011808226	200	419	270	222	236	349.3	6.4	52	33	12	10 ^{+0.3} ₀	6 ^{±0.05}	41.00	ø8 SEAL
	56 TK, AA10108														
3.	AA1011808188	80	210	127	91	101	168.5	6.4	32	22	8	7.5 ^{+0.3} ₀	4.5 ^{±0.05}	5.20	ø6 SEAL
	36 TK, AA10108														

ADDITIONAL INFORMATION

STATUS OF DRAWING U

DISTRIBUTION OF PRINTS

HTE-2 FGM-7 THX-1
WTM(P)-1 WTM(S)-4

TYPE OF PRODUCT OR
NAME OF CUSTOMER/PROJECT

PRANAHITA-VI LIS
(6x124.4 MW)



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DRN	NAME	SIGN	DATE	NO. OF VAR.
AB			03.09.16	
ND			03.09.16	
SK			03.09.16	

REV.	DATE	ALTERED	AB	REV.	DATE	ALTERED	AB
02	24.9.16	CHECKED	ND	01	19.9.16	CHECKED	ND
		APPD.	SK			APPD.	SK

MATERIAL SPCN. CHANGE.

ITEM NO. 3 ADDED.

DEPT. H.T.E.	UNTOL. DIMS. GR.	SCALE	WEIGHT(K.G.)
CODE 402	REFER DRG, 32000049014	NTS	SEE TABLE

TITLE
FLANGE WITH SEAL GROOVE
(CLASS 600)

REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM
02101718401	—	003

DRAWING NO.
3 210 17 18416
REV. 02

SHT. NO. 1 NO. OF SHT. 1

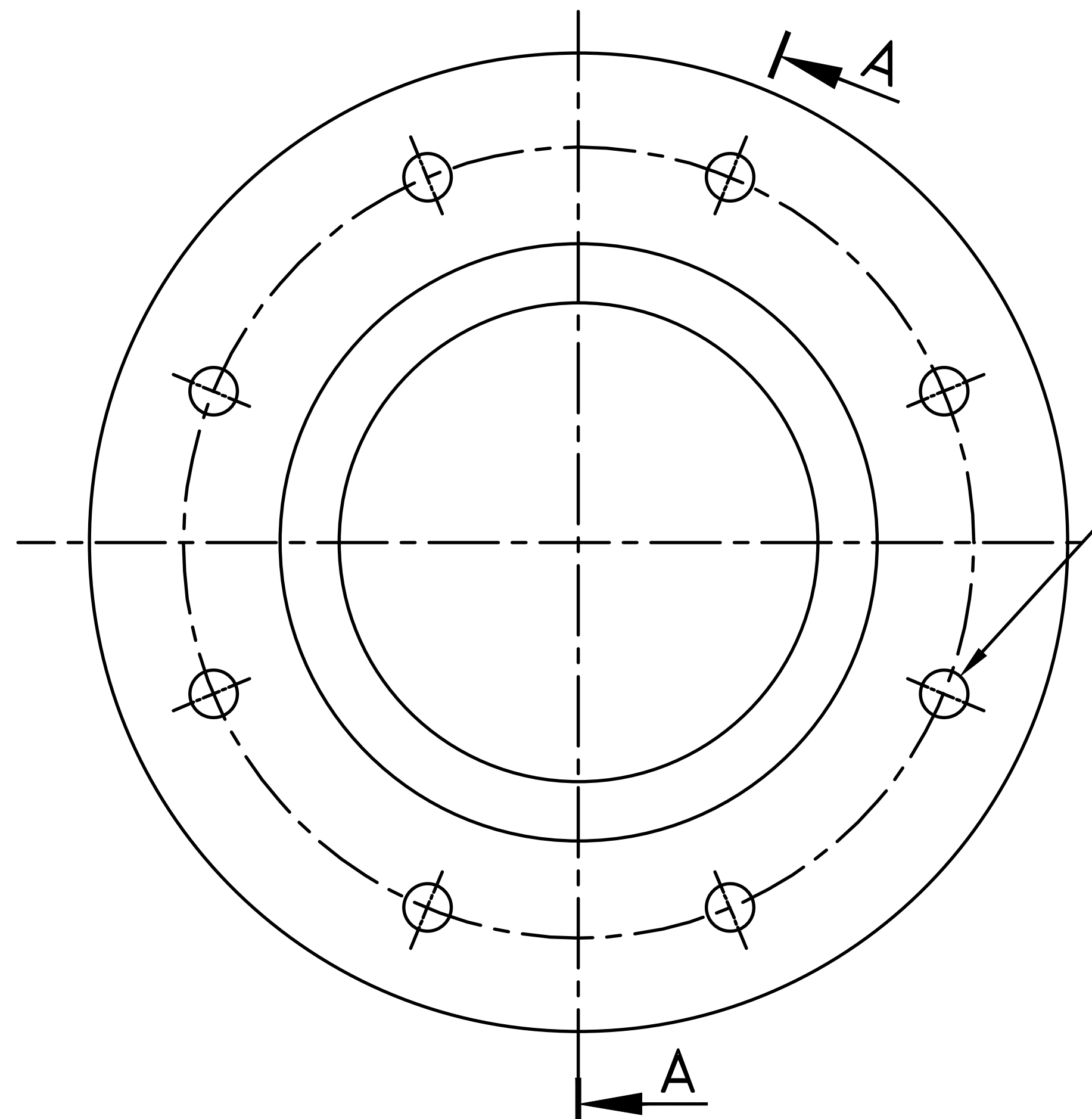
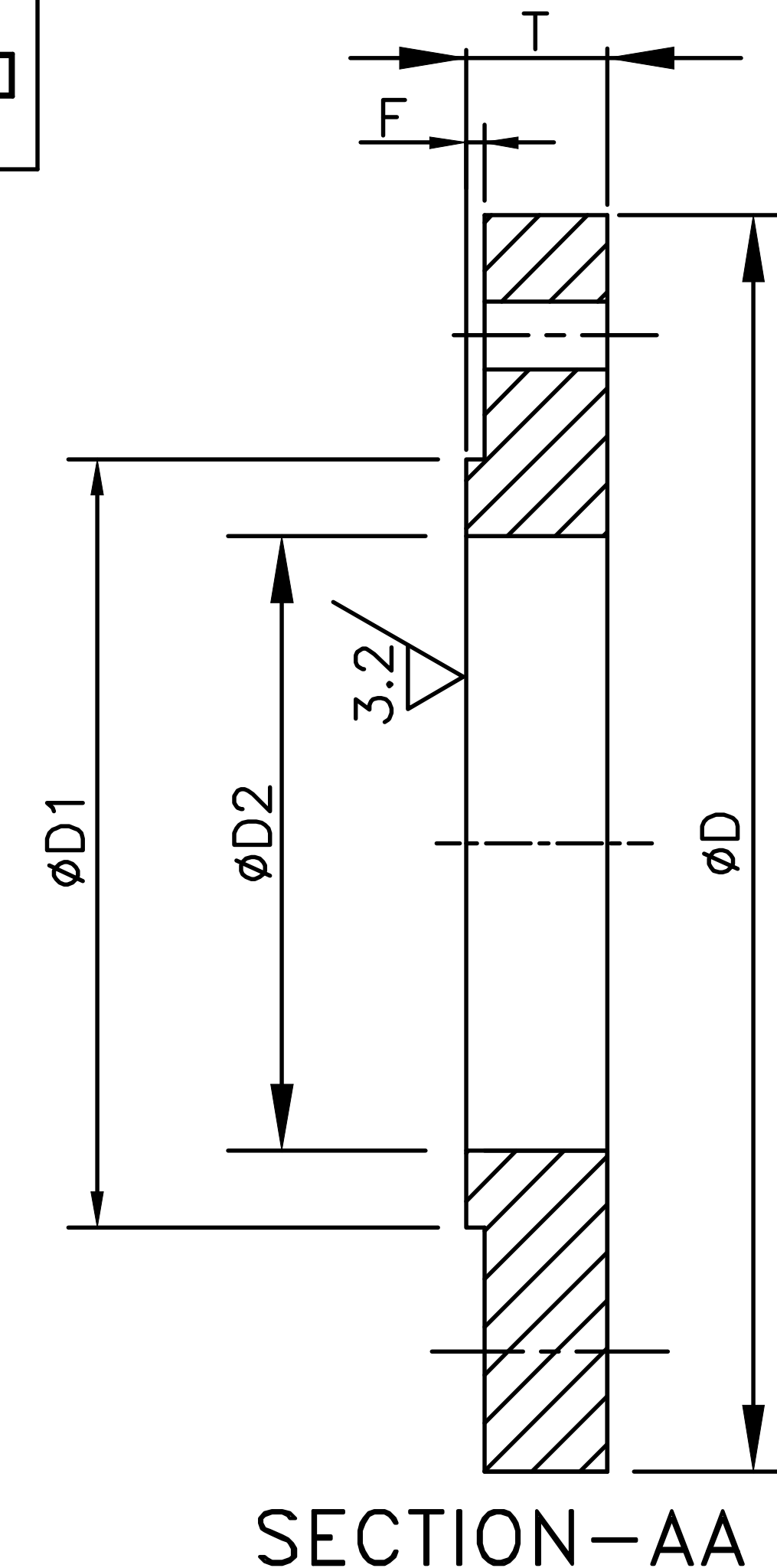
A3 SIZE

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO. 3 210 17 18417

6.3/
▽ ALL OVER UNLESS OTHERWISE STATED.



‘N’ HOLES EQUISPACED
OFF-CENTRES DRILL
THRO’ DIA ‘E’ ON ‘P’ PCD

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.

ITEM NO.	MATL CODE	NOM. BORE	Ø D (O/D)	Ø D1 RAISED FACEØ	Ø D2 (I/D)	P (PCD)	F	T	E	N	WEIGHT Kg.	REMARKS
	MATL SPEC											
1.	AA1011808226	150	356	216	170	292	6.4	48	30	12	23.00	
	56 TK, AA10108											
2.	AA1011808226	200	419	270	222	349.3	6.4	52	33	12	41.00	
	56 TK, AA10108											
3.	AA1011808188	80	210	127	91	168.5	6.4	32	22	8	5.20	
	36 TK AA10108											

ADDITIONAL INFORMATION

STATUS OF DRAWING	U
-------------------	---

DISTRIBUTION OF PRINTS

HTE-2	FGM-7	THX-1
WTM(P)-1		WTM(S-4)

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	<u>PRANAHITA-VI LIS</u> (6x124.4 MW)
--	---

 BHARAT HEAVY ELECTRICALS LTD. BHOPAL	DRN	NAME	SIGN	DATE	NO. OF VAR.
		AB	<i>[Signature]</i>	03.09.16	
	CKD	ND	<i>[Signature]</i>	03.09.16	
	APPD	SK	<i>[Signature]</i>	03.09.16	

DEPT. H.T.E.	UNTOL. DIMS. GR. REFER DRG, 32000049014		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG. 02101718401	ITEM NO.	NO.OF ITEM 003
-----------------	---	---	--------------	------------------------------	---------------------------------	----------	----------------------

TITLE	<u>FLANGE WITHOUT SEAL GROOVE</u> (CLASS 600)
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DRAWING NO. 3-210-17-18417	REV. 02
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SHT. NO. 1	NO. OF SHT. 1
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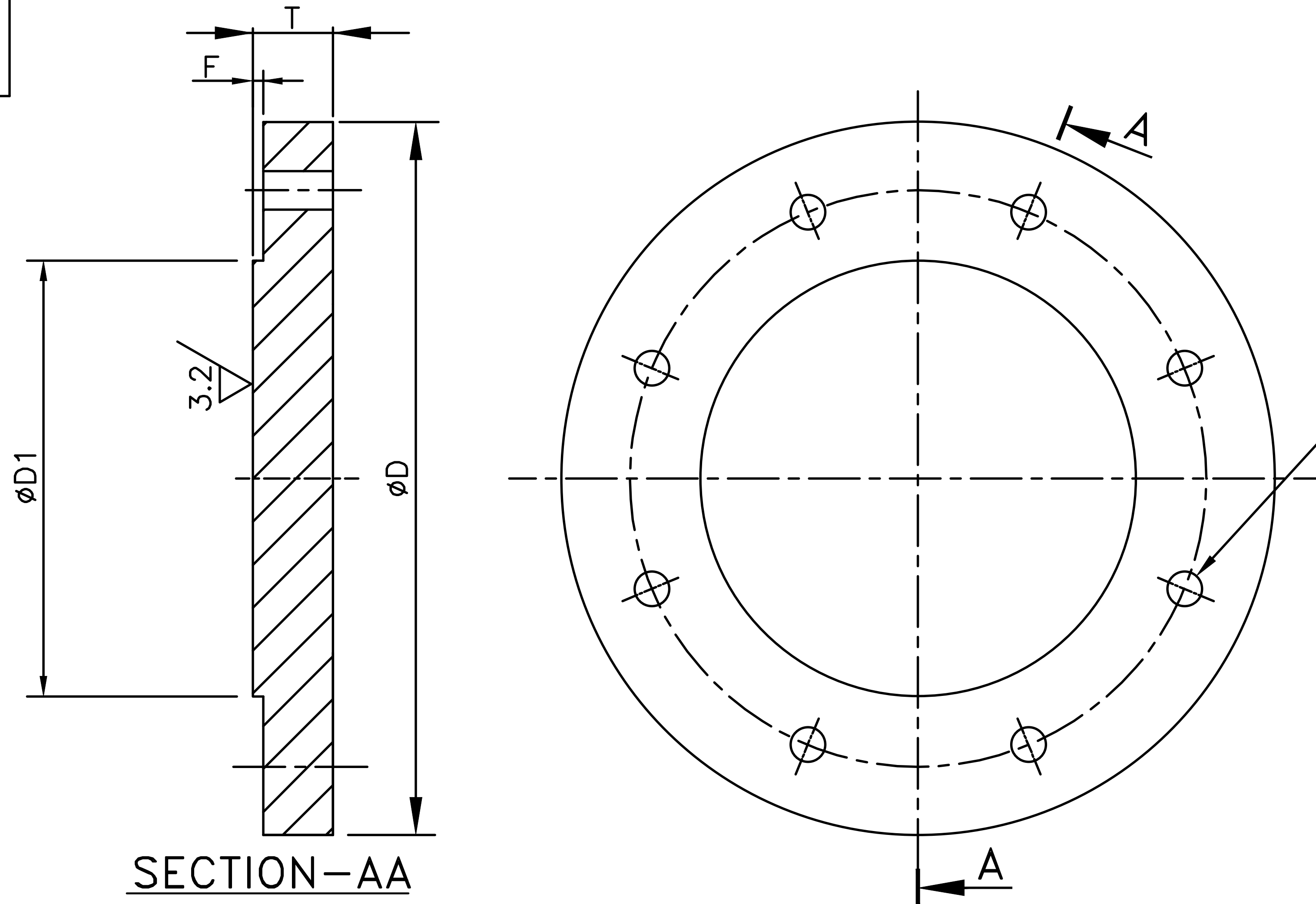
A3 SIZE

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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DRG. NO. 3 210 17 18418



6.3/
ALL OVER UNLESS OTHERWISE STATED.

'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO' DIA 'E' ON 'P' PCD

- TECH. REQ.
- 1. REMOVE ALL BURRS & SHARP EDGES.

ITEM NO.	MATL CODE	NOM. BORE	ϕD (O/D)	$\phi D1$ RAISED FACE ϕ	P (PCD)	F	T	E	N	WEIGHT Kg.	REMARKS
	MATL SPEC										
1.	AA1011808226	150	356	216	292	6.4	48	30	12	31.34	
	56 TK, AA10108										
2.	AA1011808226	200	419	270	349.3	6.4	52	33	12	48.53	
	56 TK, AA10108										
3.	AA1011808188	80	210	127	168.5	6.4	32	22	8	7.00	
	36 TK, AA10108										

REF. DRG. NO.

SIGN. & DATE

INVENTORY NO.

ADDITIONAL INFORMATION

STATUS OF DRAWING U

DISTRIBUTION OF PRINTS

HTE-2 FGM-7 THX-1
WTM(P)-1 WTM(S-4)

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT PRANAHITA-VI LIS
(6x124.4 MW)



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DRN	NAME	SIGN	DATE	NO. OF VAR.
AB	AB	<i>[Signature]</i>	03.09.16	
CKD	ND	<i>[Signature]</i>	03.09.16	
APPD	SK	<i>[Signature]</i>	03.09.16	

REV.	DATE	ALTERED	AB	REV.	DATE	ALTERED	AB
		CHECKED	ND	02	24.9.16	CHECKED	ND
		APPD.	SK			APPD.	SK

MATERIAL SPCN. CHANGE.

ITEM NO. 3 ADDED.

DEPT. H.T.E.	UNTOL. DIMS. GR.	SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM
CODE 402	REFER DRG, 32000049014	NTS	SEE TABLE	02101718401		003

TITLE BLANK FLANGE
(CLASS 600)

DRAWING NO. 3-210-17-18418
REV. 02

SHT. NO. 1 NO. OF SHT. 1

A3 SIZE

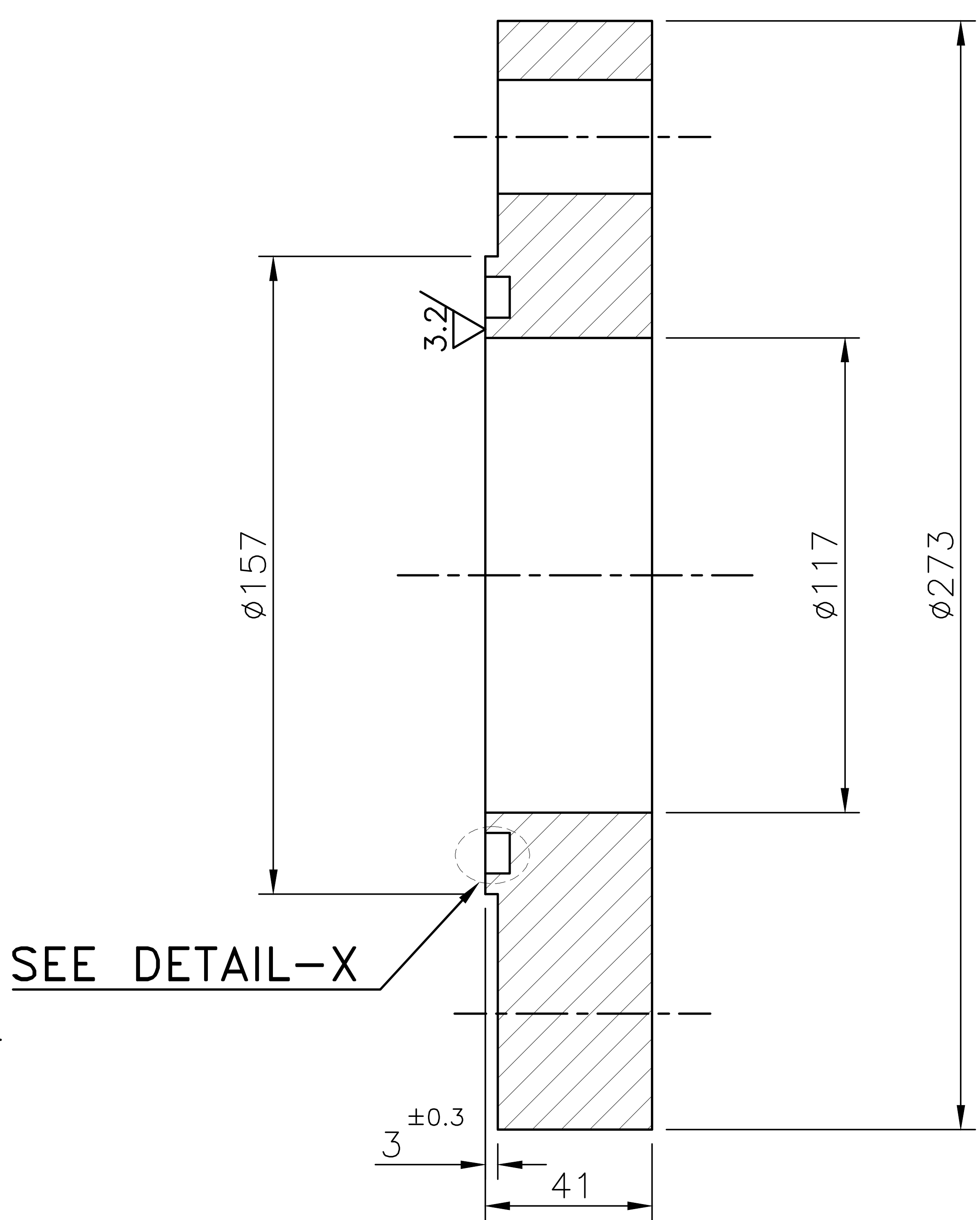
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

6.3/ ALL OVER UNLESS OTHERWISE STATED

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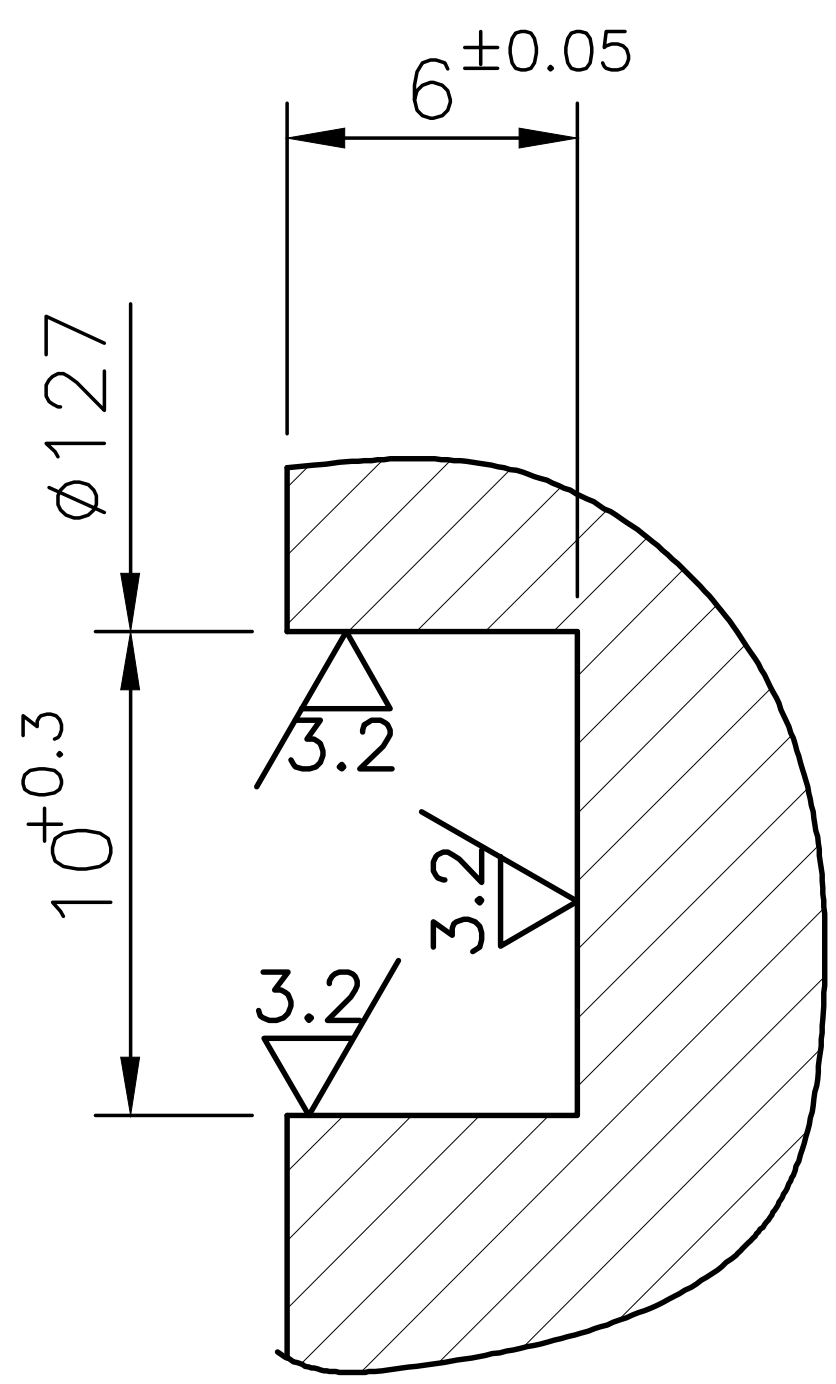
DRG. NO. 3 210 18 184 01



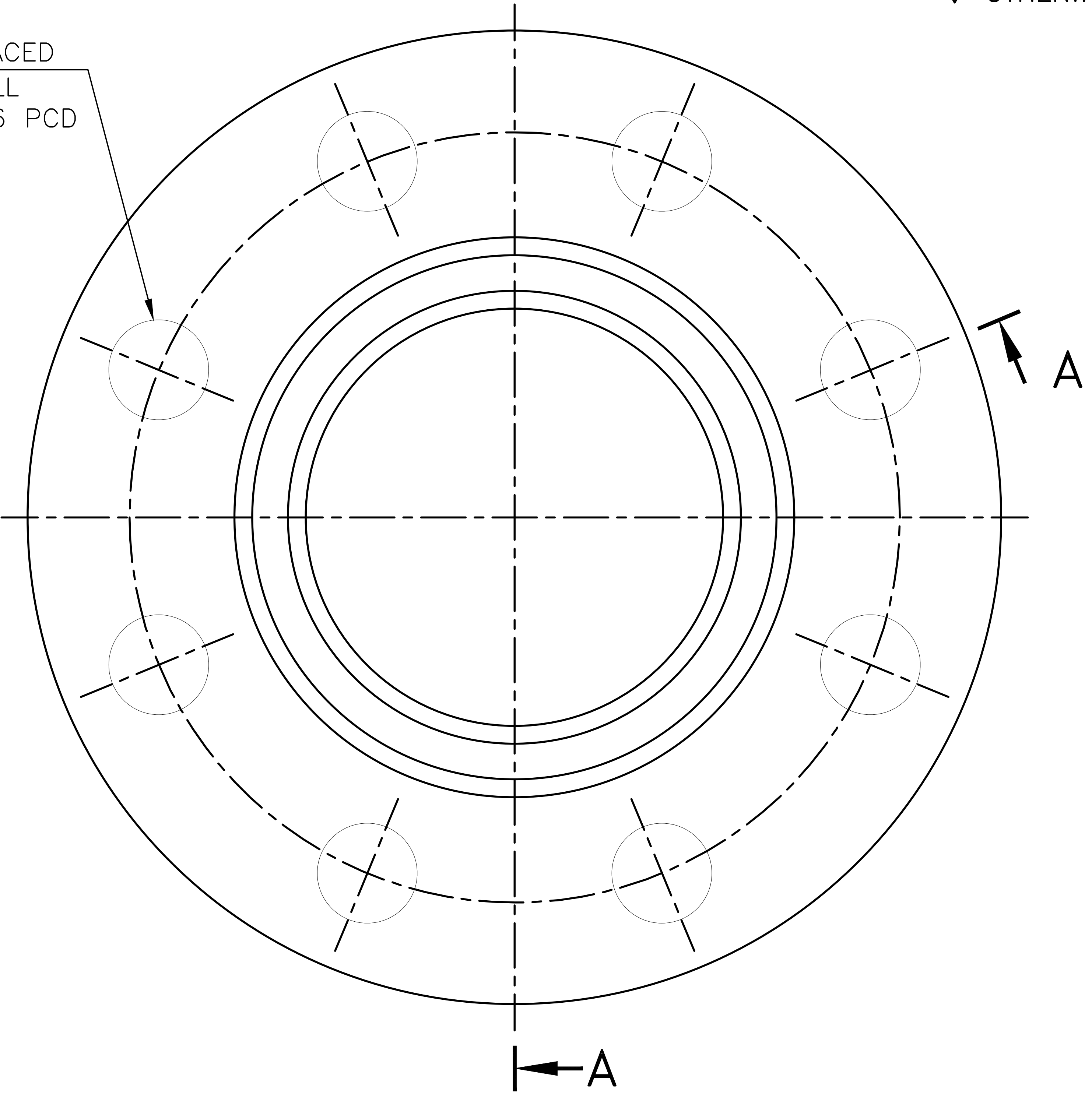
SEE DETAIL-X

SECTION-AA

8-HOLES EQUISPACED
OFF CENTRES DRILL
THRU Ø28 ON 216 PCD



DETAIL-X

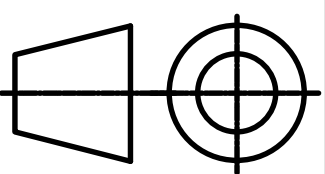


45	TK		001	FLANGE 100 NB WITH SEAL GROOVE (CL-600)				AA1011808200	Kg	12.800
65	REMARKS	75	VAR NO.	78	ITEM NO.	27	29	AA10108	No	001
58	DESCRIPTION	59	STD.	60	DRAWING NO.	77	29	31	34	45
							IT.NO.	MATL. CODE	55	57
							VAR.	MATL. SPCN.	54	58
									UNIT	UNIT WT.
									QTY.	

TECHNICAL REQUIREMENTS:-

- 1. REMOVE ALL BURRS AND SHARP EDGES.
- 2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

ADDITIONAL INFORMATION
STATUS OF DRAWING U
DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

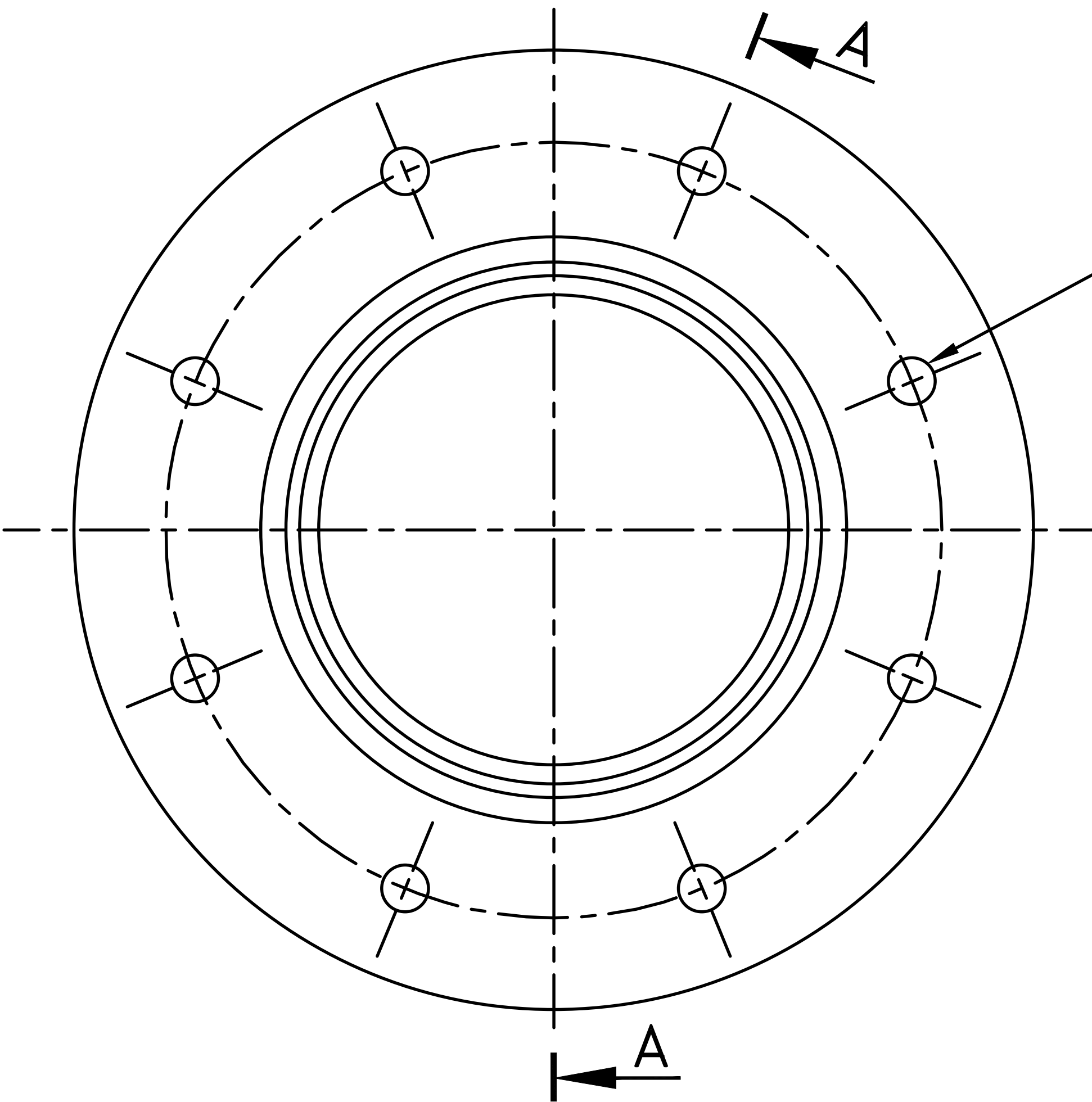
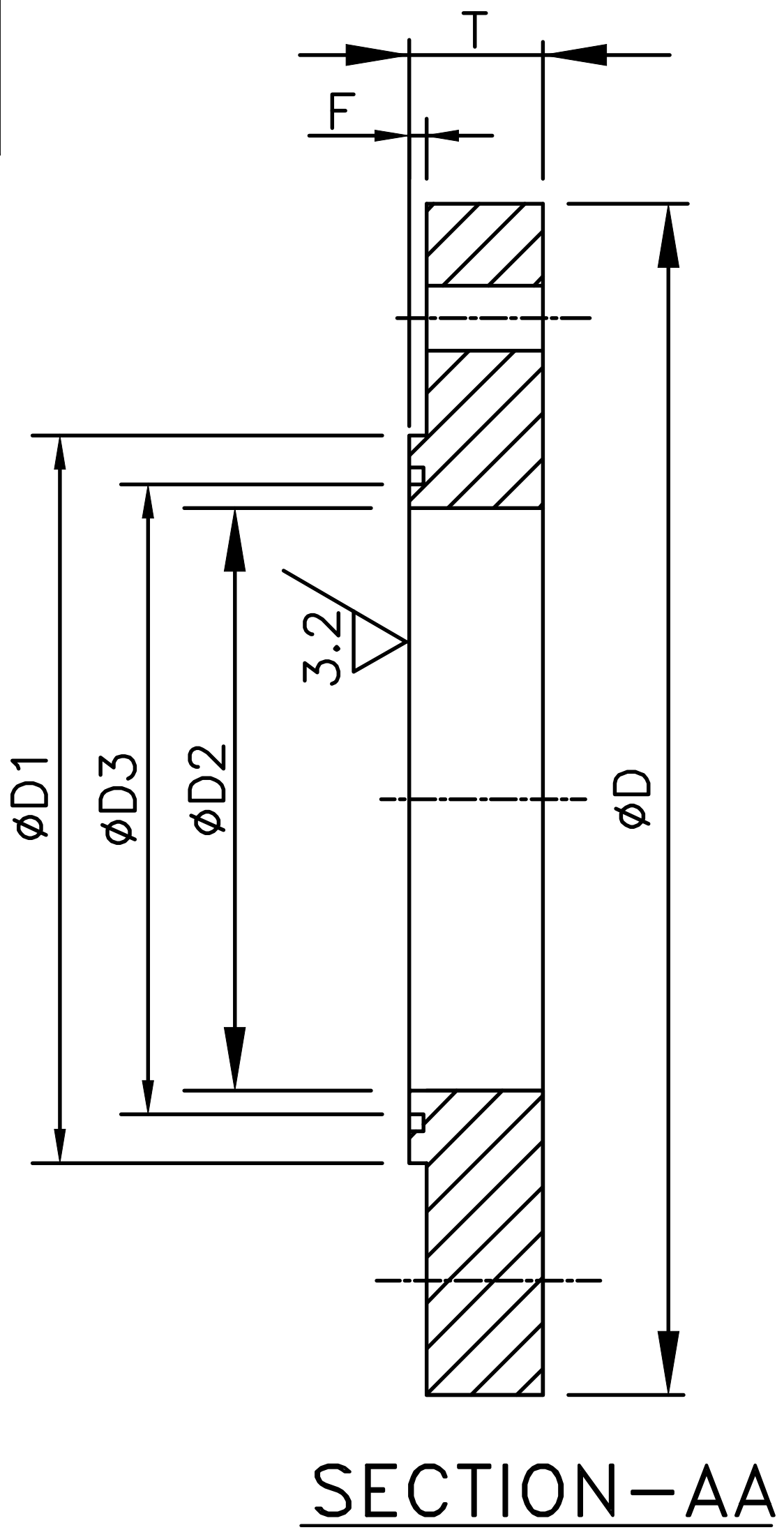
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				PRANAHITA-VI LIS (6x124.4 MW)				
BHARAT HEAVY ELECTRICALS LTD. BHOPAL				DRN	NAME NEERAJ	SIGN 	DATE 31.05.16	NO. OF VAR. —
				CKD	O.N.D.		31.05.16	
				APPD	S.K.		31.05.16	
DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE 1 : 2	WEIGHT(K.G.) 12.800	REF.TO ASSY.DRG. 0 210 18 18401	ITEM NO. 022	NO.OF ITEM 001	
CODE 402	32000049014							
TITLE FLANGE 100 NB WITH SEAL GROOVE (CL-600)					DRAWING NO. 3 210 18 18401		REV. 00	
					SHT. NO. 01		NO. OF SHT. 01	

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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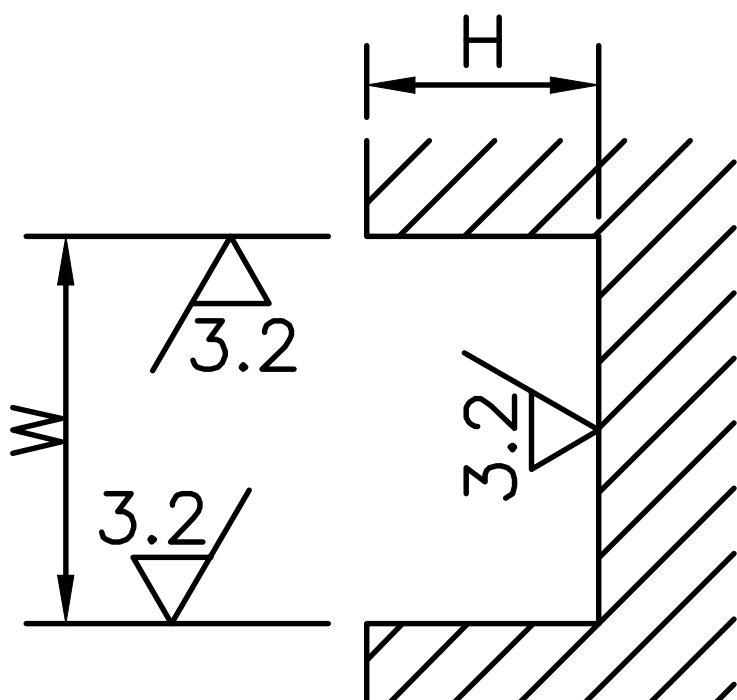
DRG. NO. 3 210 18 184 02



'N' HOLES EQUISPACED
OFF-CENTRES DRILL
THRO, DIA 'E' ON 'P' PCD.

TECH. REQ.

1. REMOVE ALL BURRS & SHARP EDGES.



GROOVE DETAIL

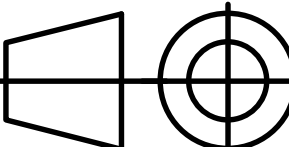
ITEM NO.	MATL CODE	NOM. BORE	ø D (O/D)	ø D1 RAISED FACE	ø D2 (I/D)	ø D3 SEAL GROOVE ø	P (PCD)	F	T	E	N	W	H	WEIGHT Kg.	REMARKS
	MATL SPEC														
1.	AA 1011808196	150	318	216	170	183	270	1.6	37	22	12	10 ^{+0.3} ₀	6 ^{±0.05}	16.00	ø8 SEAL
	AA 10108, 40 TK														
2.	AA 1011808153	50	165	92	62	70	127	1.6	22	20	8	7.5 ^{+0.3} ₀	4.5 ^{±0.05}	3.00	ø6 SEAL
	AA 10108, 25 TK														

SIGN. & DATE

REF. DRG. NO.

INVENTORY NO.

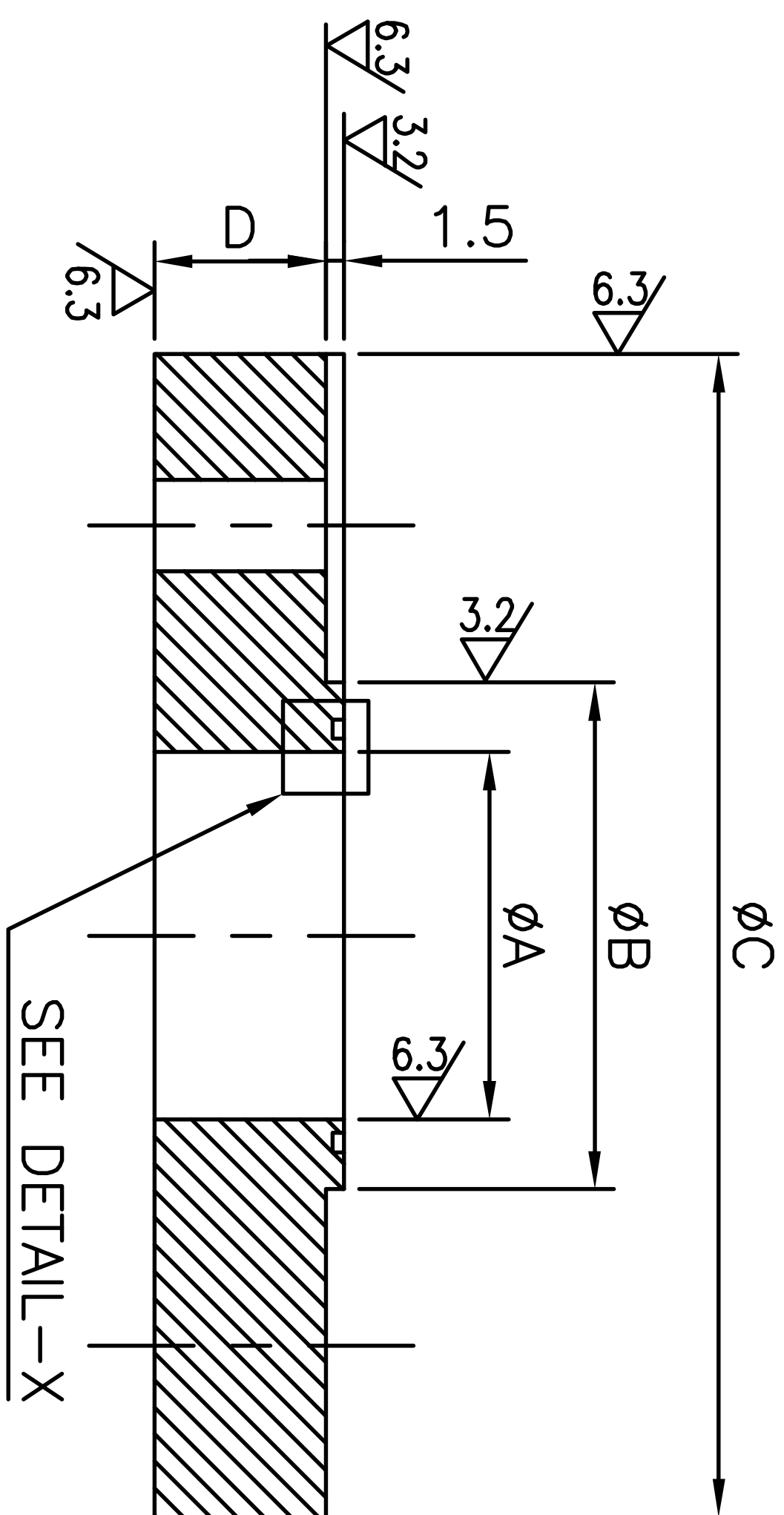
DRAWING REVIEW				ADDITIONAL INFORMATION			
DEPT.	NAME	SIGN.	DATE	STATUS OF DRAWING U			
				DISTRIBUTION OF PRINTS			
				HTE-2 FGM-7 THX-1			
				WTM(P)-1 WTM(S)-4			
REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE
		CHECKED			CHECKED		
		APPD.			APPD.		

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT					PRANAHITA-VI LIS (6x124.4 MW)					
BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.	
						CKD	NEERAJ			29.8.16
						APPD	OND			29.8.16
							SK			29.8.16
DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE NTS	WEIGHT(K.G.) SEE TABLE	REF.TO ASSY.DRG.		ITEM NO.	NO.OF ITEM		
CODE 402	REFER DRG, 32000049014				0 21018 18401				019 & 028	002
TITLE					DRAWING NO.				REV. 00	
FLANGE (CLASS 300) WITH SEAL GROOVE					3 210 18 184 02					
					SHT. NO. 1		NO. OF SHT. 1			

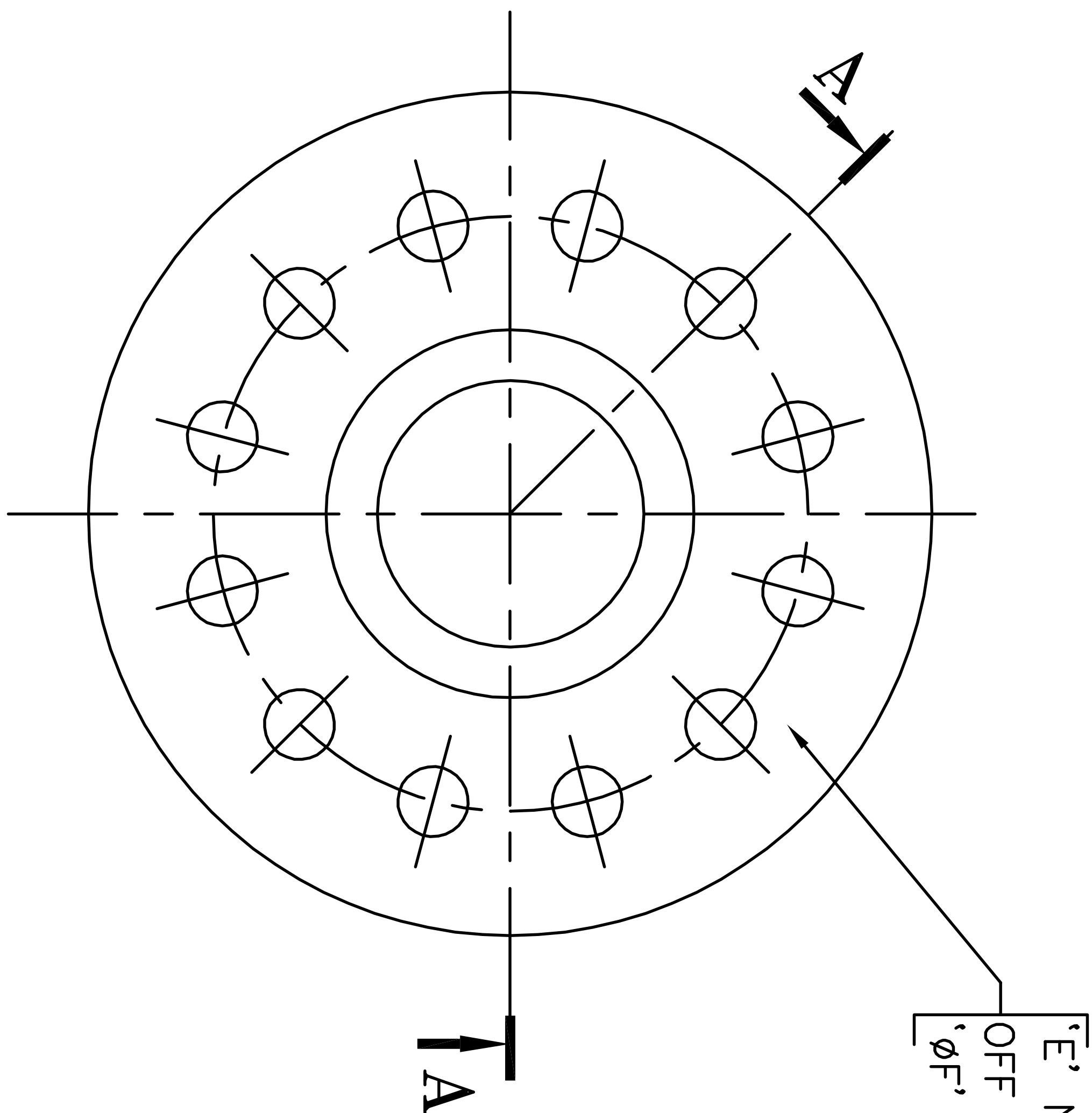
A3 SIZE

A3 SIZE

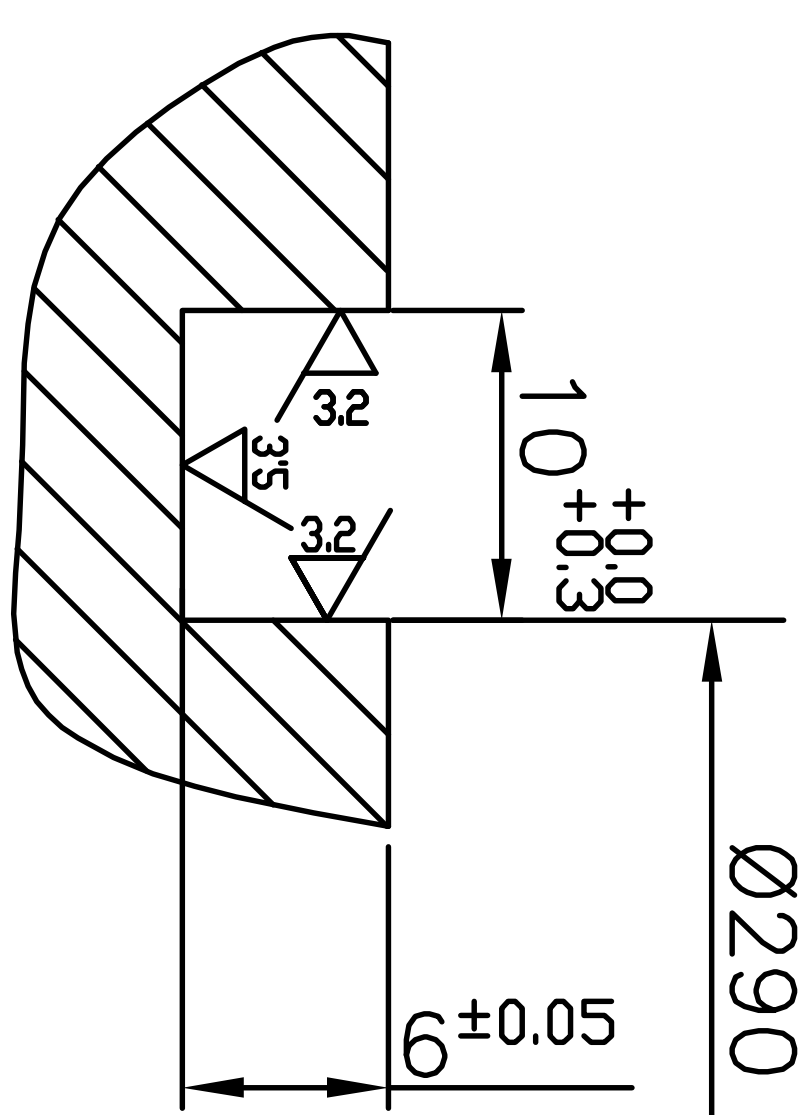
DRG. NO. 32140114503



SECTION-AA



'E', NO OF HOLES EQUI SPACED
-OFF CENTERS DRILL THROUGH
'ØF' ON 'G' PCD



DETAIL-X

TECH. REQ. :-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT & PROTECT AS PER HT00005 CAT G.

ITEM NO.	ØA	ØB	ØC	D	E	ØF	BOLT DIA. FOR REF.	G P.C.D.	WEIGHT (Kg.)	MATERIAL SPECIFICATION
01	275	324	406	30	12	28	M24	362	16.50	36X410X410 AA1011808188

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REF. DRG. NO.

SIGN. & DATE

INVENTORY NO.

	REV.	DATE	ALTERED CHECKED APPD.		REV.	DATE	ALTERED CHECKED APPD.

REV.	DATE	ALTERED
		CHECKED
		APPD.

DEPT.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)
HTE	DRG. REF. NO.		NTS	—
CODE	402	320000049014		
TITLE <u>CIRCULAR FLANGE</u> 250NB CLASS-150				

REF. TO ASSY.DRG.	ITEM NO.	NO.OF ITEM
02140114501	45	01
DRAWING NO.		REV.
32140114503		00
SHT. NO. 01	NO. OF SH.T. 01	

[illegible]

ADDITIONAL INFORMATION	STATUS OF DRAWING

TYPE OF PRODUCT OR
NAME OF CUSTOMER/PROJECTTUTORIAL HEP

DISTRIBUTION OF PRINTS



**BHARAT HEAVY ELE
BHOPAL**

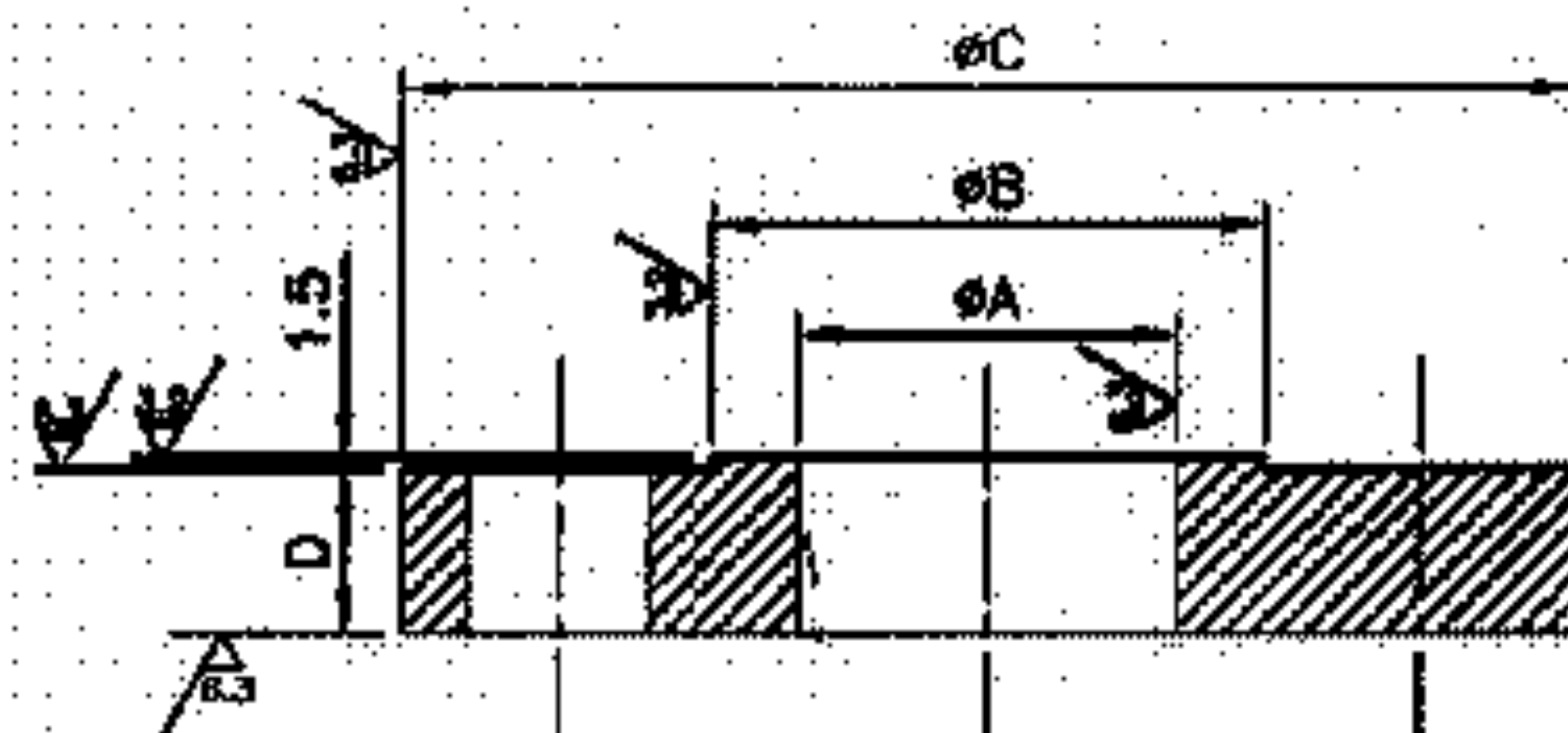
DRN	NAME	SIGN	DATE	NO. OF VAR.
	P.K.	Sd/-	1.1.1.13	
CXD	R.R	Sd/-	1.1.1.13	—
APPD	A.M	Sd/-	1.1.1.13	

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

A3 SIZE

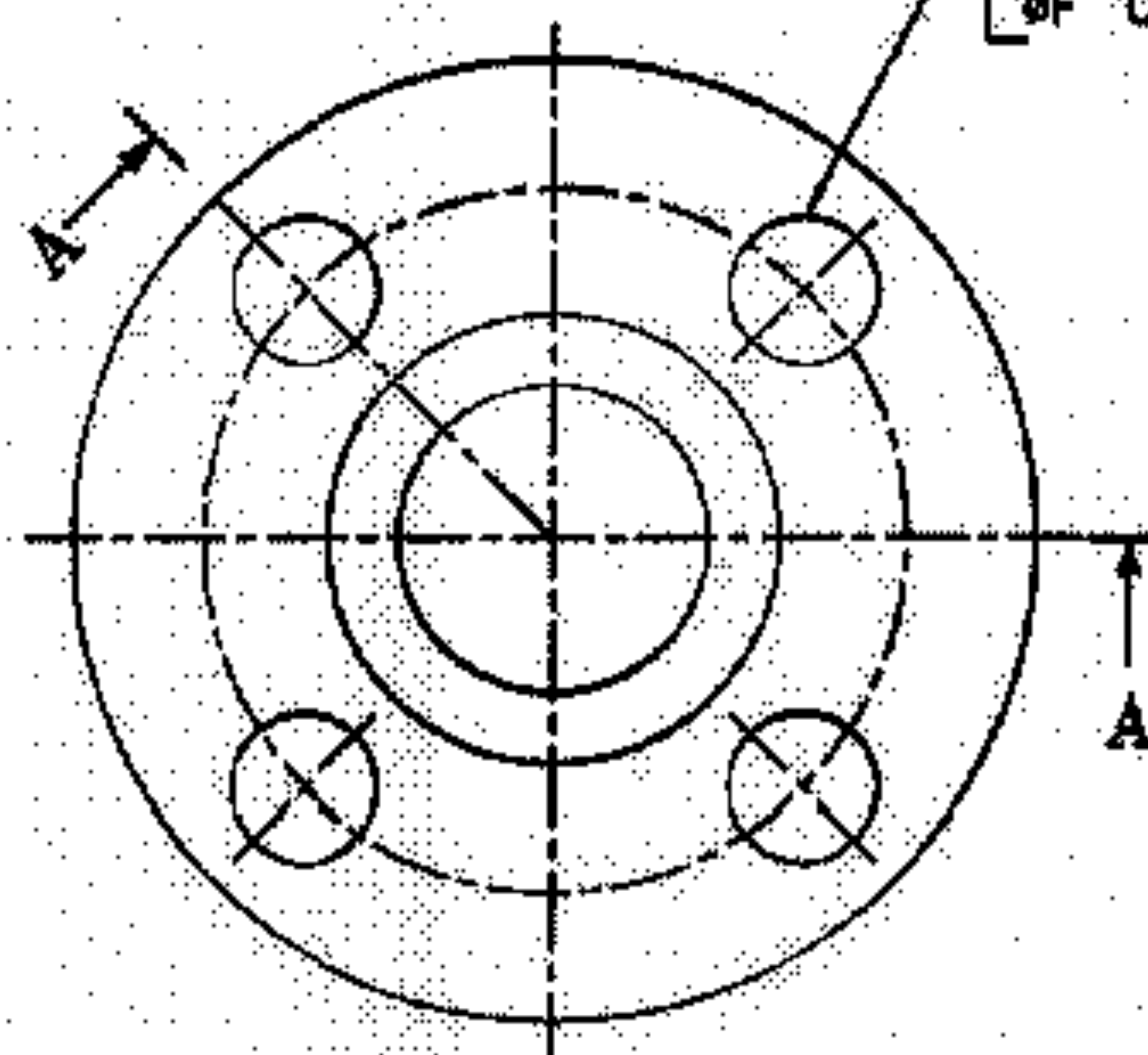
(ALL DIMENSIONS ARE IN mm)

000000



SECTION-AA

'E' NO OF HOLES EQUI SPACED
OFF CENTERS DRILL THROUGH
'OF' ON 'G' P.C.D.



NOTE:

1. BOLT HOLE 'ØF' IS DEVIATED FROM ANSI STD. TO SUIT OUR PREFERRED METRIC SERIES FASTNERS.

ITEM NO.	PIPE SIZE	'ØA'	'ØB'	'ØC'	'D'	'E'	'ØF'	G	FINISH	MATERIAL
							BOLT DIA. FOR REF.			
01	Ø40	50	73	127	14	4	15	98	1.30	20X135X135
							M12			AA1011808137
02	Ø50	62	92	152	16	4	19	121	2.00	20X160X160
							M16			AA101180137
03	Ø65	78	105	178	17	4	19	140	2.50	25X185X185
							M18			AA1011808153
04	Ø80	92	127	190	19	4	19	152	3.00	25X195X195
							M16			AA1011808153
05	Ø100	117	157	229	24	8	19	191	5.50	32X235X235
							M16			AA1011808170
06	Ø125	142	186	254	24	8	24	216	6.00	32X260X260
							M20			AA1011808170
07	Ø150	168	216	279	25	8	24	241	7.00	32X285X285
							M20			AA1011808170
08	Ø200	222	270	343	29	8	24	299	11.75	36X350X350
							M20			AA1011808188
09	Ø250	275	324	406	30	12	28	362	16.50	36X410X410
							M24			AA1011808188
10	Ø300	327	381	483	32	12	28	432	25.25	36X490X490
							M24			AA1011818188
11	Ø15	24	35	89	11	4	15	60	0.50	16X95X95
							M12			AA1011808110
12	Ø20	30	43	99	13	4	15	70	0.80	20X105X105
							M12			AA1011808137
13	Ø25	36	51	108	14	4	15	79	1.00	20X115X115
							M12			AA1011808137

कार्यालय प्रति
हाइड्रो टरबोइन इंजीनियरिंग विभाग
OFFICE COPY
Hydro Turbine Engg. Division

हाइड्रो टरबाइन इंजीनियरिंग विभाग														
OFFICE COPY														
Hydro Turbine Engg. Division														
78 79 80 81 82	26	27	28	29	30	31 32	33 34	35	36	37 38	39	40	41	42
VAR. NO.	ITEM NO.	DESCRIPTION			STD.	DRAWING NO.		P.T.NO.	MATL. CODE	A	C	UNIT WT.	QTY.	
								VAR.	MATL. SPCH.					
28 ——— CARD TYPE-1										28 ——— CARD TYPE-2				

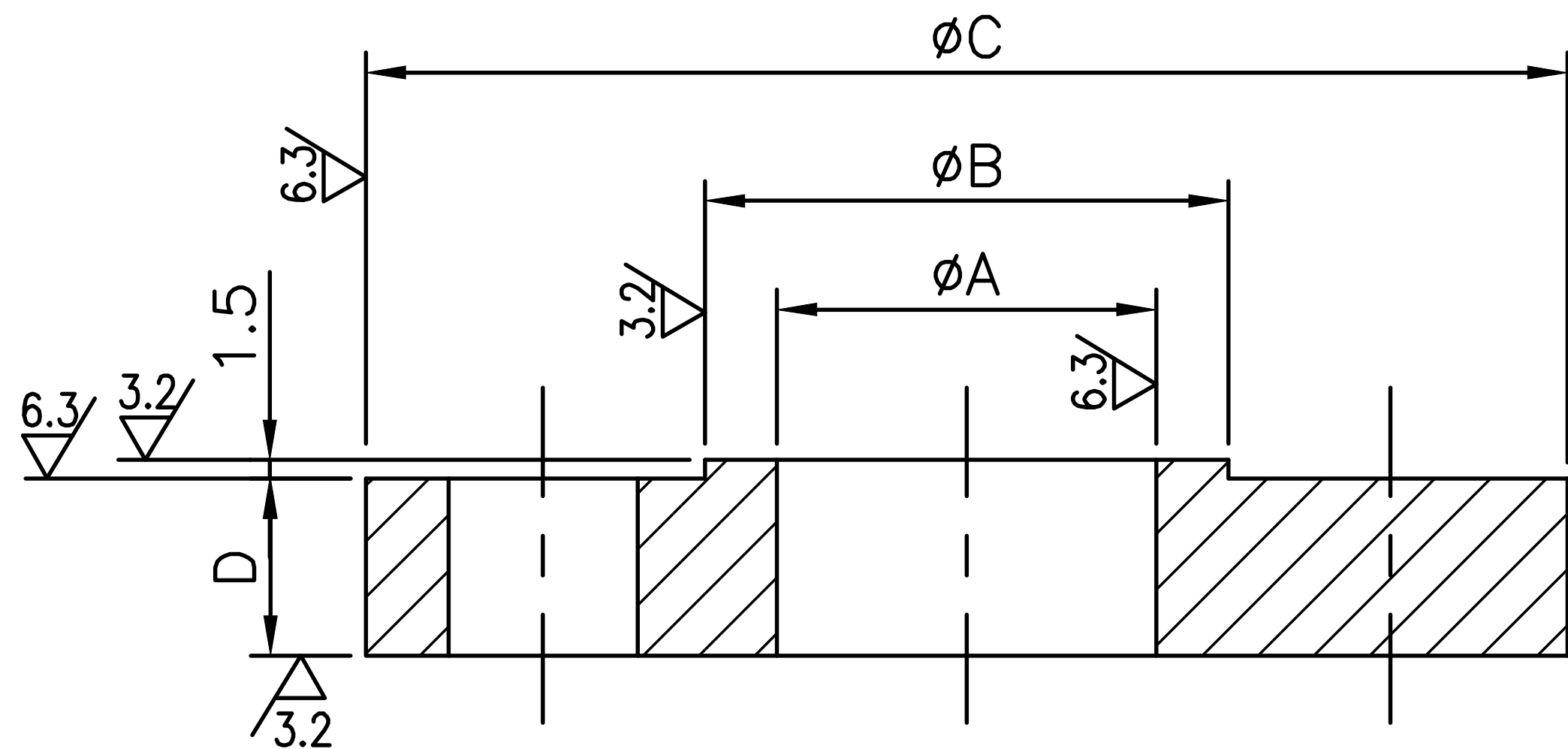
ADDITIONAL INFORMATION			उत्पाद का प्रकार या सामग्री/परियोजना का नाम TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			STANDARD				
STATUS OF DRAWING			 भारत हेवी इलेक्ट्रिकल्स लिमिटेड भोपाल BHARAT HEAVY ELECTRICALS LTD. BHOPAL			काया DRN	नाम/ NAME	हस्ता/ SIGN	दिनांक/ DATE	परी. की संख्या NO. OF
DISTRIBUTION OF PRINTS						प्रकाश PKB	PKB	Sd/-	13.12.79	VAR
HTE-2, THX-1 FBM-7						अनुमोदित APPD	K. MAHAJAN	Sd/-	13.12.79	-
WTM(PLG)-1 WTM(STORE)-4										
REV.	DATE	ALTERED PKB Sd/-	परिवर्तित DEPHTIE	उप. एवं. आय. की संख्या UNTEL. DIMS. GR.		आय. सं. एवं. WEIGHT(K.G.)	उपे. सं. एवं. या संदर्भ REF. TO ASSY. DRG.	आय. सं. एवं. ITEM NO.	परिवर्तित NO. OF	
01	27.12.79	CHANGED RKP Sd/-	कोड CODE 402	-		-	-	-	-	
		APPROVED KM Sd/-								
DIM. OF MODIFIED TO SUIT BOLT DIA. ITEM NO. 11, 12 & 13 ADDED. NOTE ADDED.			विवरण/ TITLE FLANGE(CIRCULAR) ANSI CLASS 150			उपे. सं. एवं. / DRAWING NO. 32802949014			उपे. REV. 02	
						प्रकाश सं. एवं. / 01 / परिवर्तित सं. एवं. / सं. एवं. 01				

A3 SIZE

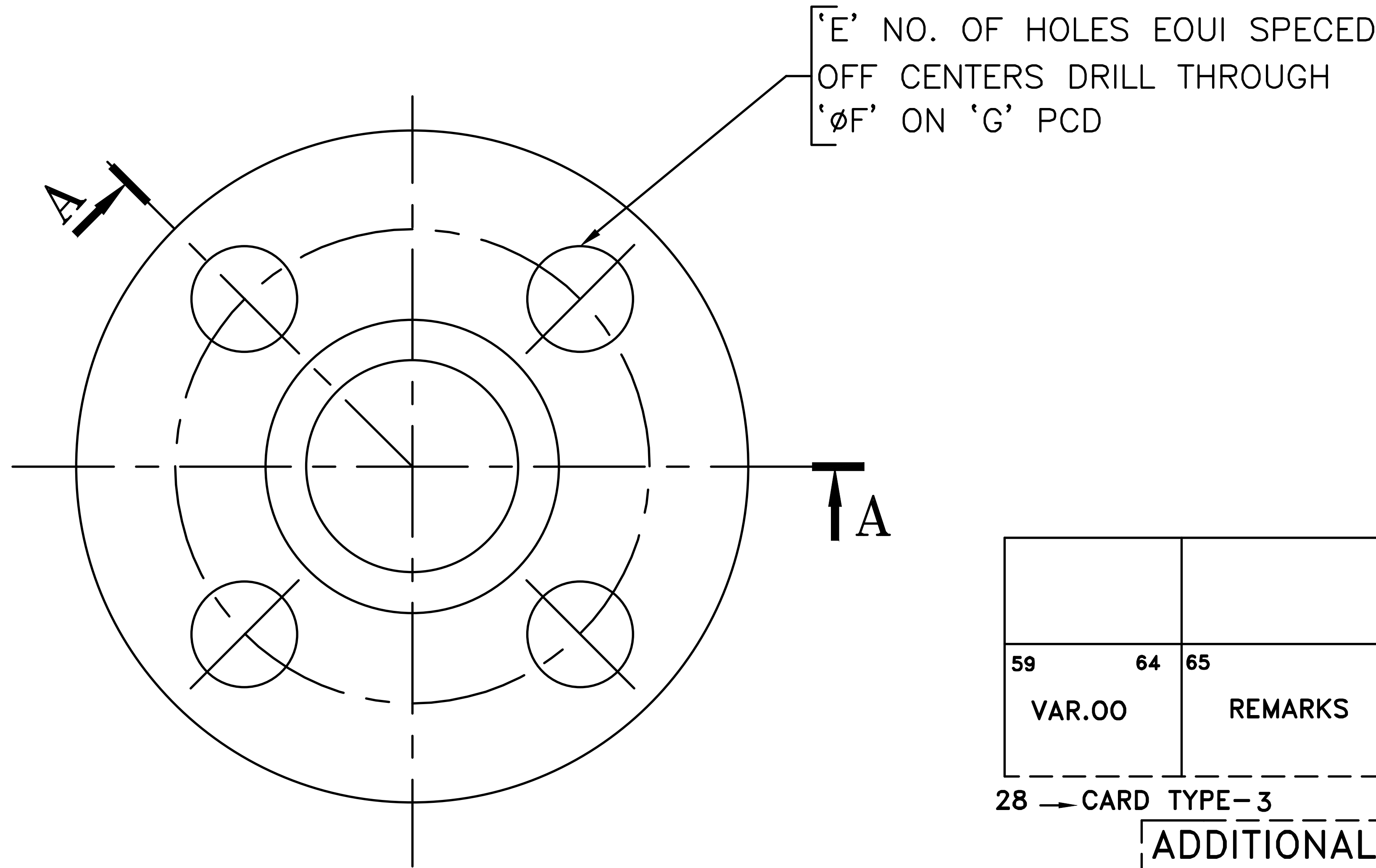
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DRG. NO. 3 230 29 49 015



SECTION-AA



NOTE:-

1. BLOT HOLE 'F' IS DEVIATED FROM ANSI STD TO SUIT OUR PREFERRED METRIC SERIES FASTNERS.

ITEM NO.	PIPE SIZE	ϕA	ϕB	ϕC	D	E	ϕF	BOLT DIA. FOR REF.	G P.C.D.	WEIGHT (Kg.)	MATERIAL SPECIFICATION AA10108	REMARKS
1	$\phi 40$	50	73	156	21	4	24	M20	114	2.50	32X160X160 AA1011808170	
2	$\phi 50$	62	92	165	22	8	19	M16	127	3.00	32X170X170 AA1011808170	
3	$\phi 65$	78	105	191	25	8	24	M20	149	4.50	32X195X195 AA1011808170	
4	$\phi 80$	92	127	210	29	8	24	M20	168	6.00	36X215X215 AA1011808188	
5	$\phi 100$	117	157	254	32	8	24	M20	200	10.00	40X260X260 AA1011808196	
6	$\phi 125$	142	186	279	35	8	24	M20	235	12.50	40X285X285 AA1011808196	
7	$\phi 150$	168	216	318	36	12	24	M20	270	16.00	45X325X325 AA1011808200	
8	$\phi 200$	222	270	381	41	12	28	M24	330	24.50	50X385X385 AA1011808216	
9	$\phi 250$	275	324	444	48	16	28	M24	387	35.00	56X450X450 AA1011808226	
10	$\phi 300$	327	381	521	51	16	35	M30	451	50.00	56X525X525 AA1011808226	
11	$\phi 15$	24	35	95	14	4	15	M12	67	0.75	20X100X100 AA1011808137	
12	$\phi 20$	30	43	118	16	4	19	M16	83	1.30	25X125X125 AA1011808153	
13	$\phi 25$	36	51	124	18	4	19	M16	89	1.50	25X130X130 AA1011808153	

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ADDITIONAL INFORMATION

STATUS OF DRAWING

DISTRIBUTION OF PRINTS

HTE-6 FBM-7 QCX-1
WTM-5 THX-1

TYPE OF PRODUCT OR
NAME OF CUSTOMER/PROJECT

STANDARD



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DRN	NAME	SIGN	DATE	NO. OF VAR.
CKD	P.K.B.	Sd/-	12.12.79	
APPD	R.K.P.	Sd/-	13.12.79	
	K.MAHAJAN	Sd/-	13.12.79	-

DEPT. HTE	UNTOL. DIMS. GR.	SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM
CODE 402	DRG. REF. NO. 32000049014	NTS	-	-	-	013

TITLE
CIRCULAR FLANGE
(ANSI CLASS 300)

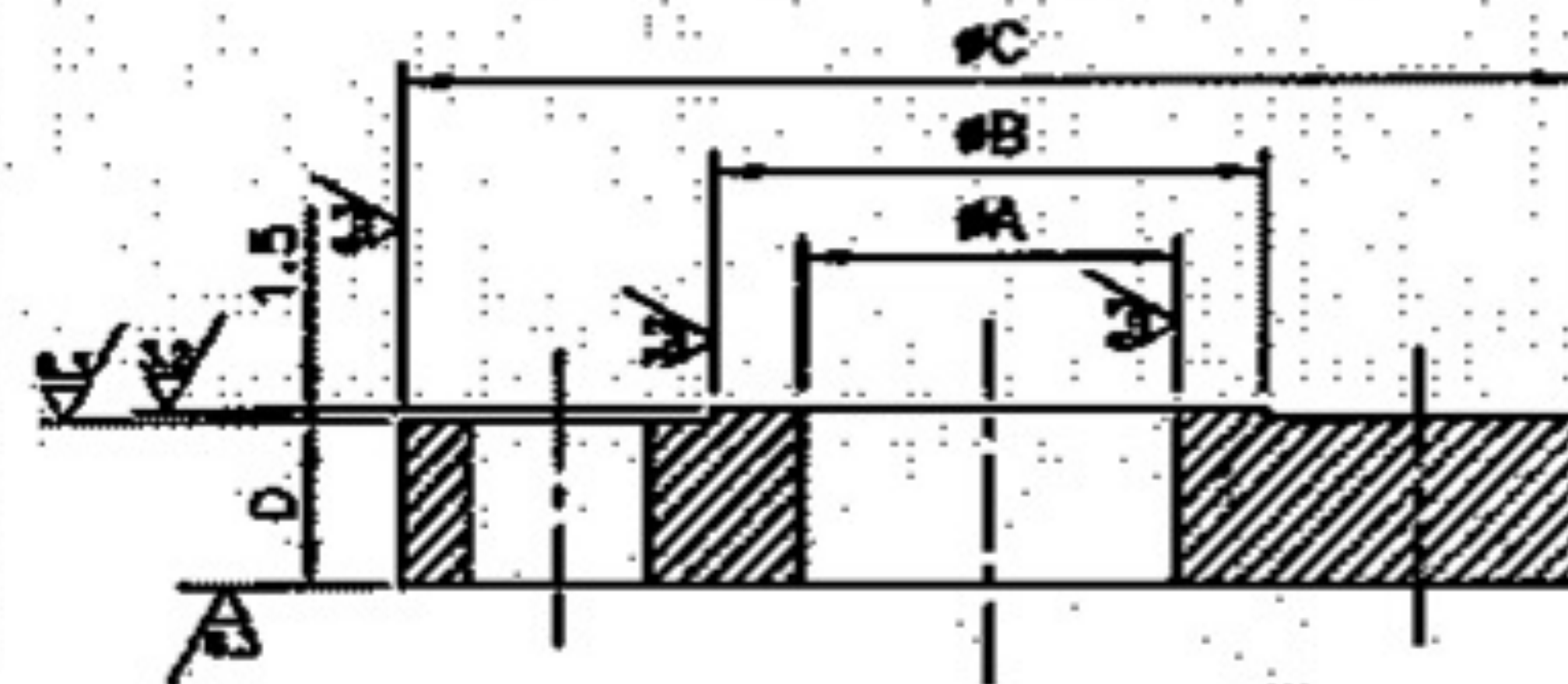
DRAWING NO.
3 230 29 49 015

SHT. NO. 01 NO. OF SHT. 01

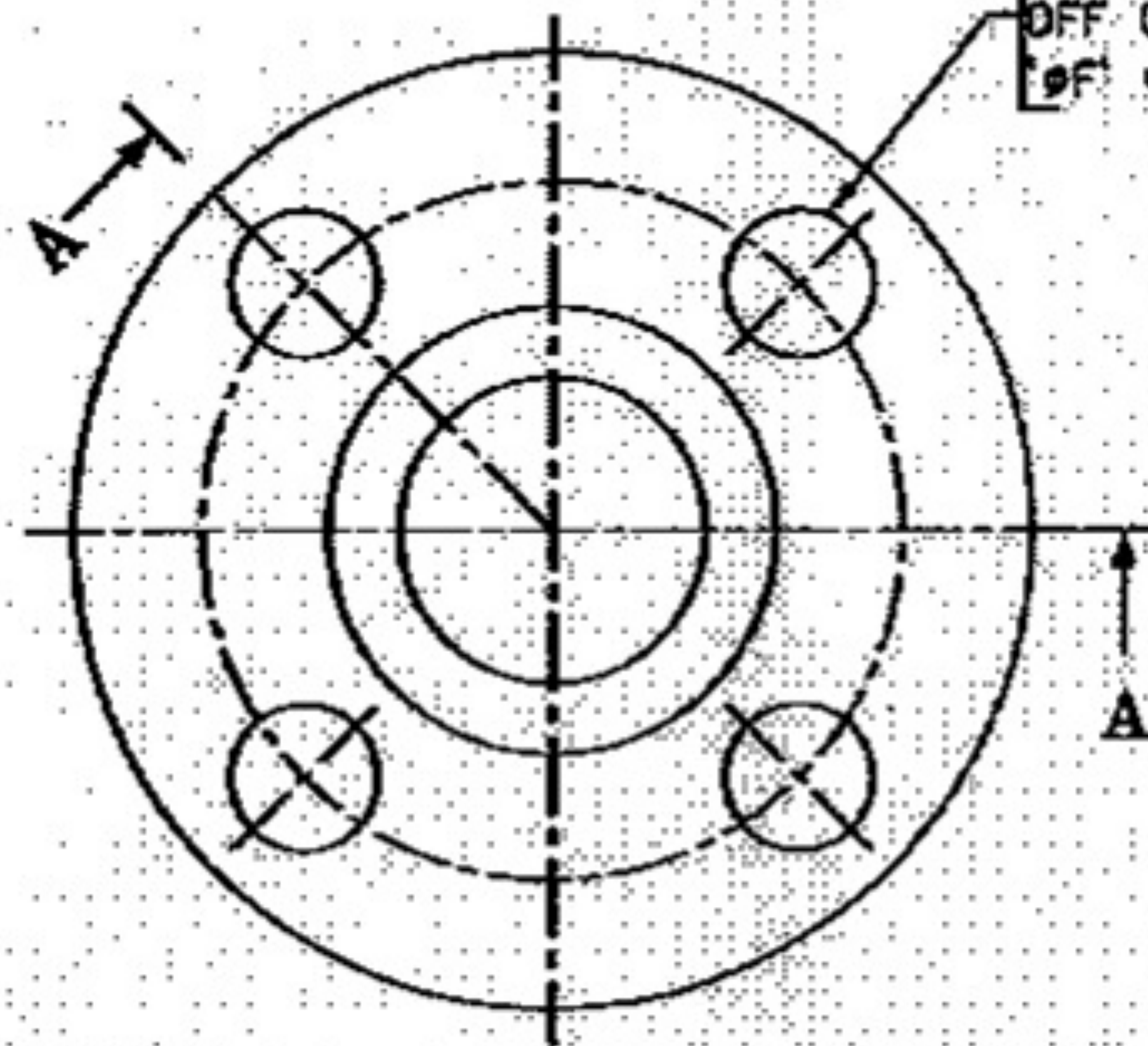
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

91064620828 ON 080



SECTION-AA



E' NO OF HOLES EQUI SPACED
OFF CENTERS DRILL THROUGH
OF ON 'G' P.C.D.

NOTE:-

1. BOLT HOLE 'OF' IS DEVIATED FROM ANSI STD. TO SUIT
OUR PREFERRED METRIC SERIES FASTNERS.

ITEM NO.	PIPE SIZE	'AA'	'AB'	'AC'	'D'	'E'	'OF' BOLT DIA FOR REF.	G P.C.D.	FINISH WT. IN KG.	MATERIAL
01	#40	50	73	156	22	4	24 M20	114	3.00	32X160X160 AA1011808170
02	#50	62	92	165	25	8	19 M16	127	3.50	32X170X170 AA101180170
03	#65	78	105	191	29	8	24 M20	149	5.00	36X195X195 AA1011808188
04	#80	92	127	210	32	8	24 M20	168	7.00	40X215X215 AA1011808196
05	#100	117	157	273	38	8	28 M24	216	14.00	45X280X280 AA1011808200
06	#125	142	186	330	44	8	28 M24	267	24.00	50X190X190 AA1011808218
07	#150	168	216	356	48	12	28 M24	292	29.50	56X360X360 AA1011808226
08	#200	222	270	419	56	12	35 M30	349	44.00	63X425X425 AA1011808234
09	#250	275	324	508	64	16	35 M30	432	73.00	71X515X515 AA1011808242
10	#300	327	381	559	67	20	35 M30	489	86.00	71X560X560 AA1011818242
11	#15	24	35	95	14	4	15 M12	67	0.75	20X100X100 AA1011808137
12	#20	30	43	118	16	4	19 M16	83	1.30	25X125X125 AA1011808153
13	#25	36	51	124	18	4	19 M16	89	1.50	25X130X130 AA1011808153

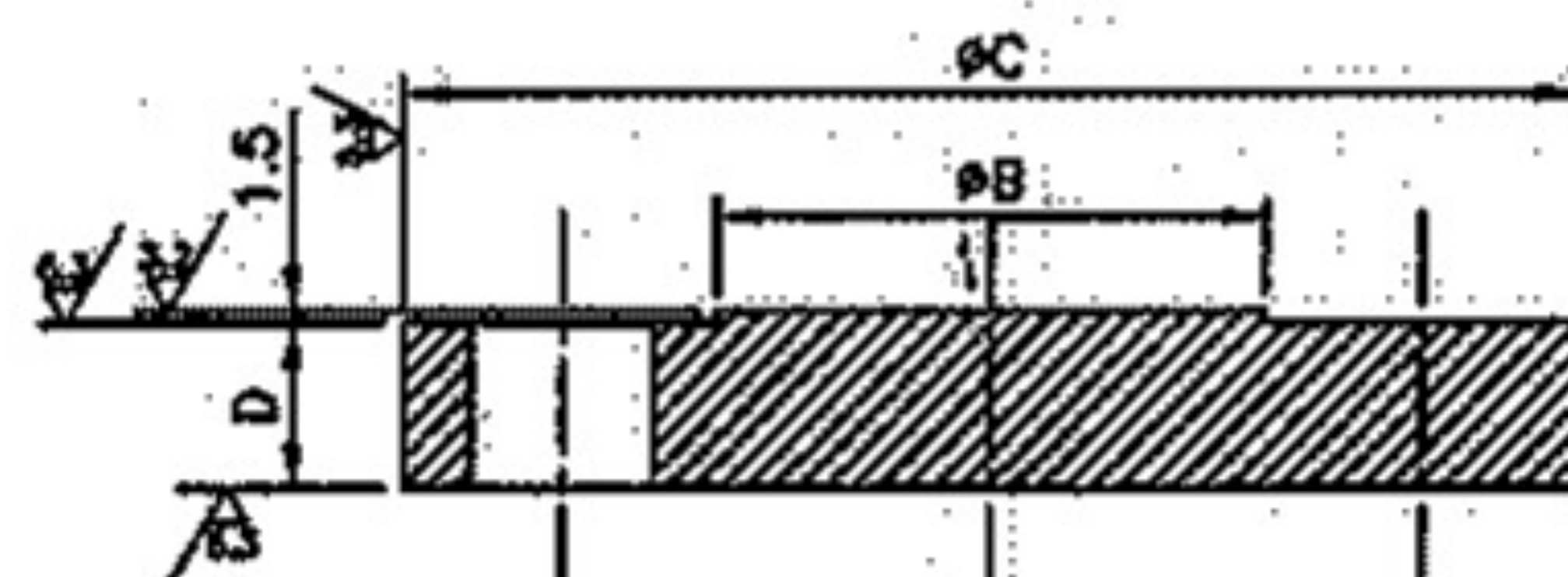
78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
VAR. NO.	ITEM NO.	DESCRIPTION	UNIT	IT. NO.	MATL. CODE	VAR.	MATL. SPCL.	UNIT	QTY.	UNIT	QTY.	UNIT	QTY.	UNIT	QTY.	UNIT	QTY.	UNIT	QTY.	UNIT	QTY.	UNIT
28 — CARD TYPE-1												28 — CARD TYPE-2										

ADDITIONAL INFORMATION		3. TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		STANDARD	
STATUS OF DRAWING		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		BOLTS	
DISTRIBUTION OF PRINTS		BOLTS		NUTS	
HTE-2, THX-1 FBM-7 WTM(PLG)-1, WTM(STORE)-4		BOLTS		NUTS	
REV. DATE ALTERED DS		BOLTS		NUTS	
03 1.3.2008 CHECKED APPROVED		BOLTS		NUTS	
02 22.8.08 CHECKED APPROVED		BOLTS		NUTS	
01 27.12.79 CHECKED APPROVED		BOLTS		NUTS	
DRAWING COMPUTERISED		BOLTS		NUTS	
DIM. OF MODIFIED TO SUIT BOLT DIA. DIM. AC 559 WAS 556. NOTE ADDED. ITEM NO. 11,12,13 ADDED.		BOLTS		NUTS	
FLANGE(CIRCULAR) ANSI CLASS 600		BOLTS		NUTS	
32302949016		BOLTS		NUTS	
01		BOLTS		NUTS	

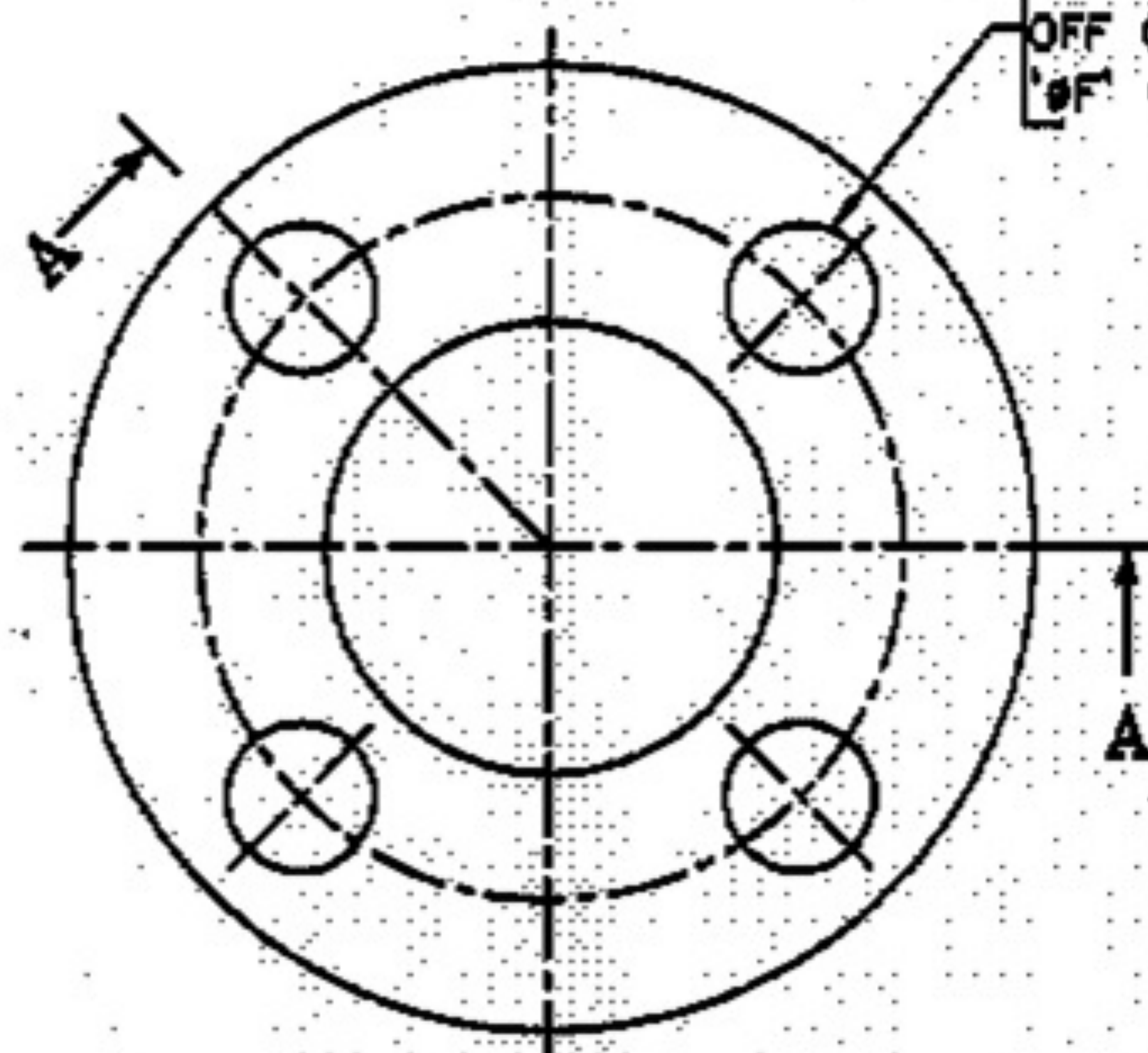
A3 SIZE

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ORG. NO. 32302949017



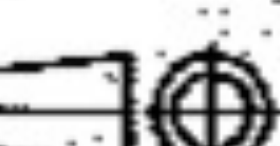
SECTION-AA



'E' NO OF HOLES EQUI SPACED
OFF CENTERS DRILL THROUGH
'OF' ON 'G' P.C.D.

ITEM NO.	PIPE SIZE	'ØB'	'ØC'	'D'	'E'	'ØF'	G P.C.D.	FINISH WT.IN KG.	MATERIAL AA10108
01	Ø40	73	127	14	4	15	98	1.40	20X135X135 AA1011808137
02	Ø50	92	152	16	4	19	121	2.30	20X160X160 AA1011808137
03	Ø65	105	178	17	4	19	140	3.35	25X185X185 AA1011808153
04	Ø80	127	190	19	4	19	152	4.20	25X195X195 AA1011808153
05	Ø100	157	229	24	8	19	191	7.90	32X235X235 AA1011808170
06	Ø125	186	254	24	8	24	216	9.70	32X260X260 AA1011808170
07	Ø150	216	279	25	8	24	241	11.80	32X285X285 AA1011808170
08	Ø200	270	343	29	8	24	299	29.40	36X350X350 AA1011808188
09	Ø250	324	406	30	12	28	362	31.00	36X410X410 AA1011808188
10	Ø300	381	483	32	12	28	432	46.80	36X490X490 AA1011818188
11	Ø15	35	89	11	4	15	60	0.55	16X95X95 AA1011808110
12	Ø20	43	99	13	4	15	70	0.80	20X105X105 AA1011808137
13	Ø25	51	108	14	4	15	79	1.00	20X115X115 AA1011808137
14	Ø32	63.5	118	16	4	15	89	1.38	20X125X125 AA1011808137

			कार्यालय प्रति हाइड्रो टरबाइन इंजीनियरिंग विभाग OFFICE COPY Hydro Turbine Engg. Division												
78-79	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VAR. NO.	ITEM NO.	DESCRIPTION			PROJECT NO.	IT. NO.	MATL. CODE			A	C	UNIT	UNIT WT.		
							MATL. SPECN.						QTY.		
25 — CARD TYPE-1						28 — CARD TYPE-2									

ADDITIONAL INFORMATION		उत्पाद का प्रकार या ग्राहक/परियोजना का नाम		STANDARD					
STATUS OF DRAWING		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT							
DISTRIBUTION OF PRINTS		 भारत हेवी इलेक्ट्रिकल्स लिमिटेड भोपाल BHARAT HEAVY ELECTRICALS LTD. BHOPAL		नाम/NAME PKB Sd/- 12.12.79	तिथि/DATE 12.12.79				
HTE-2, THX-1, FBM-7 WTM(PLG)-1, WTM(STORE)-4		कच्चा DRN PKB Sd/- 12.12.79	मंजूर OKD RKP Sd/- 13.12.79	अंतिम APPD K.MAHAJAN Sd/- 13.12.79	वै. सं. संख्या NO. 0 VAR				
REV.	DATE	ALTERED BY CHECKED PKB APPROVED RKP	विमा DEPTH 402 CODE	उल. टोल. नाम की वेब UNTOL. DIMS. GR. 	अनुपात SCALE NTS	मूल वजन WEIGHT(KGS) -	उल. ड्राइंग का संदर्भ REF. TO ASSY. DRG. -	मद. सं. ITEM NO. -	मद. सं. NO. 0 ITEM
DRAWING COMPUTERISED		विमा/ TITLE BLANK FLANGE(CIRCULAR) ANSI CLASS 150				उल. सं./ DRAWING NO. 32302949017	उल. सं. REV. 01		
		पृष्ठ सं./पृष्ठ सं. 01 पृष्ठों की संख्या/NO. OF SHEET 01							

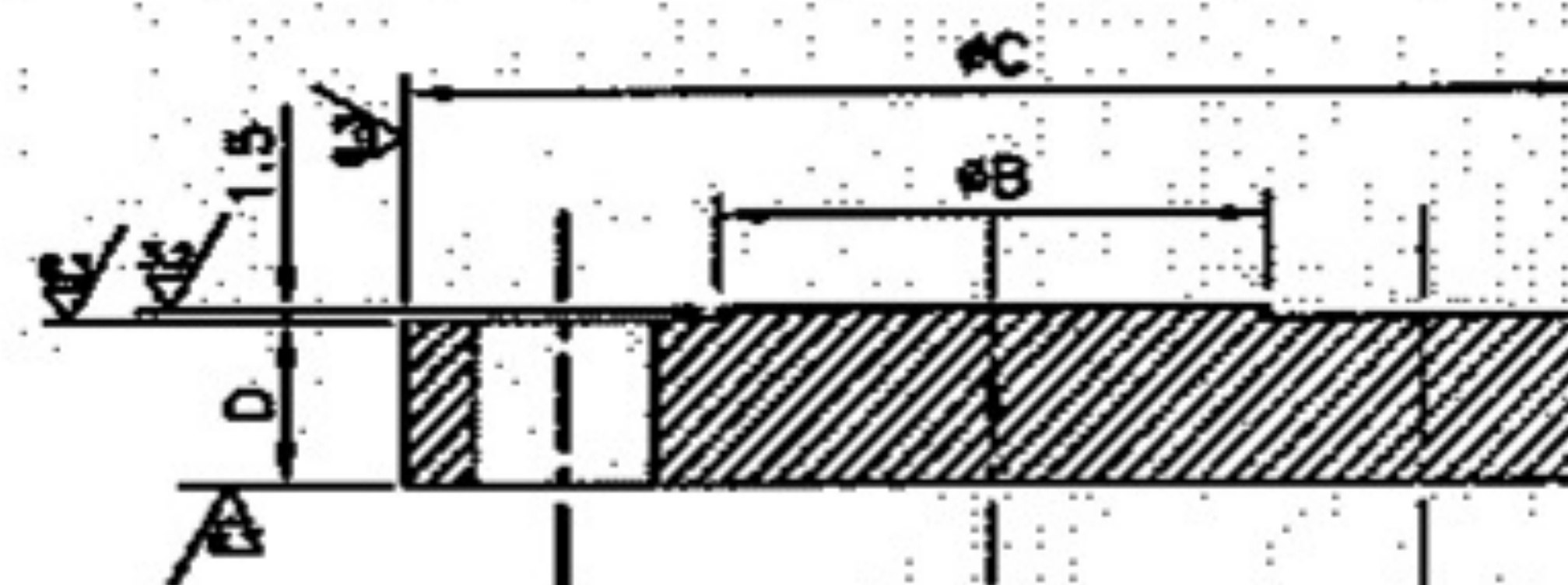
A3 SIZE

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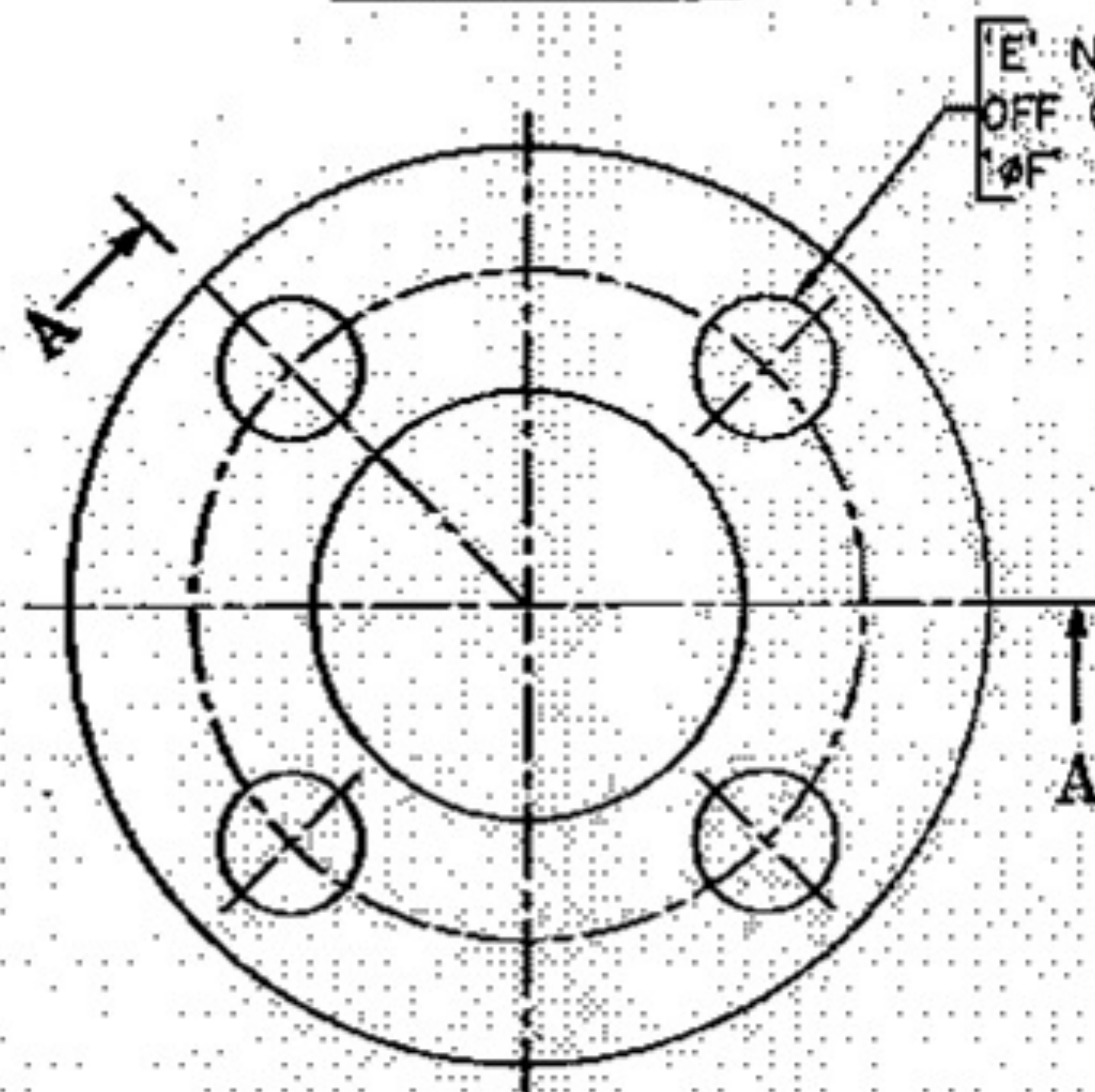
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

81067620828 ON 380



SECTION-AA



'E' NO. OF HOLES EQUI SPACED
OFF CENTERS DRILL THROUGH
'F' ON 'G' P.C.D.

ITEM NO.	PIPE SIZE	'#B'	'#C'	'D'	'E'	'F'	G P.C.D.	FINISH WT. IN KG.	MATERIAL AA10108
01	#40	73	156	21	4	24	114	3.00	32X160X160 AA1011808170
02	#50	92	165	22	8	19	127	3.45	32X170X170 AA101180170
03	#65	105	191	25	8	24	149	5.10	32X195X195 AA1011808170
04	#80	127	210	29	8	24	168	7.20	36X215X215 AA1011808188
05	#100	157	254	32	8	24	200	12.10	40X260X260 AA1011808196
06	#125	186	279	35	8	24	235	16.60	40X285X285 AA1011808196
07	#150	216	318	36	12	24	270	22.20	45X325X325 AA1011808200
08	#200	270	381	41	12	28	330	35.60	50X385X385 AA1011808216
09	#250	324	444	48	16	28	387	56.80	56X450X450 AA1011808226
10	#300	381	521	51	16	35	451	82.25	56X525X525 AA1011818226
11	#15	35	95	14	4	15	67	.80	20X100X100 AA1011808137
12	#20	43	118	16	4	19	83	1.42	25X125X125 AA1011808153
13	#25	51	124	18	4	19	89	1.78	25X130X130 AA1011808153
14	#32	63.5	133	20.5	4	19	98.5	2.30	25X140X140 AA1011808153

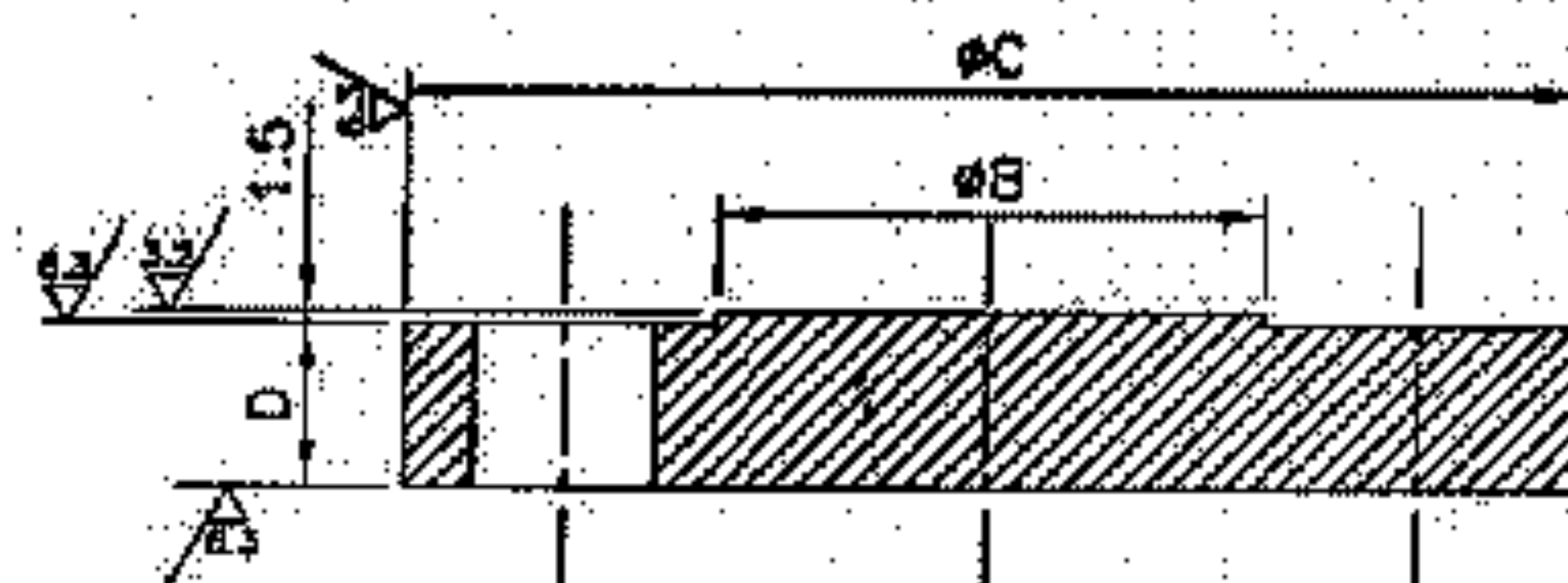
28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
DESCRIPTION										OFFICE COPY NO.										Hydro Turbine Engg. Division										MATL. CODE										UNIT WT.										QTY.																						
28										CARD TYPE-1										28										CARD TYPE-2																																										

ADDITIONAL INFORMATION										STANDARD									
STATUS OF DRAWING										TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT									
DISTRIBUTION OF PRINTS										BHARAT HEAVY ELECTRICALS LTD. BHOPAL									
HTE-2, THX-1 FBM-7 WTM(PLG)-1, WTM(STORE)-4										BHARAT HEAVY ELECTRICALS LTD. BHOPAL									
REV. DATE										REV. DATE									
01 22.8.08										01 22.8.08									
DRAWING COMPUTERISED										DRAWING COMPUTERISED									
BLANK FLANGE(CIRCULAR)										BLANK FLANGE(CIRCULAR)									
ANSI CLASS 300										ANSI CLASS 300									
32302949018										32302949018									
REV. 01										REV. 01									

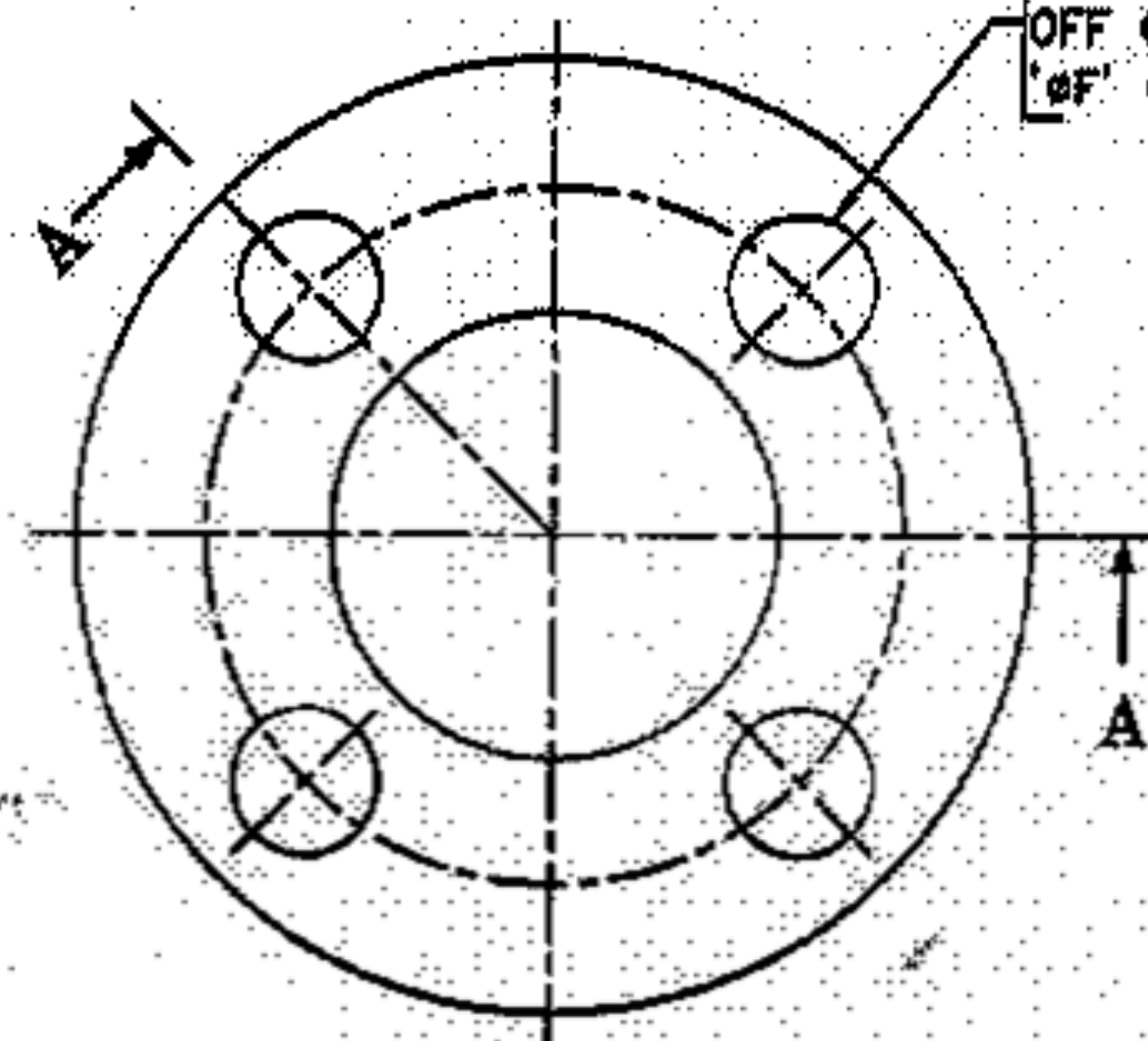
A3 SIZE

(ALL DIMENSIONS ARE IN mm)

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SECTION-AA



'E' NO OF HOLES EQUI SPACED
OFF CENTERS DRILL THROUGH
'OF' ON 'G' P.C.D.

ITEM NO.	PIPE SIZE	'ØB'	'ØC'	'D'	'E'	'ØF'	G P.C.D.	FINISH WT.IN KG.	MATERIAL AA10108
01	ø40	73	156	22	4	24	114	3.20	32X180X160 AA1011808170
02	ø50	92	165	25	8	19	127	4.10	32X170X170 AA101180170
03	ø65	105	191	29	8	24	149	6.00	36X195X195 AA1011808188
04	ø80	127	210	32	8	24	168	8.83	40X215X215 AA1011808196
05	ø100	157	273	38	8	28	216	16.72	45X280X280 AA1011808200
06	ø125	186	330	44	8	28	267	29.00	50X190X190 AA1011808218
07	ø150	216	356	48	12	28	282	36.12	56X360X360 AA1011808226
08	ø200	270	419	56	12	35	349	57.31	63X425X425 AA1011808234
09	ø250	324	508	64	16	35	432	87.40	71X515X515 AA1011808242
10	ø300	381	559	67	20	35	489	123.50	71X560X560 AA1011818242
11	ø15	35	95	14	4	15	67	.80	20X100X100 AA1011808137
12	ø20	43	118	16	4	19	83	1.40	25X125X125 AA1011808153
13	ø25	51	124	18	4	19	89	1.70	25X130X130 AA1011808153
14	ø32	63.5	133	20.5	4	19	98.5	2.40	25X145X145 AA1011808153

कार्यालय प्रति हाइड्रो टरबाइन इंजीनियरिंग विभाग OFFICE COPY Hydro Turbine Engg. Division										डRAWING NO.														
78	79	25	27	29	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
VAR. NO.					ITEM NO.										MATL. CODE					UNIT WT.				
					DESCRIPTION					DRAWING NO.					MATL. SPCN.					QTY.				
28 — CARD TYPE-1										28 — CARD TYPE-2														

ADDITIONAL INFORMATION		25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542									
------------------------	--	---	--	--	--	--	--	--	--	--	--

A3 SIZE

Doc Rev No.: 0

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

REV.

DATE

ALTERED

CHECKED

APPD.

REV.

DATE

ALTERED

CHECKED

APPD.

ADDITIONAL INFORMATION

STATUS OF DRAWING

U

DISTRIBUTION HTE-2, WTM(S)-4

OF PRINTS THX-1,WTM(P)-1,FGM-7

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IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

6.3

ALL OVER UNLESS OTHERWISE STATED.

22(25)

3.2

3.2

160(170)

110(120)

40°

40°

41.04

160

1 HOLE DRILL THRO' Ø56

6 HOLE DRILL THRO' Ø19
SHOWN ON 120 PCD.

TECH. REQ.

1. REMOVE ALL BURRS AND SHARP EDGES.

2. PAINT AND PROTECT AS PER HT00005 CAT. G.

REF. DRG. NO.

25 THICK

001

SPECIAL FLANGE

STD

AA1011808153

AA10108

K9

2.70

001

REMARKS

ITEM NO.

DESCRIPTION

STD

MATL. CODE

MATL. SPCN.

A

C

UNIT

58 UNIT WT. 65

68 QTY. 71

INVENTORY NO.

SIGN. & DATE

PRANAHITA-VI

(6x124.4MW)

DEPT. H.T.E.

CODE

402

UNTOL. DIMS. GR.

AS PER DRG.

32000049014

SCALE

1:5

WEIGHT(K.G.)

2.70

NAME

AB

ND

SK

SIGN

DATE

18.7.16

18.7.16

18.7.16

NO. OF VAR.

TITLE

SPECIAL FLANGE

DRAWING NO.

4 210 17 18402

REV.

00

SHT. NO.

01

NO. OF SHT.

01

SIZE A4

FIRST ANGLE PROJECTION

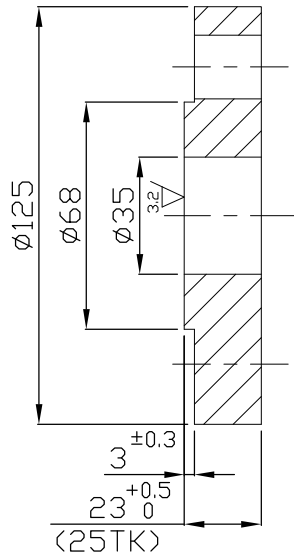
(ALL DIMENSIONS ARE IN mm)

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

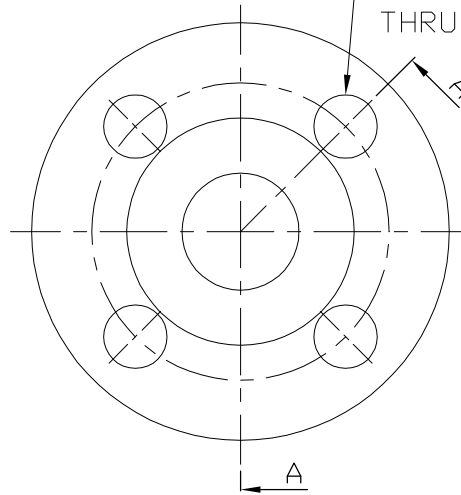
REV.	DATE	ALTERED CHECKED APPD.	REV.	DATE	ALTERED CHECKED APPD.	ADDITIONAL INFORMATION
						39008A20210 TO 39012A20210
						STATUS OF DRAWING U
						DISTRIBUTION HTE-2, WTM(P)-1, OF PRINTS WTM(S)-4, FGM-7, THX-1

6.3
ALL OVER
UNLESS
OTHERWISE
SPECIFIED

4 HOLES EQUISPACED
OFF-CENTRES DRILL
THRU'Ø19 ON PCD89.



SECTION-AA



TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS & SHARPE EDGES.
2. PAINT & PROTECT AS PER HT00005 TO CAT-G.

REF. DRG. NO.

SIGN. & DATE

INVENTORY NO.

25TK PLATE	01	FLANGE 25NB WITHOUT SEAL GROOVE CLASS-600	AA1011808153		1.65
			AA10108		01
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE 46 MATL. SPCN. 54	57 A C UNIT 58 UNIT WT. 65 68 QTY. 71

PRANAHITA-VIII



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DRN	NAME	SIGN	DATE	NO. OF VAR.
CKD	ANUJ	-sd-	12.08.16	-
APPD	H.K	-sd-	12.08.16	-

DEPT. H.T.E.	UNTOL. DIMS. GR. AS PER DRG.	SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO	NO.OF ITEM
CODE 402	32000049014	1:2	1.65	0 21018 181 01	024	01
TITLE FLANGE 25NB WITHOUT SEAL GROOVE (CLASS-600)				DRAWING NO. 4 21018 181 02		REV. 00
SHT. NO. 01		NO. OF SHT. 01		SIZE A4		

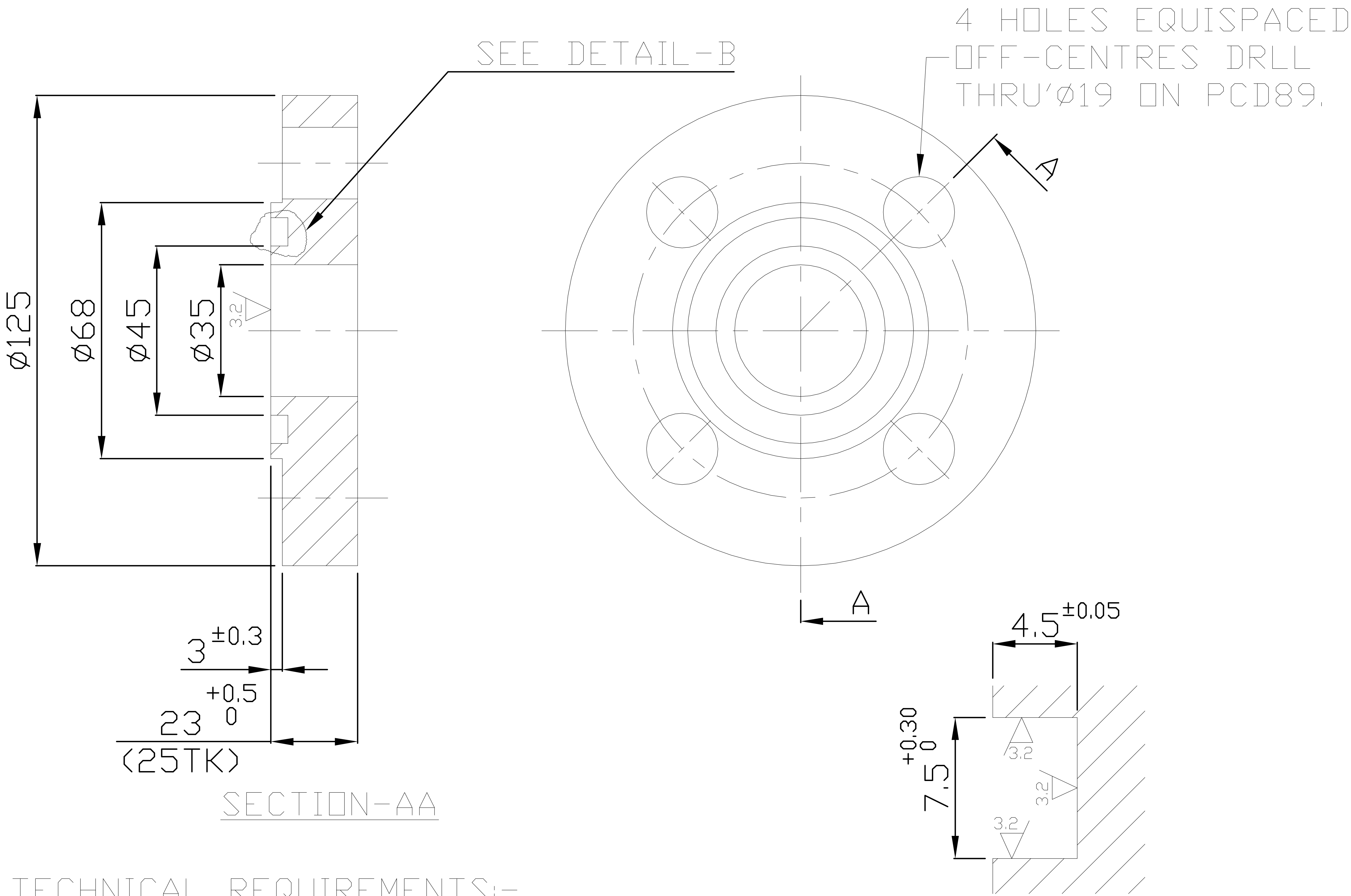
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION	39008A20210 TO 39012A20210
		CHECKED			CHECKED		
		APPD.			APPD.		
						STATUS OF DRAWING	U
						DISTRIBUTION OF PRINTS	HTE-2, WTM(P)-1, WTM(S)-4, FGM-7, THX-1

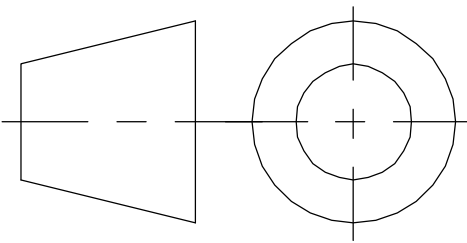
6.3
ALL OVER
UNLESS
OTHERWISE
SPECIFIED



TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS & SHARPE EDGES.
2. PAINT & PROTECT AS PER HT00005 TO CAT-G.

25TK PLATE	01	FLANGE 25NB WITH SEAL GROOVE CLASS-600	AA1011808153	AA10108	1.62
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	UNIT
				MATL. SPCN.	

PRANAHITA-VIII	बीएच ई एल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL					NAME	SIGN	DATE	NO. OF VAR.	
						DRN	DKJ	-sd-		12.08.16
						CKD	ANUJ	-sd-		12.08.16
						APPD	H.K	-sd-	12.08.16	-
	DEPT. H.T.E.	UNTOL. DIMS. GR. AS PER DRG.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
CODE 402	32000049014	1:2		1.62	0 21018 181 01	026	01			
TITLE FLANGE 25NB WITH SEAL GROOVE (CLASS-600)					DRAWING NO.		REV.			
					4 21018 181 03		00			
					SHT. NO. 01	NO. OF SHT. 01				

SIZE A4

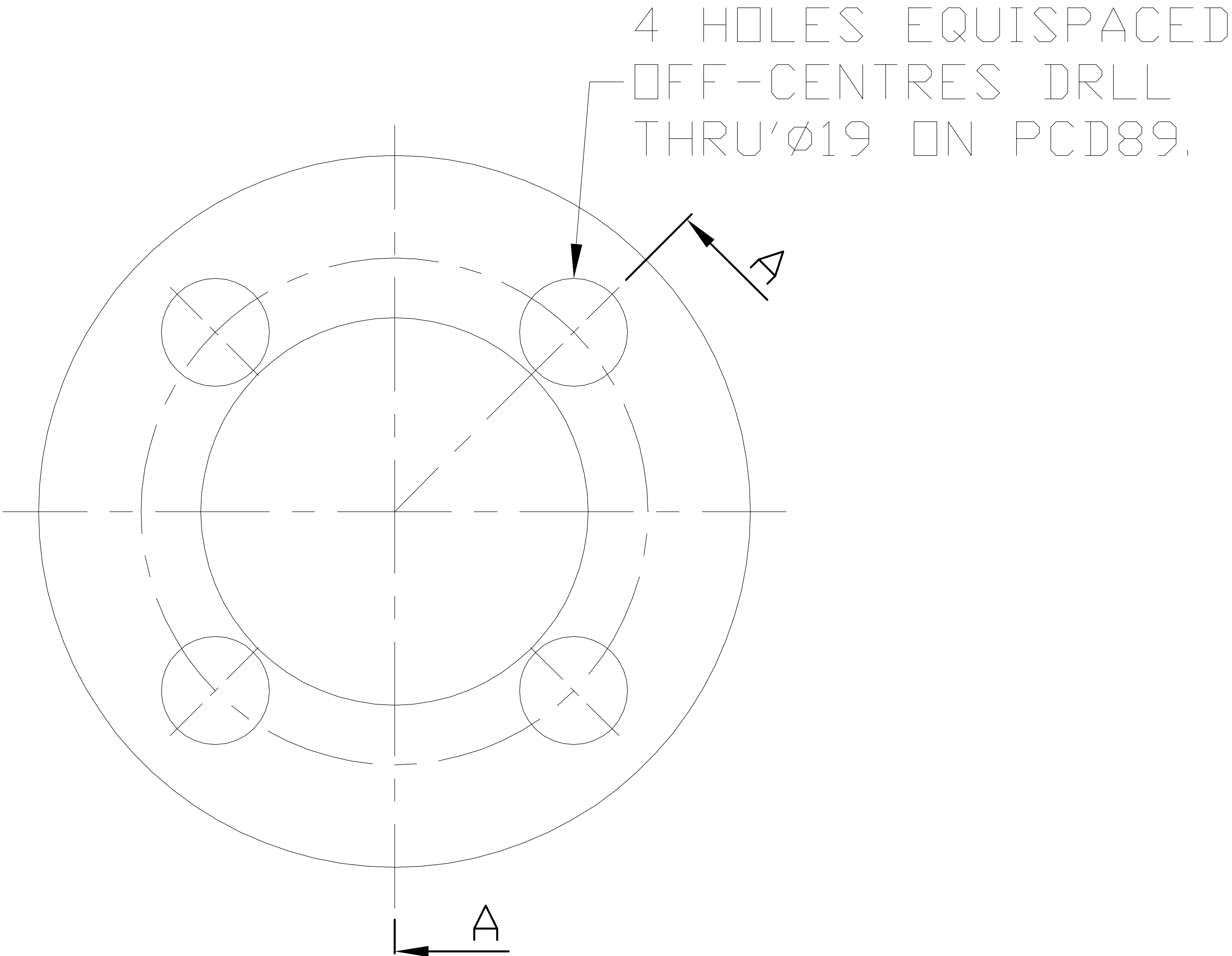
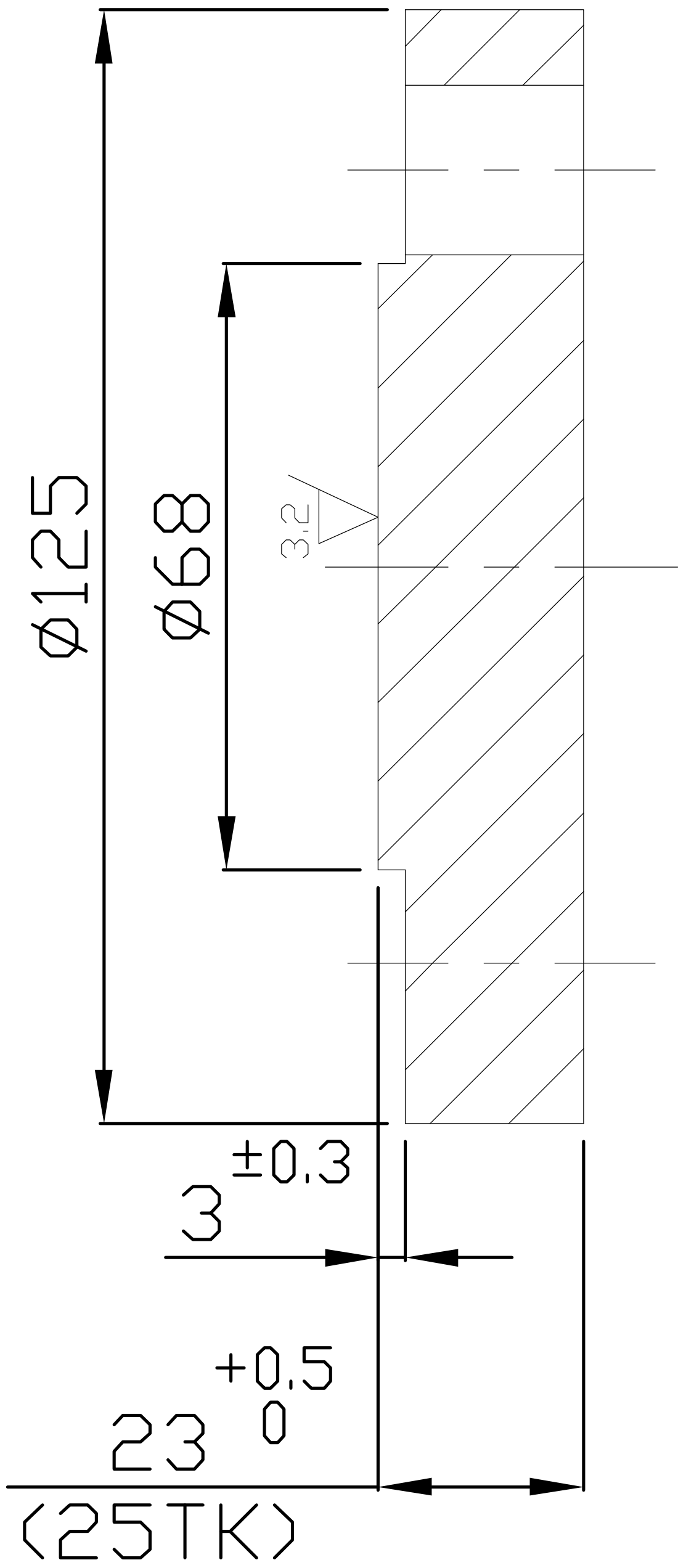
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION	39008A20210 TO 39012A20210
		CHECKED			CHECKED		
		APPD.			APPD.		
						STATUS OF DRAWING	U
						DISTRIBUTION OF PRINTS	HTE-2, WTM(P)-1, WTM(S)-4, FGM-7, THX-1

6.3
ALL OVER
UNLESS
OTHERWISE
SPECIFIED



TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS & SHARPE EDGES.
2. PAINT & PROTECT AS PER HT00005 TO CAT-G.

25TK PLATE	01	BLANK FLANGE 25NB CLASS-600	AA1011808153	AA10108	1.80
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	UNIT WT.
				MATL. SPCN.	QTY.

PRANAHITA-VIII	बीएचईएल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL				DRN	NAME	SIGN	DATE	NO. OF VAR.	
					CKD	DKJ	-sd-	12.08.16		
					APPD	ANUJ	-sd-	12.08.16		-
						H.K	-sd-	12.08.16		
DEPT. H.T.E.		UNTOL. DIMS. GR. AS PER DRG.			SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.		ITEM NO.	NO.OF ITEM
CODE 402		32000049014			1:2		1.80	0 21018 181 01		
TITLE BLANK FLANGE 25NB (CLASS-600)							DRAWING NO.			REV.
							4 21018 181 04			
							SHT. NO. 01		NO. OF SHT. 01	

SIZE A4

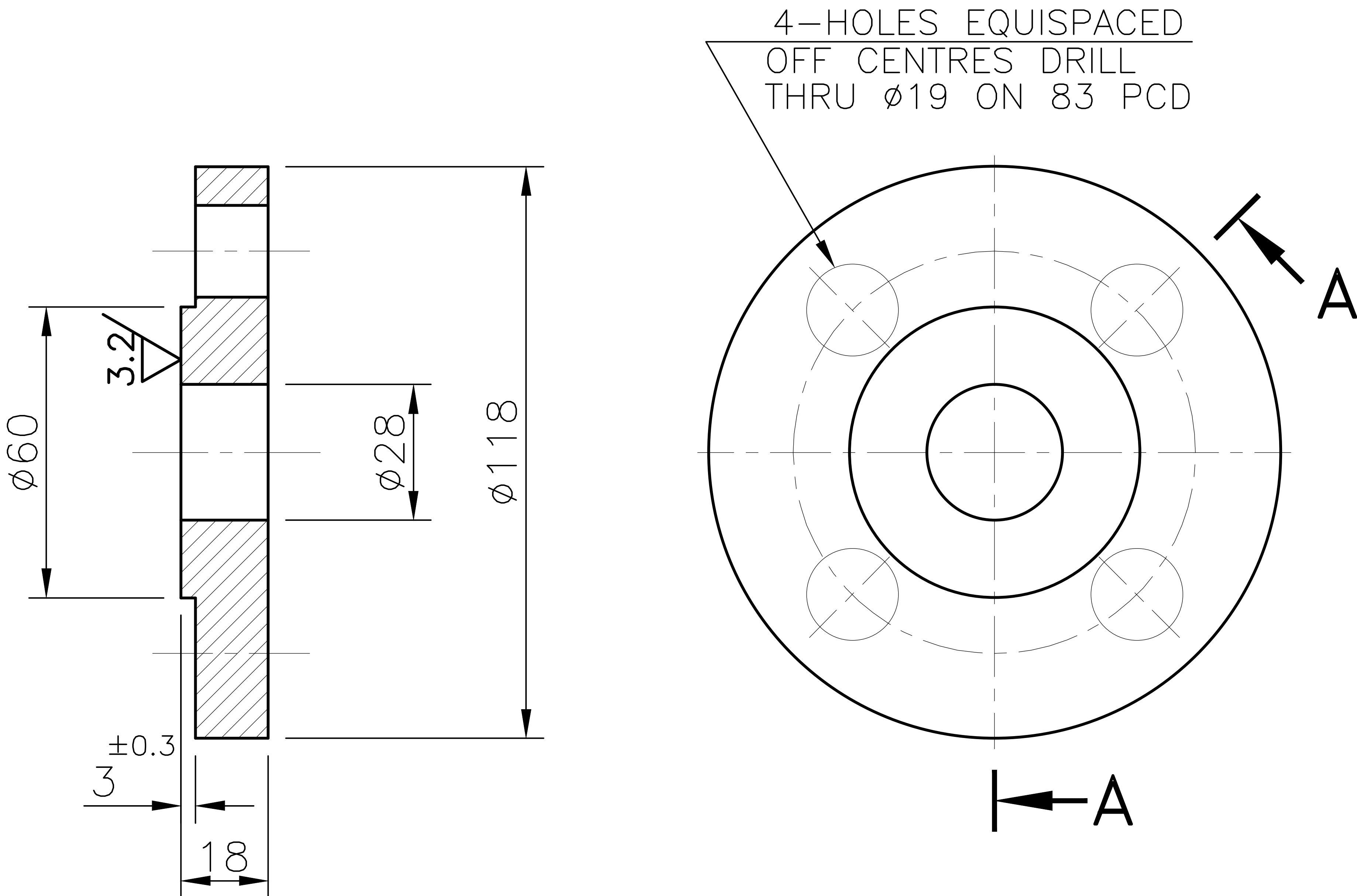
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS OTHERWISE STATED

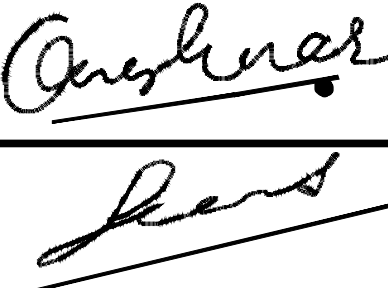
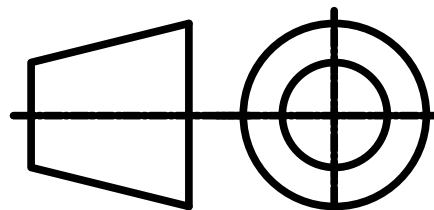


SECTION-AA

TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

20 TK	001	FLANGE 20 NB	AA 1011808137	1.150
			AA 10108	001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	58 UNIT WT. 65
			46 MATL. SPCN. 54	68 QTY. 71

PRANAHITA-VI LIS (6x124.4 MW)	बीएचईएल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	O.N.D.		31.05.16	
						APPD	S.K.		31.05.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
	CODE 402	32000049014		1 : 2	1.150	0-210-18-184-01	030	001		
TITLE FLANGE 20NB (CLASS-300)					DRAWING NO.		REV.			
					4-210-18-184-02		00			
SHT. NO. 01			NO. OF SHT. 01							

SIZE A4

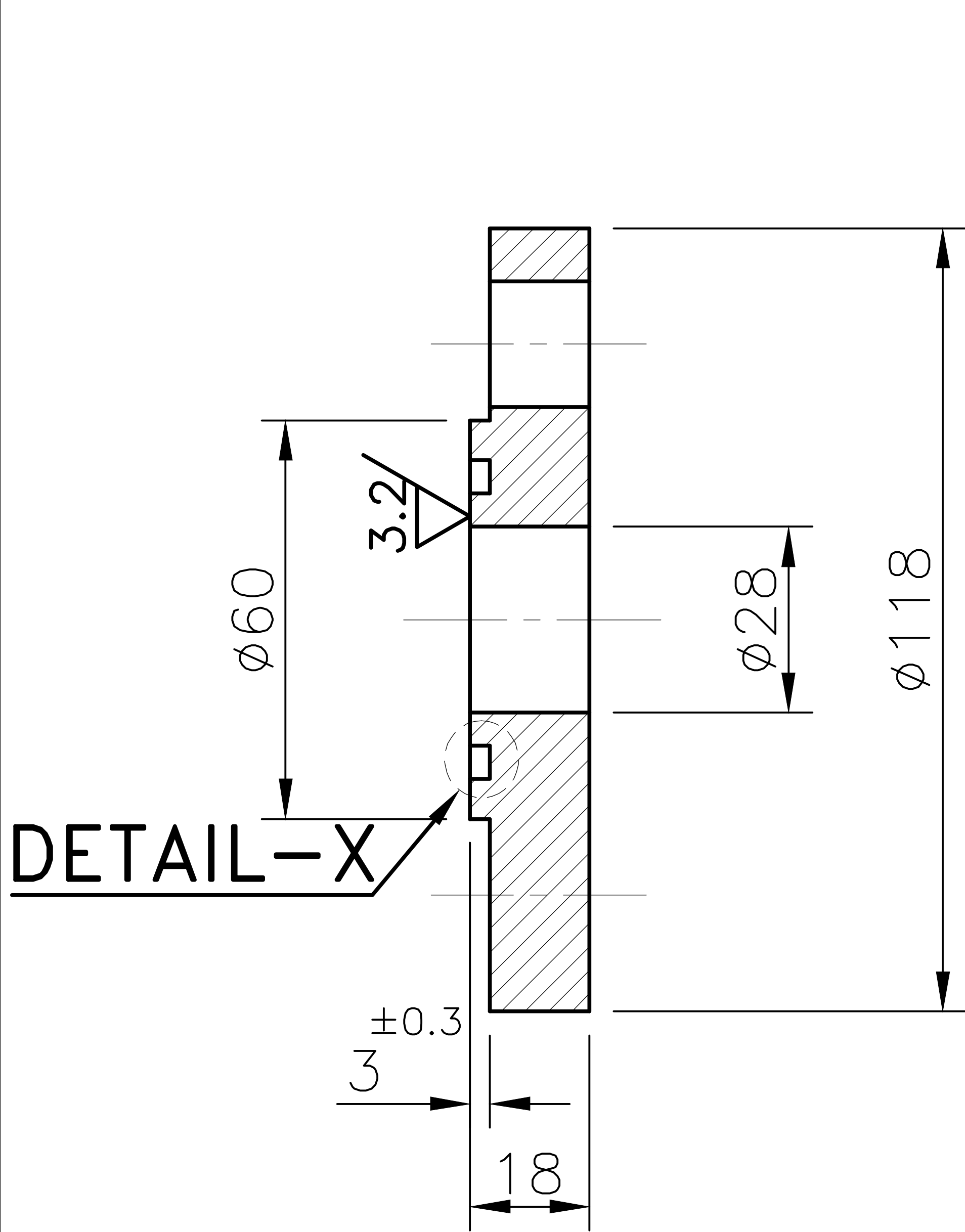
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

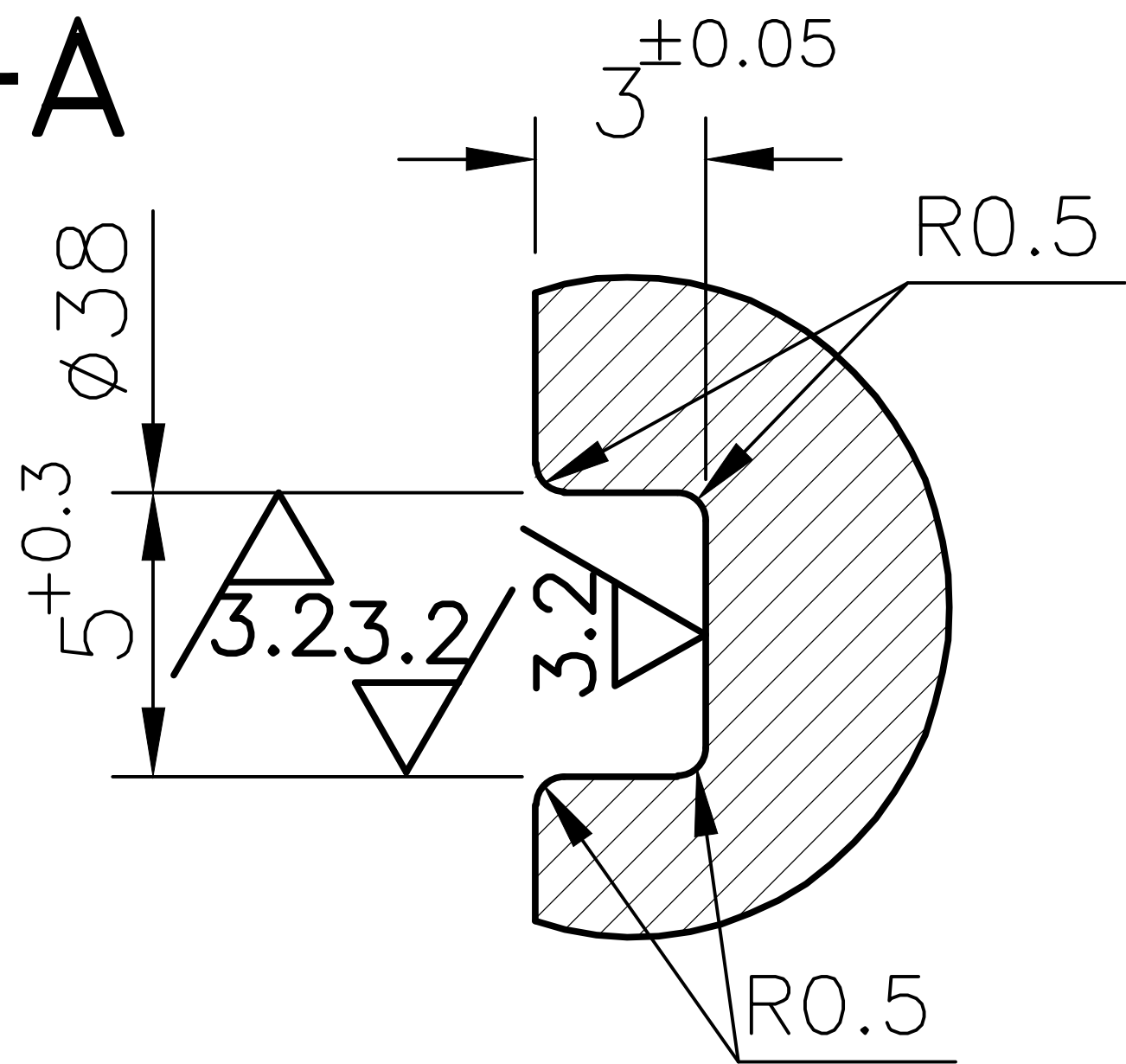
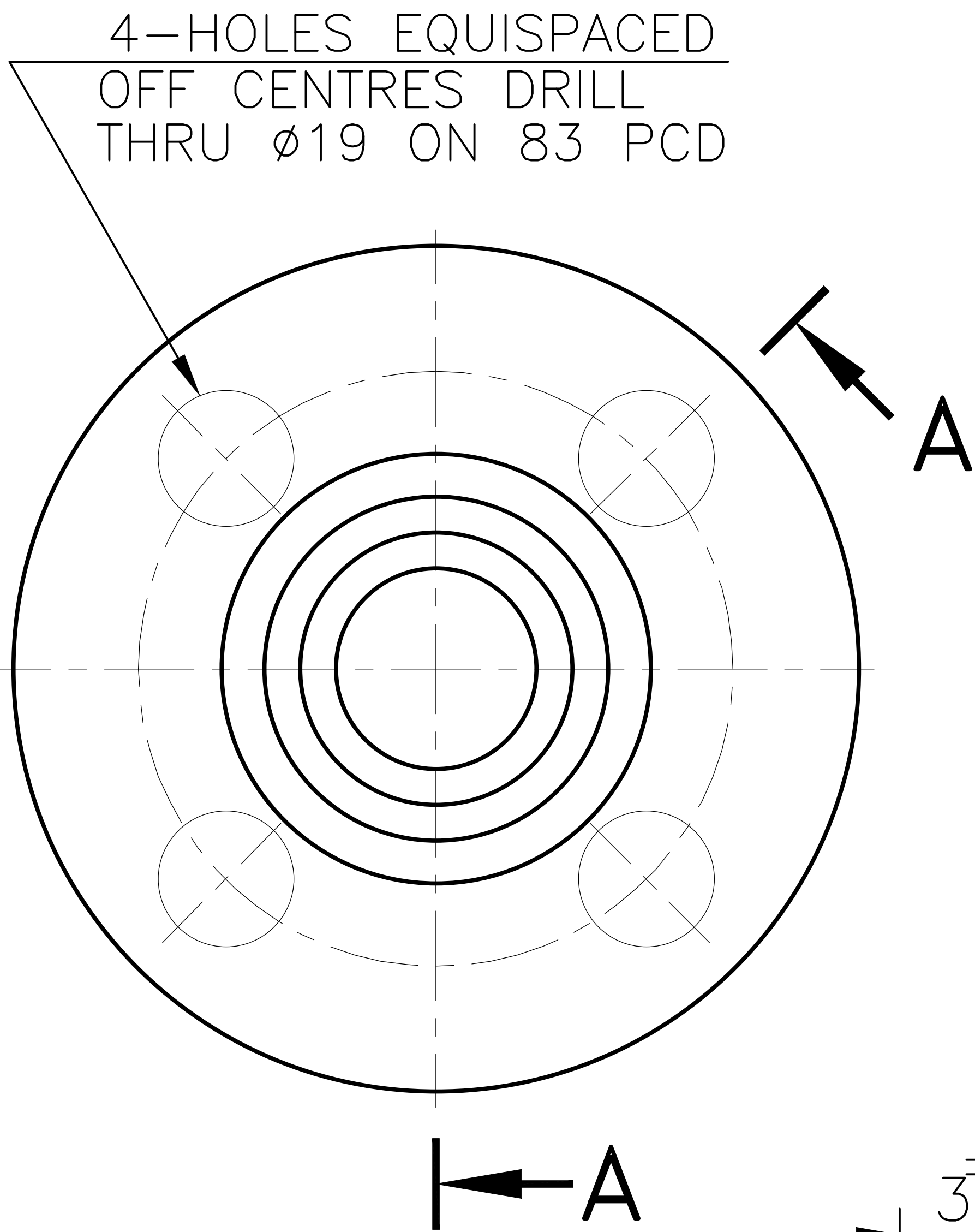
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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS OTHERWISE STATED



SECTION-AA



DETAIL-X

TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

20 TK	001	FLANGE 20 NB WITH SEAL GROOVE	AA 1011808137	1.100
			AA 10108	001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	58 UNIT WT. 65
			MATL. SPCN.	68 QTY. 71

INVENTORY NO.	SIGN. & DATE	REF. DRG. NO.	PRANAHITA-VI LIS (6x124.4 MW)		BHARAT HEAVY ELECTRICALS LTD. BHOPAL	DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	O.N.D.		31.05.16	
						APPD	S.K.		31.05.16	
DEPT. H.T.E.	UNTOL. DIMS. GR.	SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM	DRAWING NO.	REV.	SHT. NO.	NO. OF SHT.
CODE 402	32000049014	1 : 2	1.100	0-210-18-184-01	031	001	4-210-18-184-03	00	01	01
TITLE FLANGE 20NB WITH SEAL GROOVE (CLASS-300)				DRAWING NO. 4-210-18-184-03				REV. 00		
				SHT. NO. 01				NO. OF SHT. 01		

SIZE A4

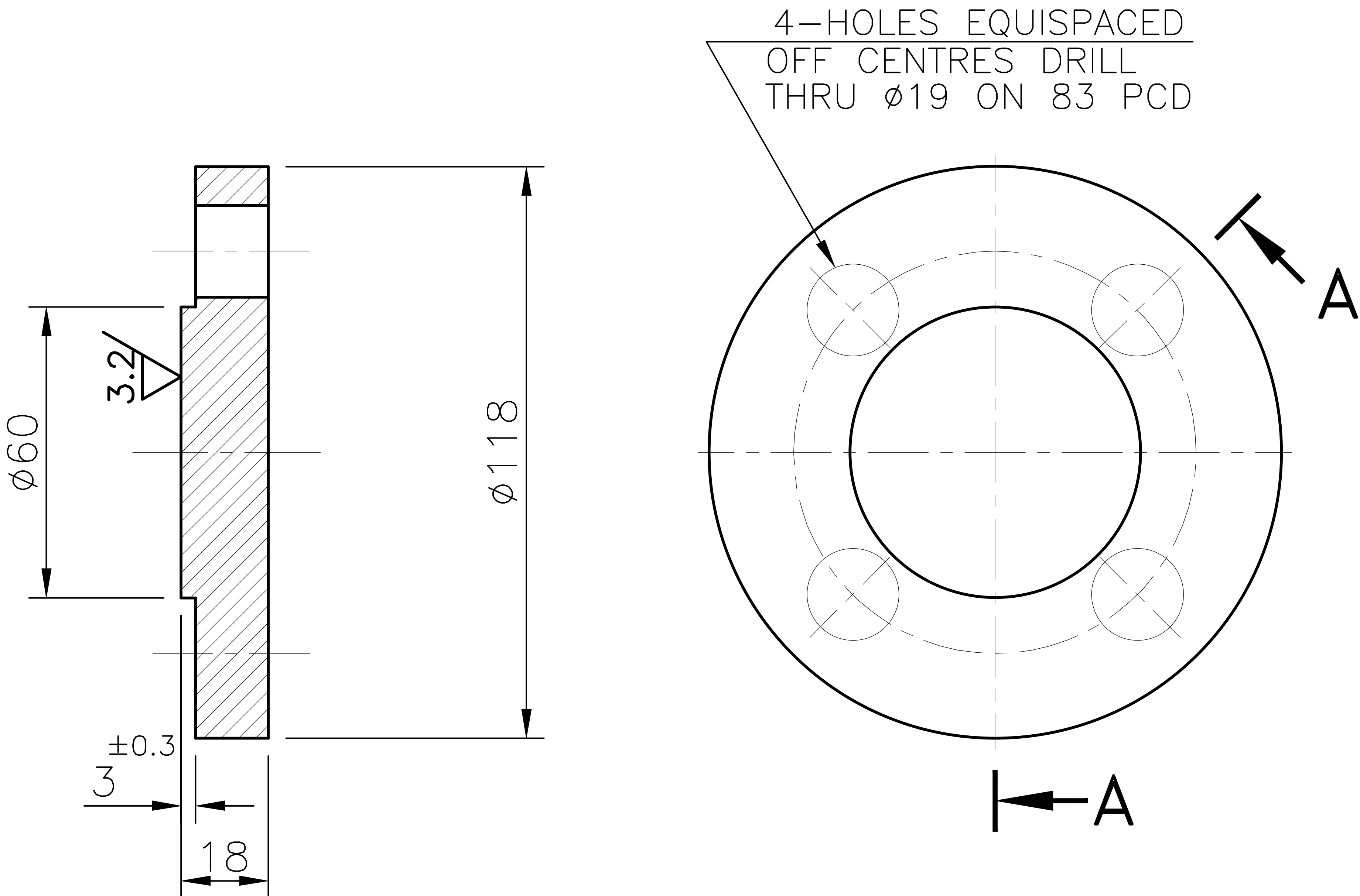
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS OTHERWISE STATED

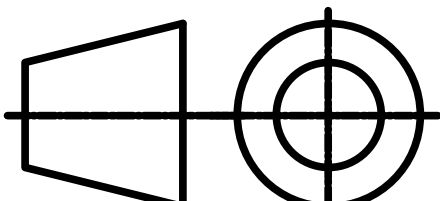


SECTION-AA

TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

20 TK	001	BLANK FLANGE 20 NB	AA 1011808137	1.220
			AA 10108	001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	58 UNIT WT. 65
			MATL. SPCN.	68 QTY. 71

PRANAHITA-VI LIS (6x124.4 MW)			BHARAT HEAVY ELECTRICALS LTD. BHOPAL				DRN	NAME	SIGN	DATE	NO. OF VAR.
							CKD	O.N.D.		31.05.16	
							APPD	S.K.		31.05.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.		ITEM NO.	NO.OF ITEM		
	CODE 402	32000049014		1 : 2	1.220	0-210-18-184-01		032	001		
TITLE <u>BLANK FLANGE 20NB</u> (CLASS-300)						DRAWING NO. 4-210-18-184-04			REV. 00		
						SHT. NO. 01		NO. OF SHT. 01			

SIZE A4

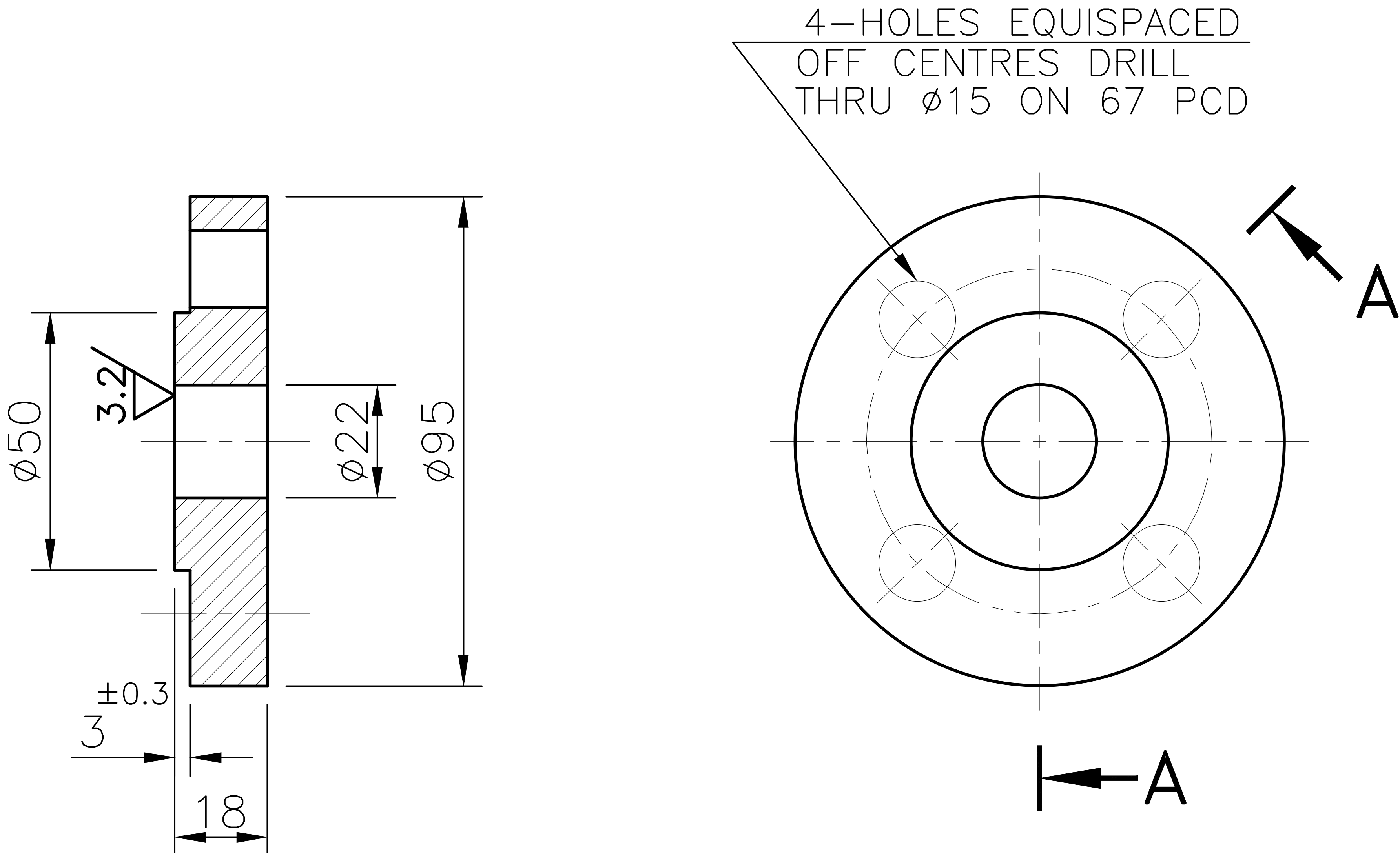
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS OTHERWISE STATED

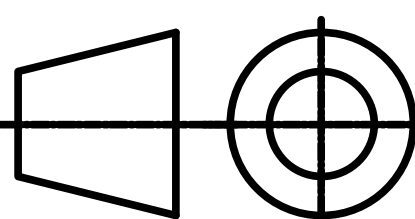


SECTION-AA

TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

20 TK	001	FLANGE 15 NB	AA 1011808137	0.800
			AA 10108	001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	UNIT WT. 58
			MATL. SPCN. 46	QTY. 65

PRANAHITA-VI LIS (6x124.4 MW)	बीएचईएल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	O.N.D.		31.05.16	
						APPD	S.K.		31.05.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
	CODE 402	32000049014		1 : 2	0.800	0-210-18-184-01	033	001		
TITLE FLANGE 15 NB (CLASS-600)					DRAWING NO. 4-210-18-184-05		REV. 00			
					SHT. NO. 01		NO. OF SHT. 01			

SIZE A4

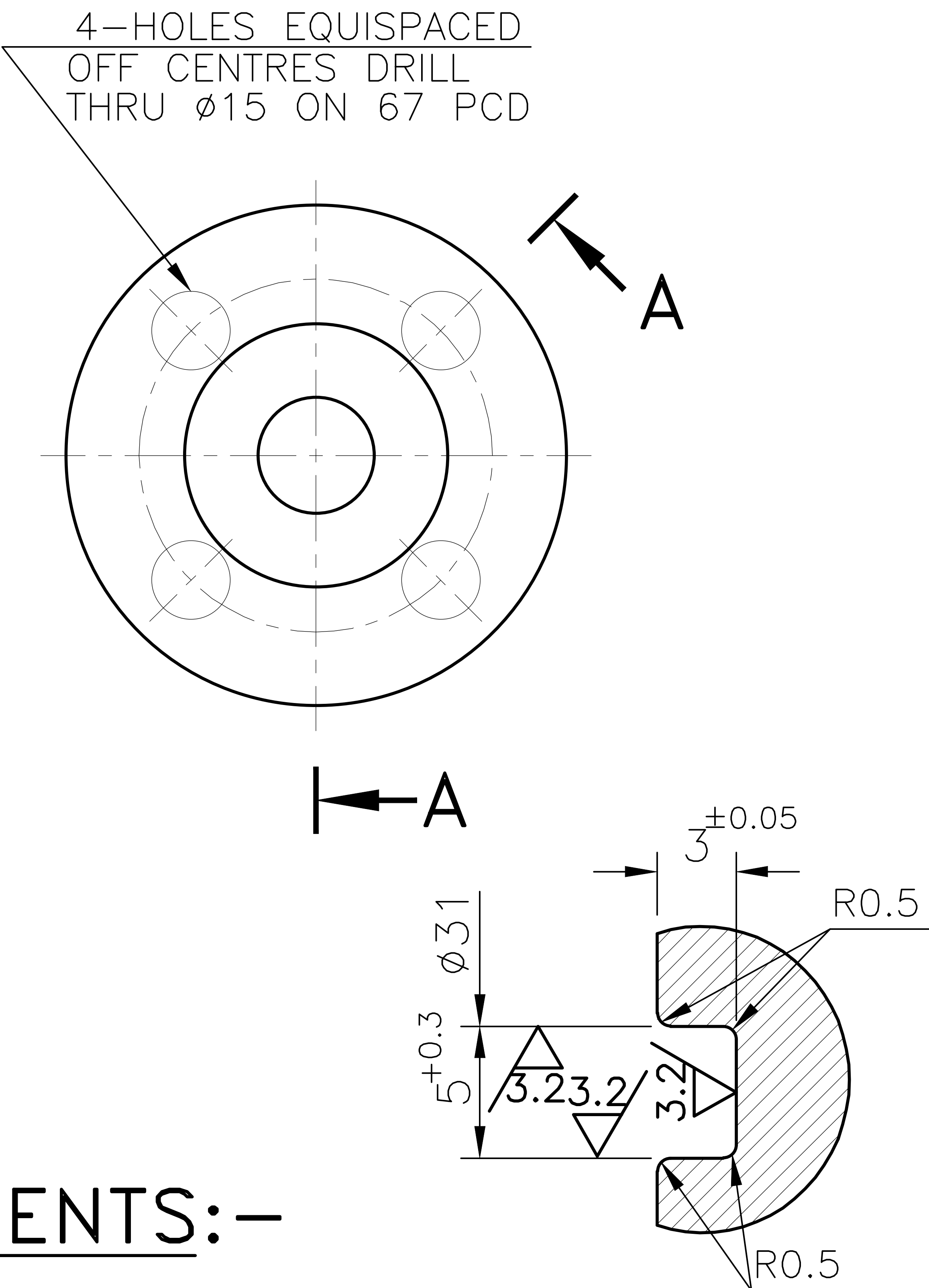
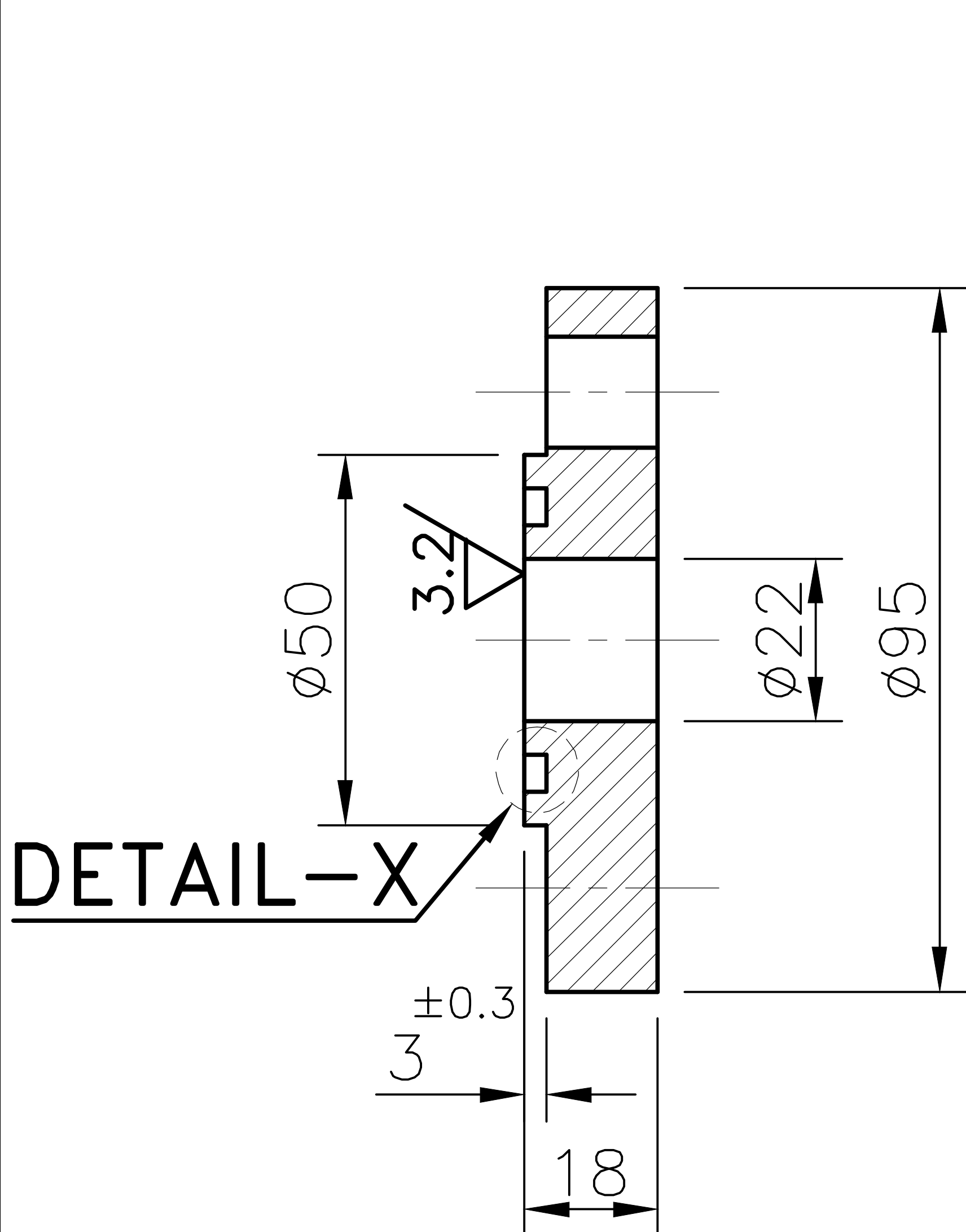
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

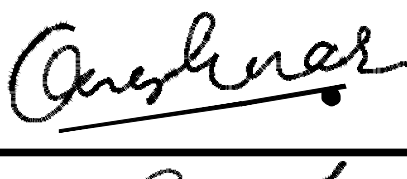
6.3/ ALL OVER UNLESS OTHERWISE STATED



TECHNICAL REQUIREMENTS:-

- REMOVE ALL BURRS AND SHARP EDGES.
- PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

20 TK	001	FLANGE 15 NB	AA 1011808137	0.790
			AA 10108	001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	UNIT WT.
			MATL. SPCN.	QTY.

INVENTORY NO.	SIGN. & DATE	REF. DRG. NO.	PRANAHITA-VI LIS (6x124.4 MW)		BHARAT HEAVY ELECTRICALS LTD. BHOPAL	DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	O.N.D.		31.05.16	
						APPD	S.K.		31.05.16	
DEPT. H.T.E.	UNTOL. DIMS. GR.	SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM	DRAWING NO.	REV.	SHT. NO.	NO. OF SHT.
CODE 402	32000049014	1 : 2	0.790	0-210-18-184-01	034	001	4-210-18-184-06	00	01	01
TITLE FLANGE 15NB WITH SEAL GROOVE (CLASS-600)				DRAWING NO. 4-210-18-184-06				REV. 00		
				SHT. NO. 01				NO. OF SHT. 01		

SIZE A4

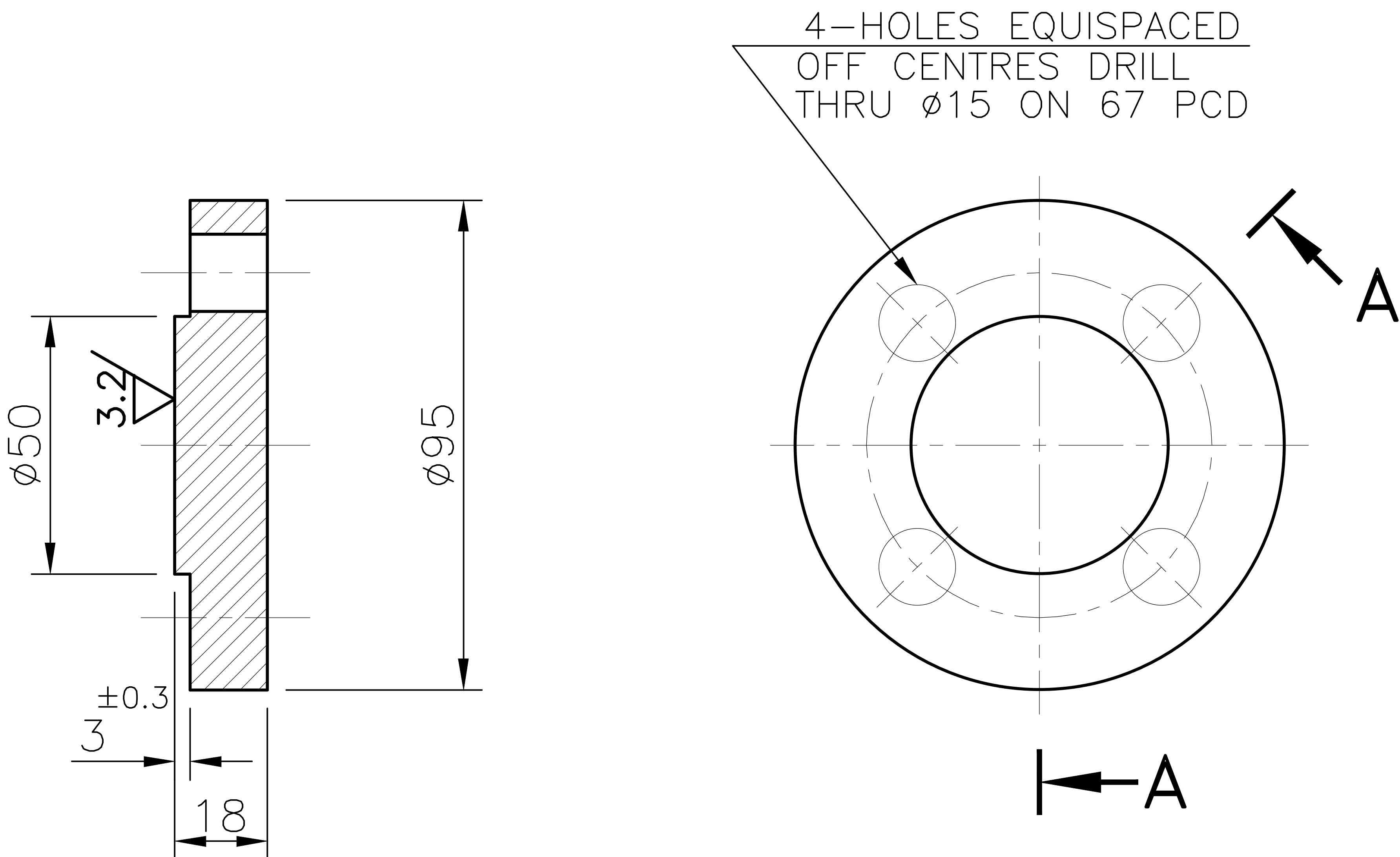
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS OTHERWISE STATED

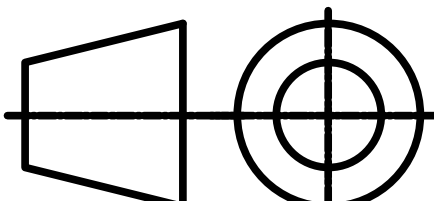


SECTION-AA

TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

20 TK	001	BLANK FLANGE 15 NB	AA 1011808137		0.860
			AA 10108		001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	57	58 UNIT WT. 65
			46 MATL. SPCN. 54	A/C	68 QTY. 71

PRANAHITA-VI LIS (6x124.4 MW)	बीएचईएल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	NEERAJ		31.05.16	
						APPD	O.N.D.		31.05.16	
							S.K.		31.05.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
	CODE 402	32000049014		1 : 2	0.860	0-210-18-184-01	035	001		
	TITLE BLANK FLANGE 15NB (CLASS-600)					DRAWING NO.		REV.		
						4-210-18-184-07		00		
						SHT. NO. 01		NO. OF SHT. 01		

SIZE A4

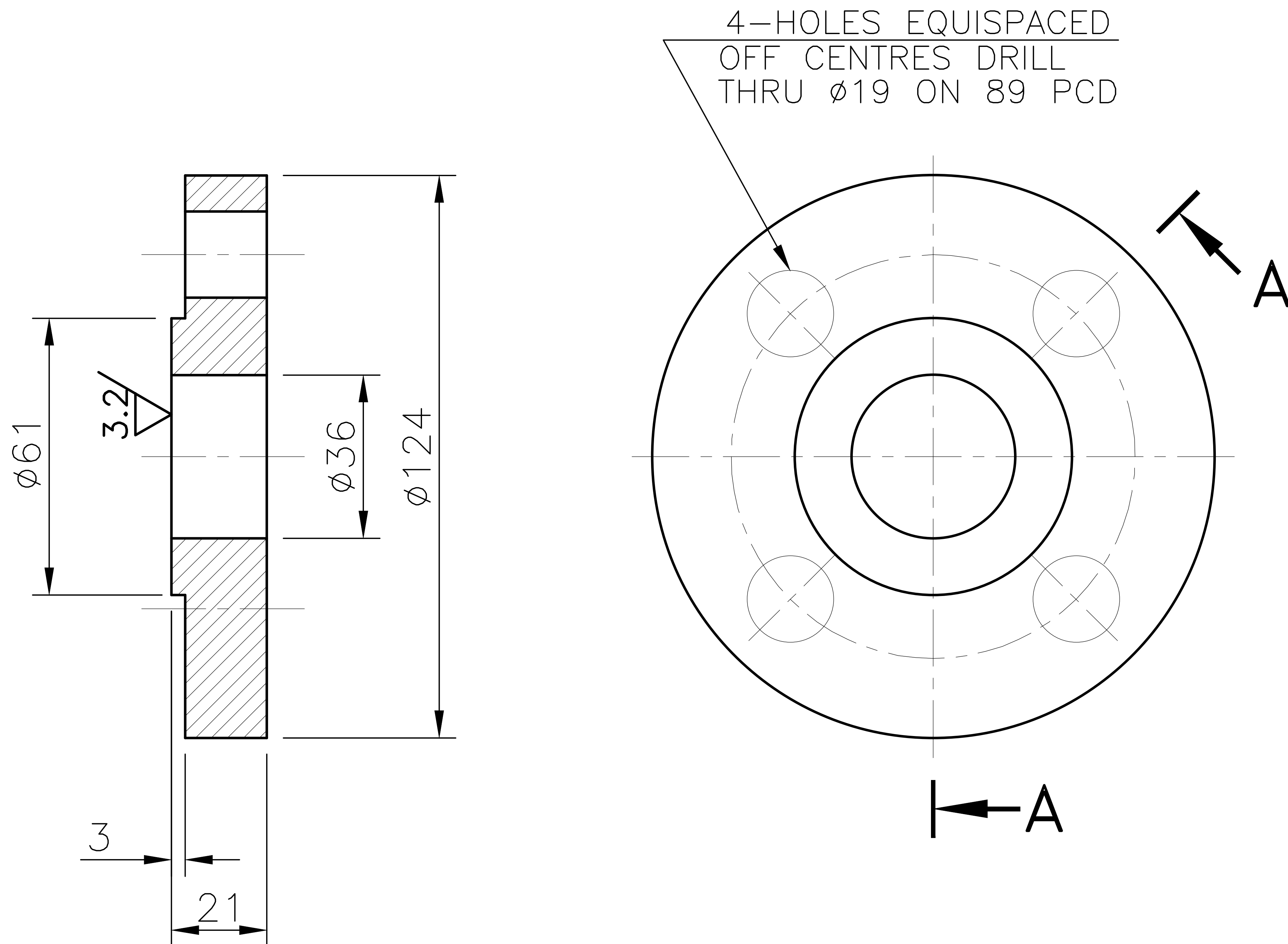
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS OTHERWISE STATED

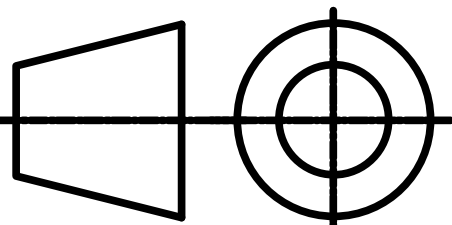


SECTION-AA

TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

25 TK	001	FLANGE 25 NB	AA 1011808153	1.500
			AA 10108	001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	UNIT WT.
			MATL. SPCN.	QTY.

PRANAHITA-VI LIS (6x124.4 MW)	 BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	O.N.D.		21.09.16	
						APPD	S.K.		21.09.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.		ITEM NO.	NO.OF ITEM	
	CODE 402	32000049014		1 : 2	1.500	0-210-18-184-01		076	001	
TITLE FLANGE 25 NB (CLASS-600)					DRAWING NO. 4-210-18-184-08			REV. 00		
					SHT. NO. 01		NO. OF SHT. 01			

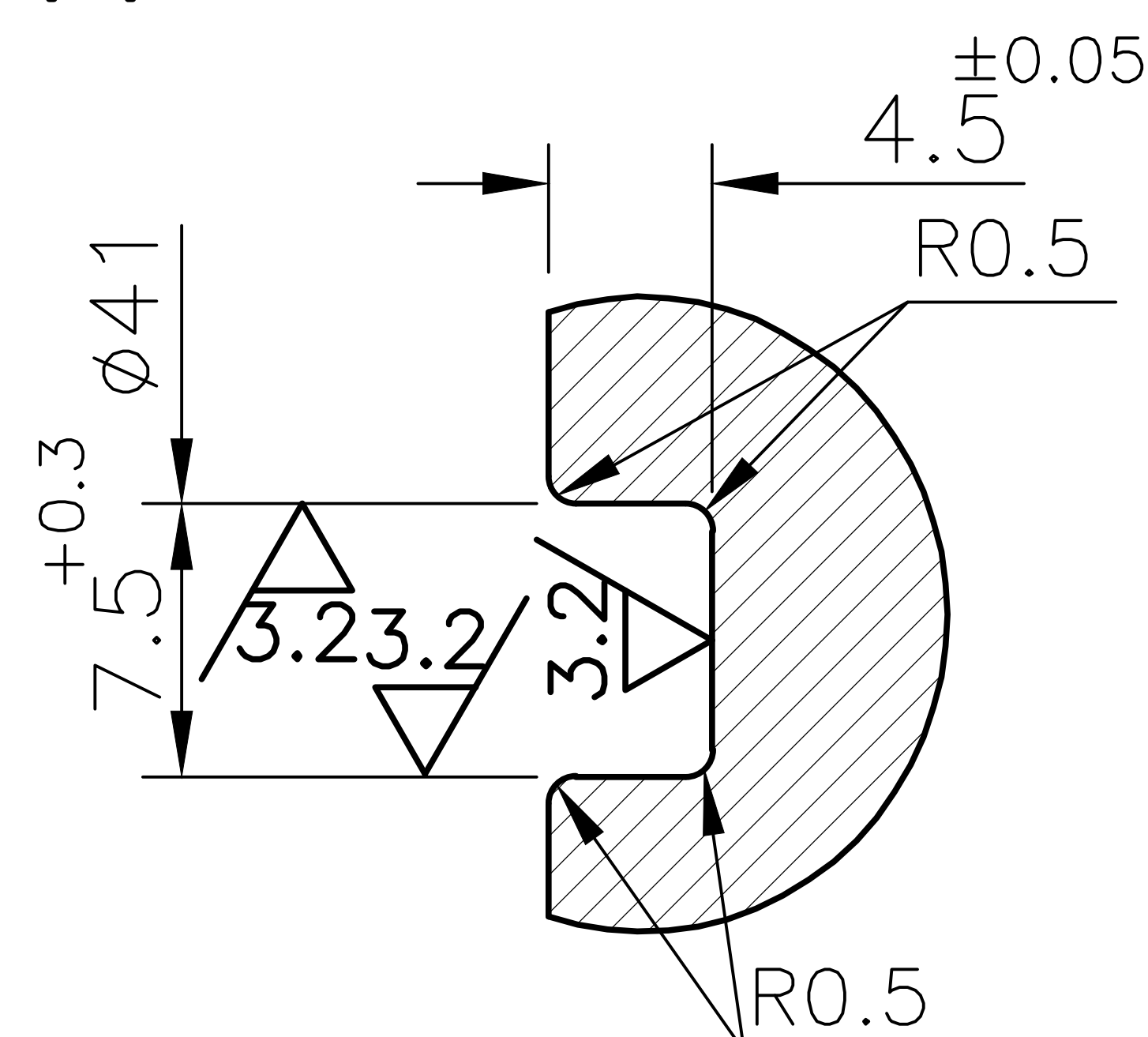
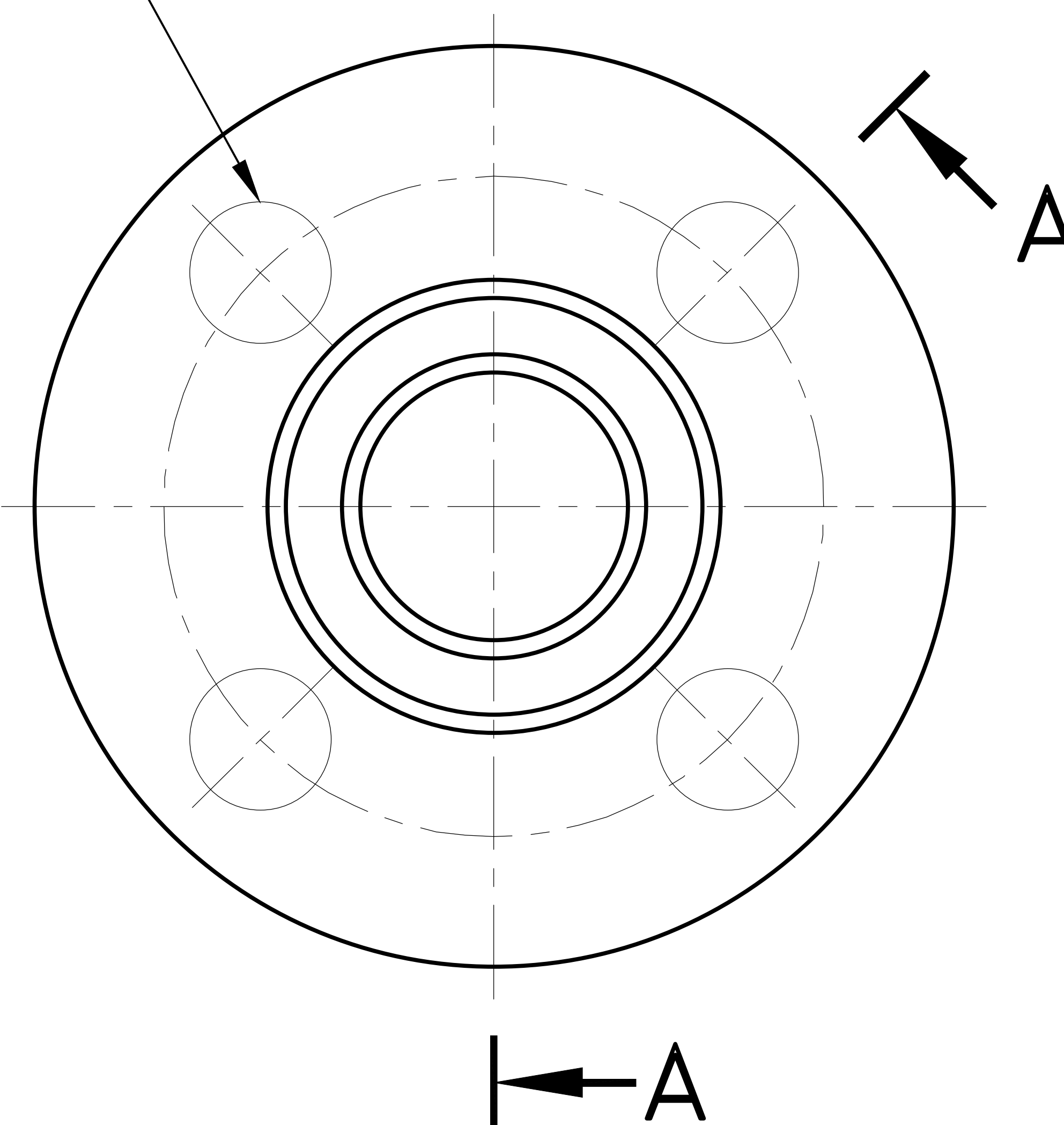
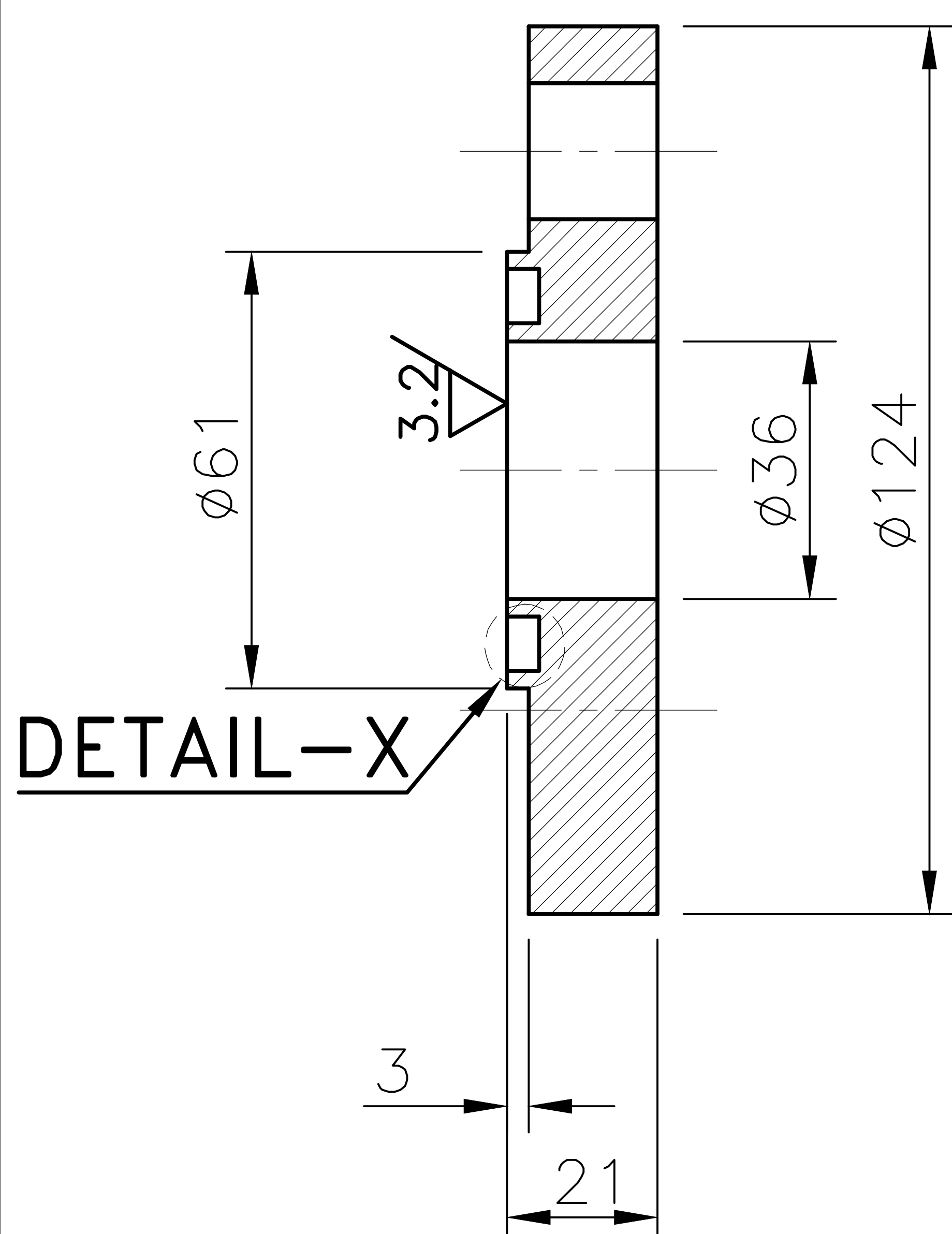
SIZE A4

(ALL DIMENSIONS ARE IN mm)

REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS
▽ OTHERWISE STATED

4-HOLES EQUISPACED
OFF CENTRES DRILL
THRU $\phi 19$ ON 89 PCD



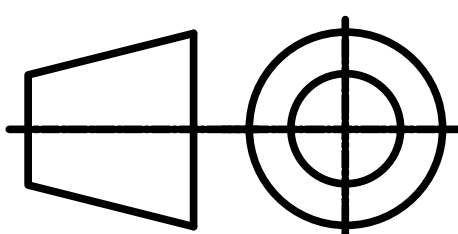
SECTION-AA

TECHNICAL REQUIREMENTS:—

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

DETAIL-X

25 TK	001	FLANGE 25 NB		AA 1011808153			1.450
				AA 10108			[001]
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	A C	UNIT	58 UNIT WT. 65
				46 MATL. SPCN. 54			68 QTY. 71

PRANAHITA-VI LIS (6x124.4 MW)	बीएचईएल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	NEERAJ	<i>Neeraj</i>	21.09.16	
						APPD	O.N.D.	<i>O.N.D.</i>	21.09.16	
							S.K.	<i>S.K.</i>	21.09.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.		ITEM NO.	NO.OF ITEM	
CODE 402	32000049014	1 : 2		1.450	0-210-18-184-01		077	001		
TITLE <u>FLANGE 25NB WITH SEAL</u> GROOVE (CLASS-600)					DRAWING NO.			REV.		
					4-210-18-184-09			00		
					SHT. NO. 01		NO. OF SHT. 01			

SIZE A4

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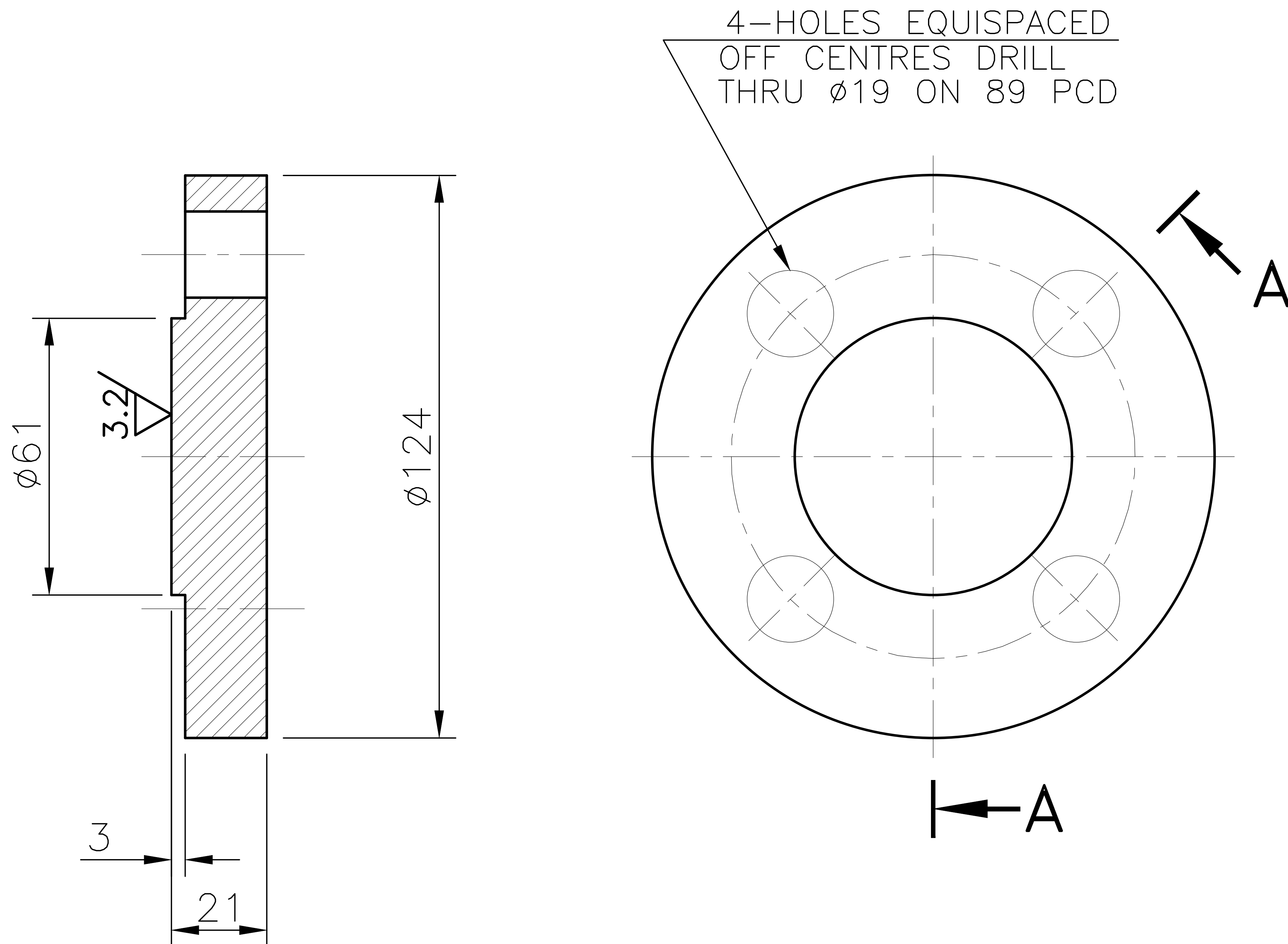
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 FGM-7 THX-1 WTM(PLANNING)-1 WTM(STORE)-4

6.3/ ALL OVER UNLESS OTHERWISE STATED

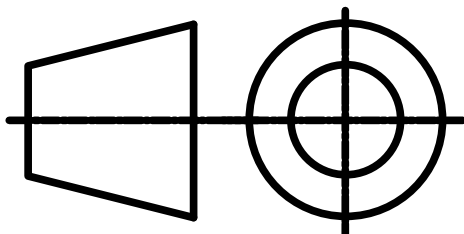


SECTION-AA

TECHNICAL REQUIREMENTS:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PAINT AND PROTECT AS PER HT 00005 CAT 'G'.

25 TK	001	FLANGE 25 NB	AA 1011808153	1.700
			AA 10108	001
REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	UNIT WT.
			MATL. SPCN.	QTY.

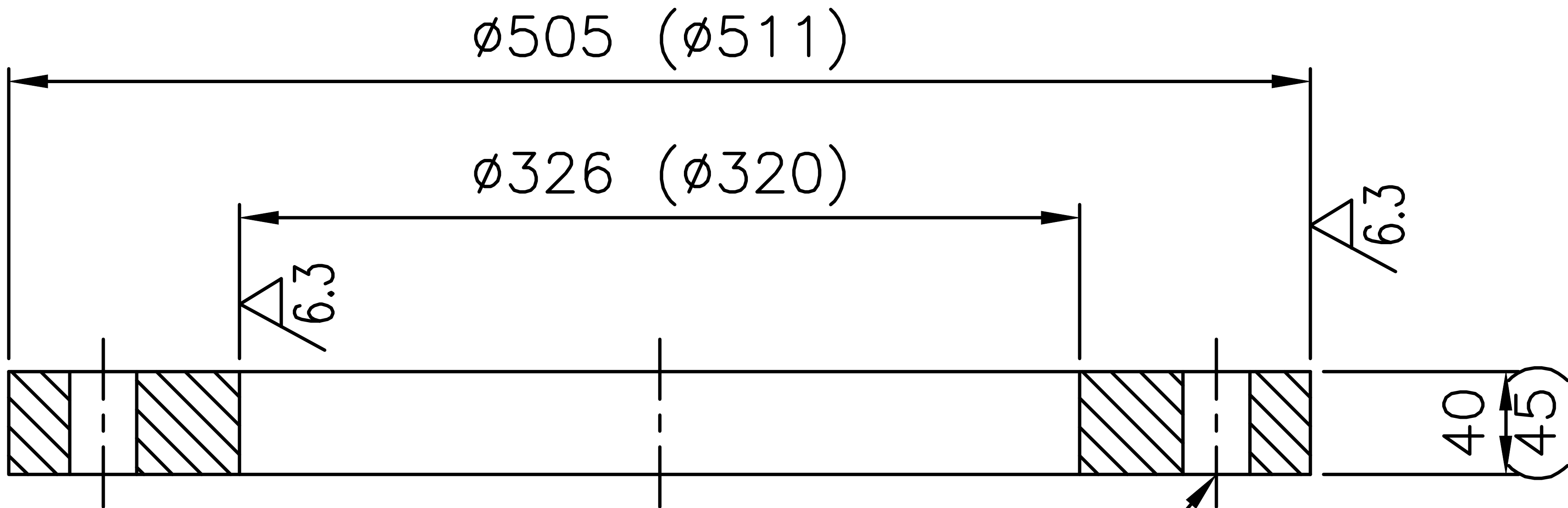
PRANAHITA-VI LIS (6x124.4 MW)	बीएच ई एल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	NEERAJ		21.09.16	
						APPD	O.N.D.		21.09.16	
							S.K.		21.09.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
	CODE 402	32000049014		1 : 2	1.700	0-210-18-184-01	078	001		
TITLE <u>BLANK FLANGE 25NB</u> (CLASS-600)					DRAWING NO.		REV.			
					4-210-18-184-10			00		
					SHT. NO. 01	NO. OF SHT. 01				

SIZE A4

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2, THX-1 WTM-5, FGM-7

3.2/∇ ALL OVER EXCEPT OTHERWISE STATED

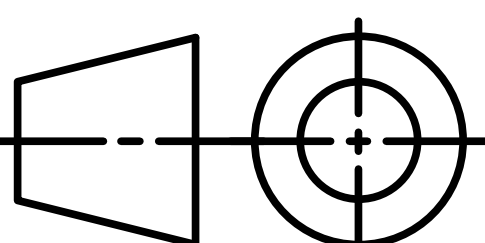


12 HOLES, DRILL THRO'
Ø26 ON PCD 432
FULL CHORD=111.81

TECH. REQ. : —

- 1. REMOVE BURRS AND SHARP EDGES.
- 2. PAINT & PROTECT AS PER PRODUCT STD. HT 00005 CAT. "G"

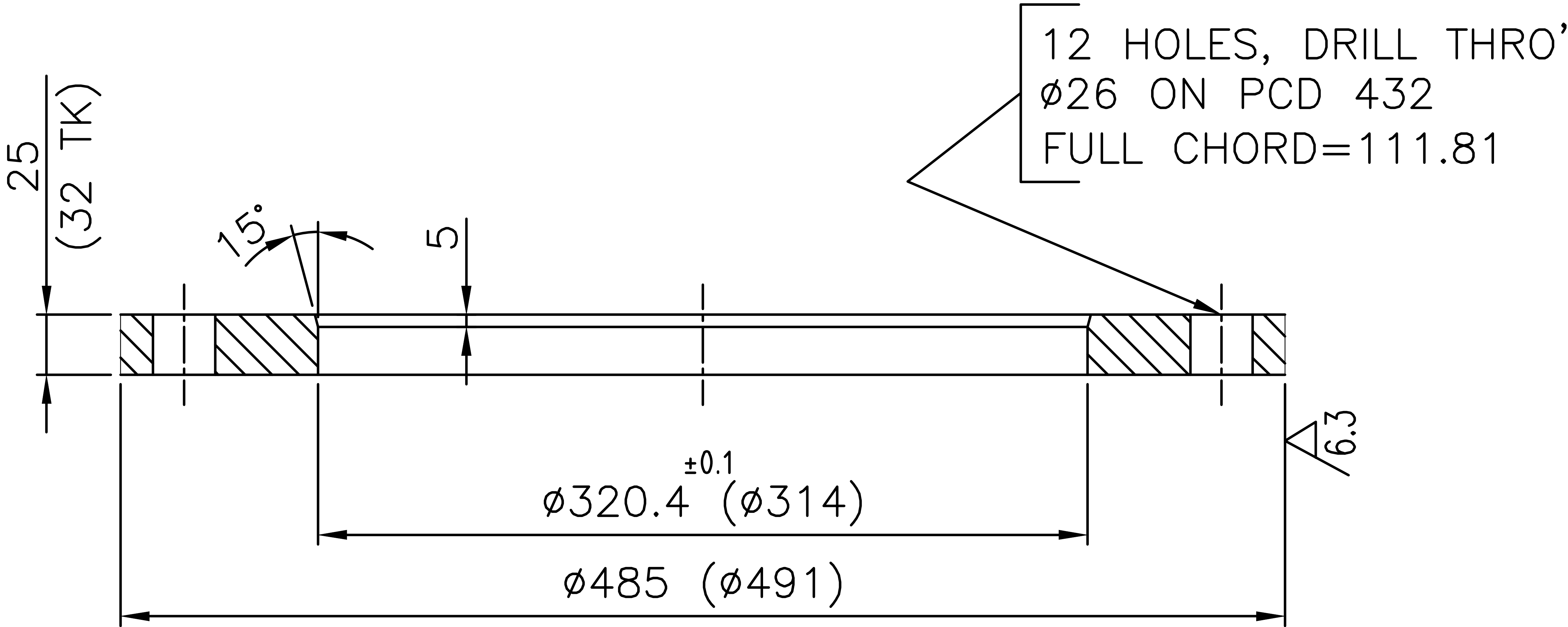
45 TK	001	FLANGE—I (300 NB)		AA1011819201		Kg	34.700
				AA10119		No	001
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	A C	UNIT	58 UNIT WT. 65
				46 MATL. SPCN. 54			68 QTY. 71

PRANAHITA—VIII	 BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR. —
						CKD	SKM		26.09.16	
						APPD	MG		26.09.16	
						AKB		26.09.16		
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
	CODE 402	REF. DRG. NO. 32000049014		1:5	34.7	0—214—01—18101	013	01		
TITLE FLANGE—I (300 NB)					DRAWING NO.			REV.		
					4—214—01—18103			00		
					SHT. NO. 01		NO. OF SHT. 01			

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2, THX-1 WTM-5, FGM-7

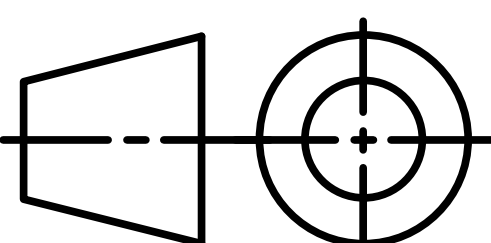
3.2/√ ALL OVER EXCEPT OTHERWISE STATED



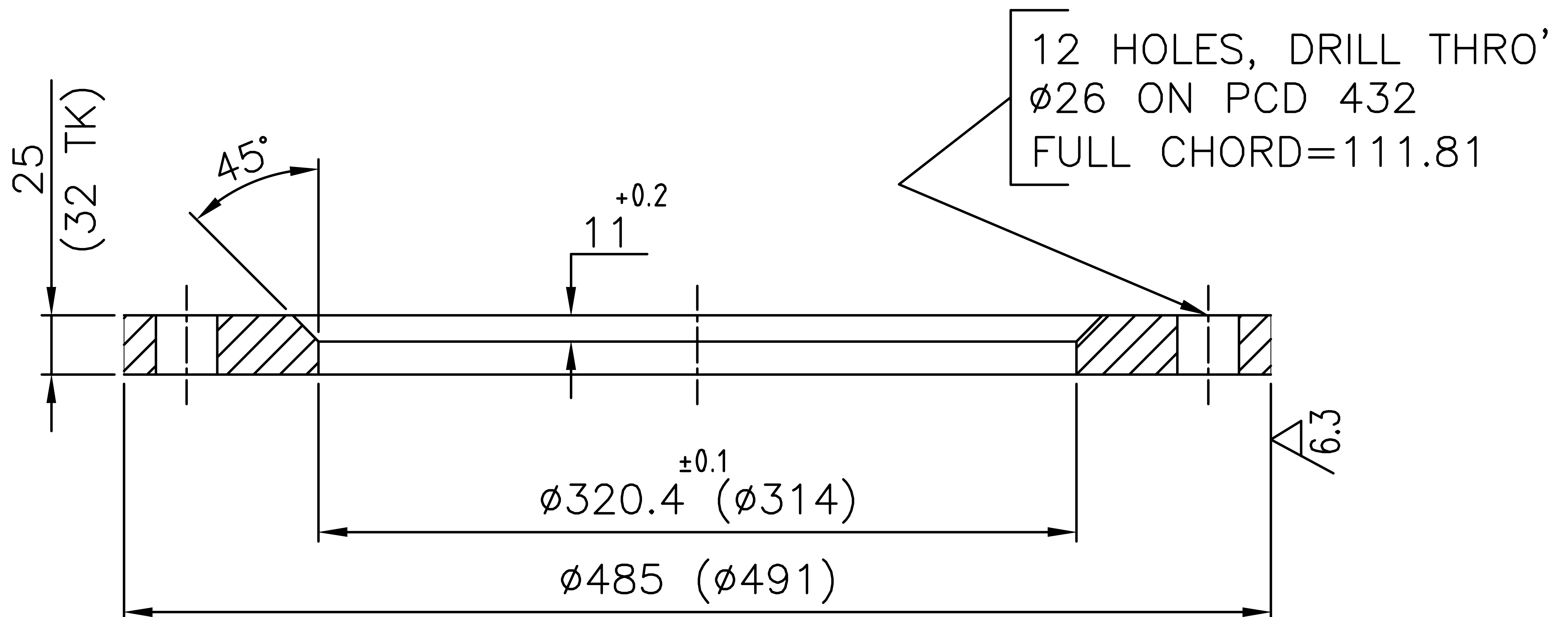
TECH. REQ. : —

1. REMOVE BURRS AND SHARP EDGES.
2. PAINT & PROTECT AS PER PRODUCT STD. HT 00005 CAT. "G"

32 TK	001	SLIP FLANGE (300 NB)		AA1011808170		Kg	19.200
				AA10108			No
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE		A/C	57
				46	MATL. SPCN.		54
							68 QTY. 71

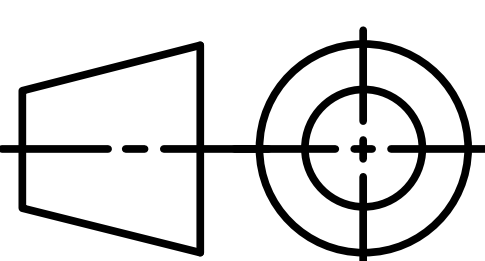
PRANAHITA—VIII			BHARAT HEAVY ELECTRICALS LTD. BHOPAL			DRN	NAME	SIGN	DATE	NO. OF VAR. —
						CKD	MG		26.09.16	
						APPD	AKB		26.09.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE 1:4	WEIGHT(K.G.) 19.2	REF.TO ASSY.DRG.		ITEM NO.	NO.OF ITEM	
CODE 402	REF. DRG. NO. 32000049014	0—214—01—18101				016	01			
TITLE <u>SLIP FLANGE</u> (300 NB)						DRAWING NO.			REV.	
						4—214—01—18105			00	
						SHT. NO. 01		NO. OF SHT. 01		

3.2/
▽ ALL OVER EXCEPT
OTHERWISE STATED



1. REMOVE BURRS AND SHARP EDGES.
2. PAINT & PROTECT AS PER PRODUCT STD. HT 00005 CAT. "G"

32 TK	001	BACKING FLANGE (300 NB)		AA1011808170		Kg	18.700
				AA10108		No	001
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	A/C	UNIT	58 UNIT WT. 65
				46 MATL. SPCN. 54			68 QTY. 71

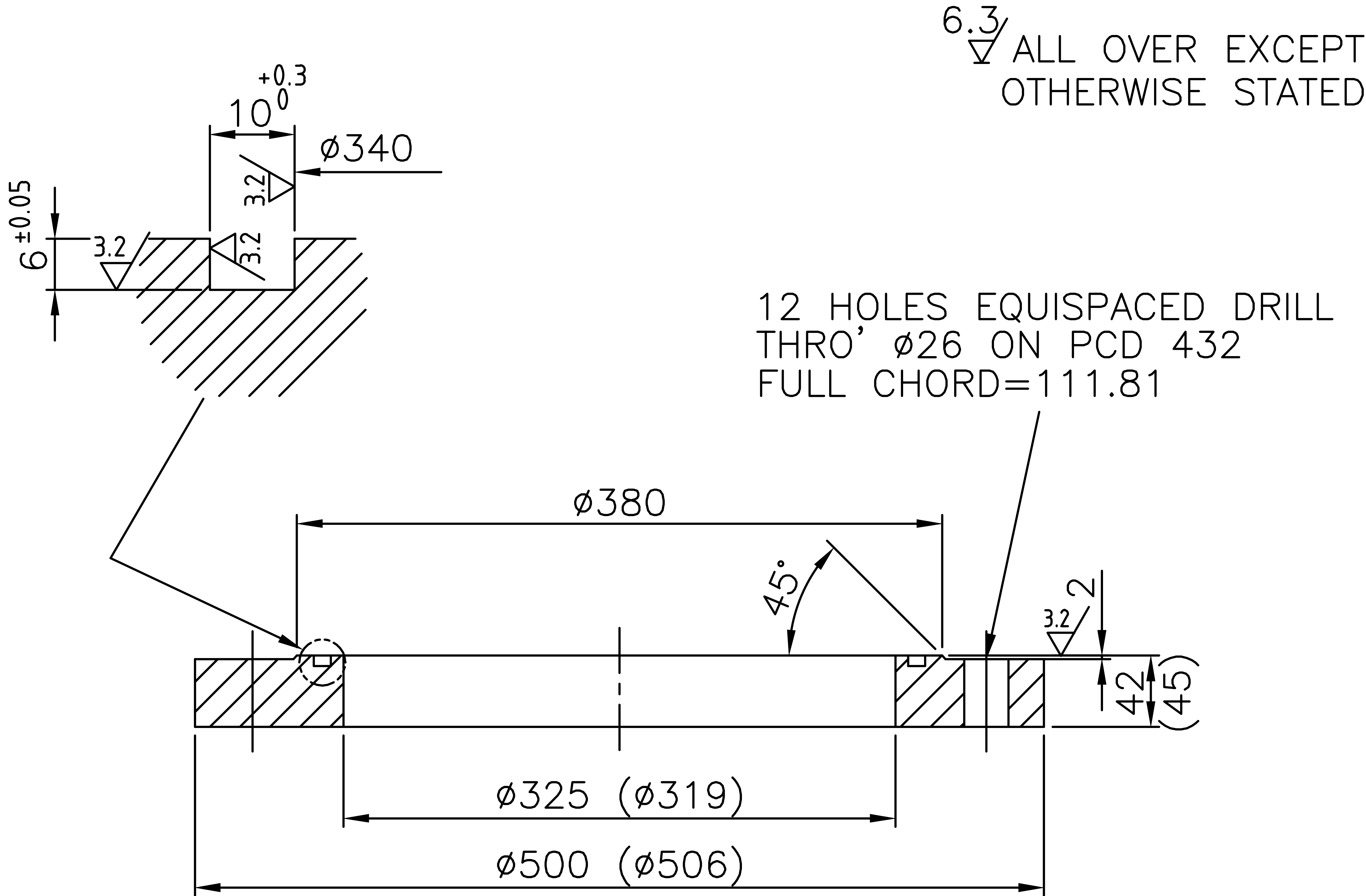
बीएचईएल BHEL BHARAT HEAVY ELECTRICALS LTD. BHOPAL						NAME	SIGN	DATE	NO. OF VAR. —
					DRN	SKM		26.09.16	
					CKD	MG		26.09.16	
					APPD	AKB		26.09.16	
DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
CODE 402	REF. DRG. NO. 32000049014		1:4	18.7	0-214-01-18101	017	01		
TITLE BACKING FLANGE (300 NB)					DRAWING NO.		REV.		
					4-214-01-18106		00		
					SHT. NO.	NO. OF SHT.			
					01	01			

SIZE A4

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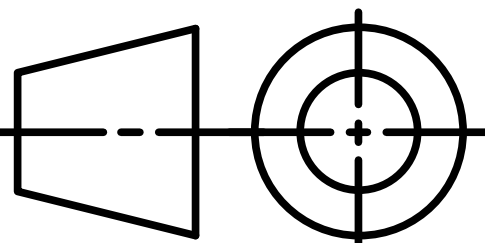
REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2, THX-1 WTM-5, FGM-7



TECH. REQ. : —

1. REMOVE BURRS AND SHARP EDGES.
2. PAINT & PROTECT AS PER PRODUCT STD. HT 00005 CAT. "G"

45 TK	001	FLANGE-II (300 NB)	AA1011819201	Kg	33.600
					No 001
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	UNIT
				A/C	57 58 UNIT WT. 65
					68 QTY. 71

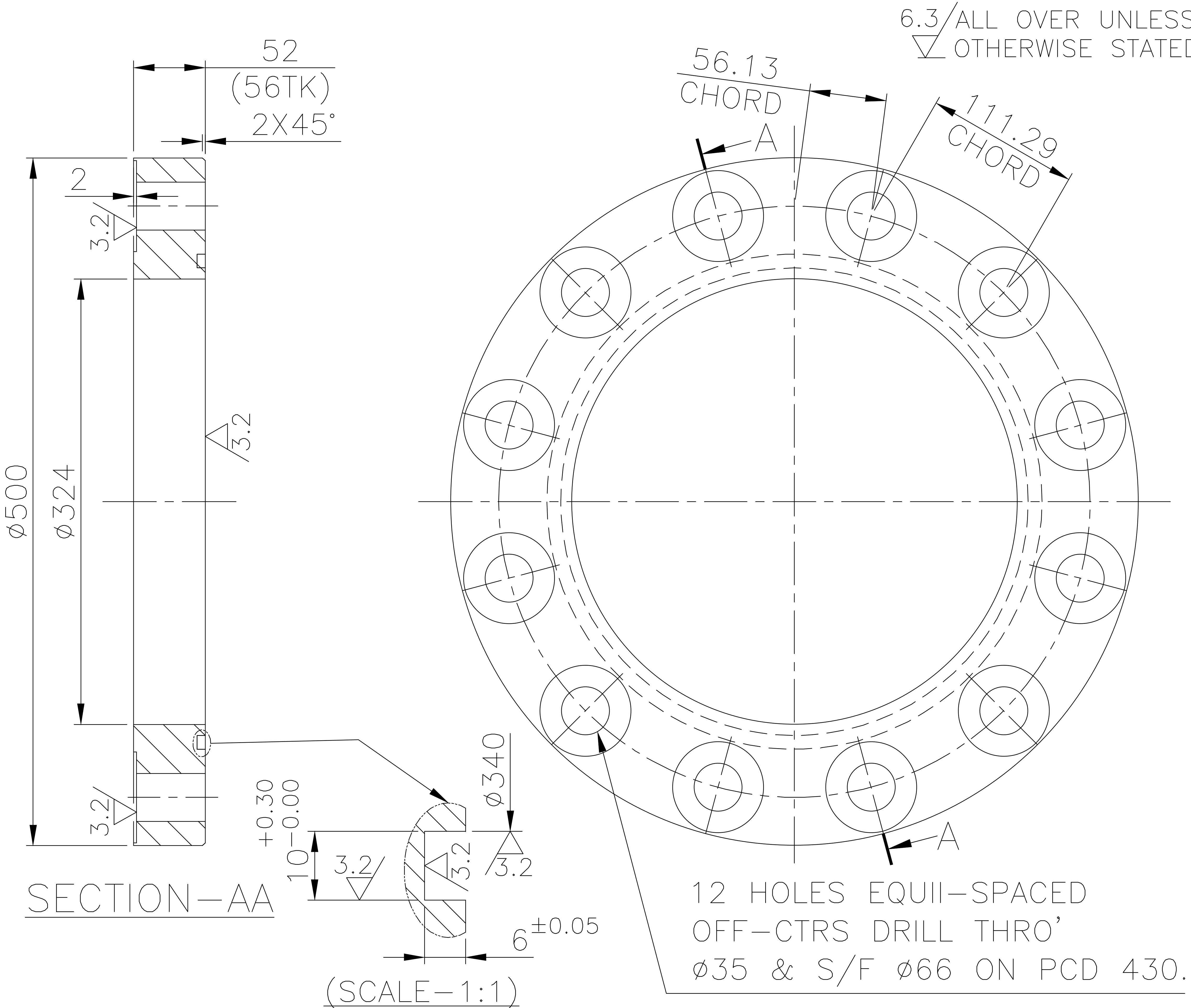
PRANAHITA—VIII	 BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR. —
						CKD	SKM		26.09.16	
						APPD	MG		26.09.16	
							AKB		26.09.16	
	DEPT. H.T.E.	UNTOL. DIMS. GR.		SCALE	WEIGHT(K.G.)	REF.TO ASSY.DRG.	ITEM NO.	NO.OF ITEM		
	CODE 402	REF. DRG. NO. 32000049014		1:5		33.6	0—214—01—18101		018	01
	TITLE FLANGE—II (300 NB)					DRAWING NO.			REV.	
						4—214—01—18107				00
						SHT. NO. 01		NO. OF SHT. 01		

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 WT(S)-4 WT(P)-1 FGM-7 THX-1

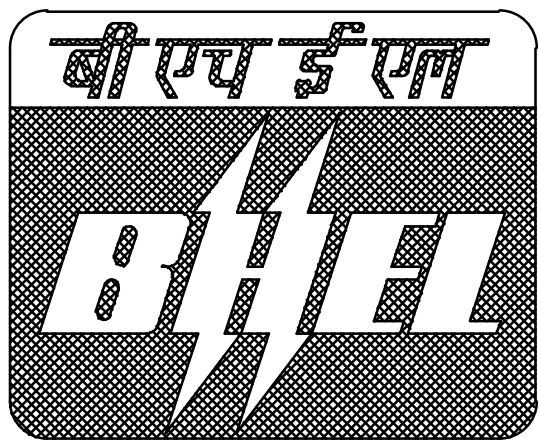


TECHNICAL REQUIREMENTS:-

- REMOVE BURRS & SHARP EDGES.
- PAINT & PROTECT AS PER HT00005 CAT. 'G'.

56TK PLATE	001	SPECIAL FLANGE 300NB (WITH SEAL GROOVE)		AA1011808226	Kg.	86.35	
				AA10108		No.	001
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	A C	UNIT	58 UNIT WT. 65
				46 MATL. SPCN. 54			68 QTY. 71

PALAMURU RANGAREDDY-2 LIS



BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

	NAME	SIGN	DATE	NO. OF VAR. —
DRN	DKJ	—sd—	13.03.21	
CKD	AR/HK	—sd—	13.03.21	
APPD	AM	—sd—	13.03.21	
IT(K.G.)	REF.TO ASSY.DRG.		ITEM NO.	NO.OF ITEM
.05	0—214—01—20101		010	001
NB	DRAWING NO. 4—214—01—20101			REV. 00
	SHT. NO. 01		NO. OF SHT. 01	

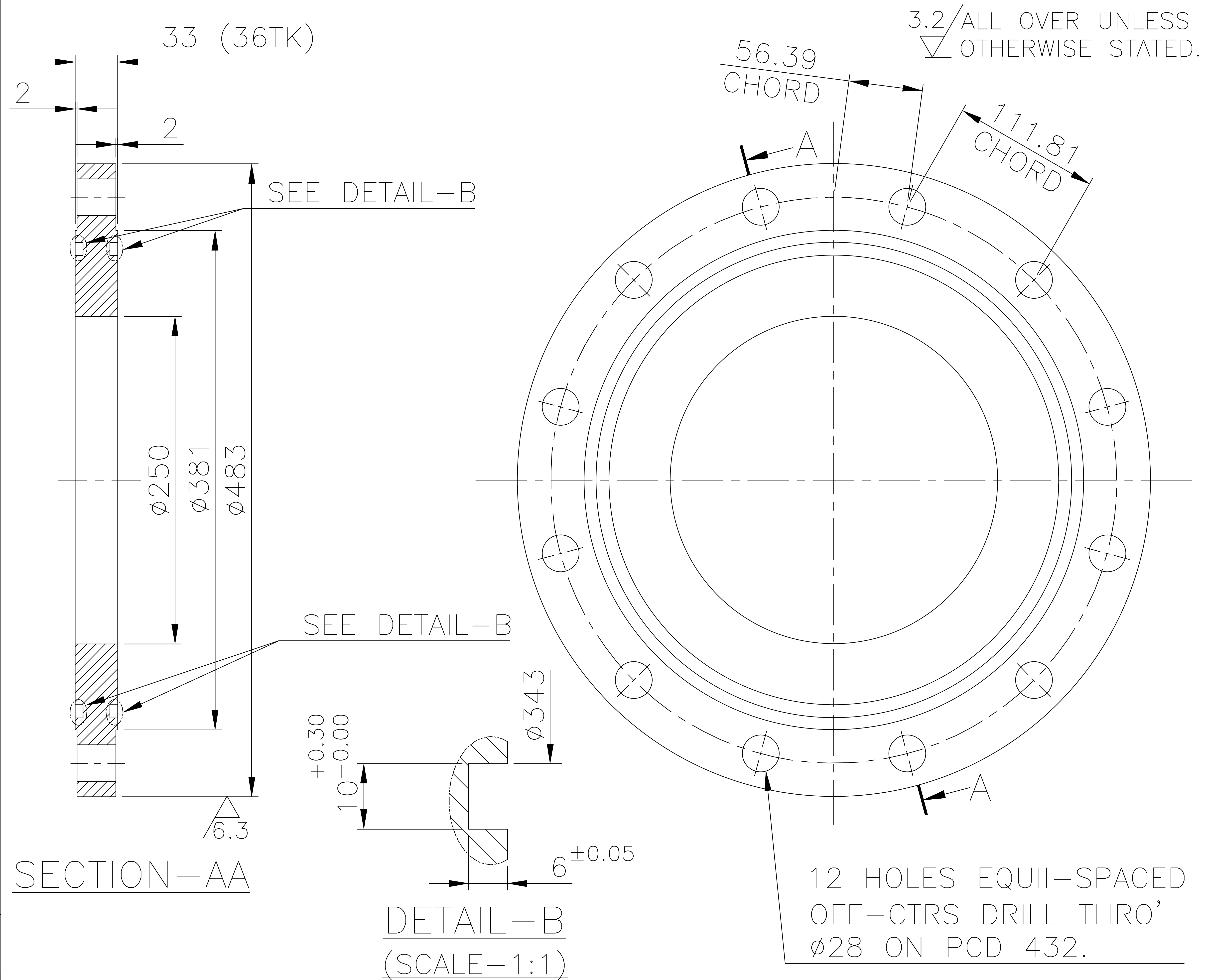
SIZE A4

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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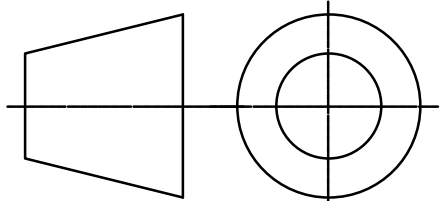
REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPD.			APPD.	
						STATUS OF DRAWING U
						DISTRIBUTION OF PRINTS HTE-2 WT(S)-4 WT(P)-1 FGM-7 THX-1



TECHNICAL REQUIREMENTS:-

1. REMOVE BURRS & SHARP EDGES.
2. PAINT & PROTECT AS PER HT00005 CAT. 'G'.

36TK PLATE	001	ADAPTER FLANGE 300NB (CLASS-150)		AA1011808188	Kg.	51.80
				AA10108		No.
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	A C	UNIT
				46 MATL. SPCN. 54		

PALAMURU RANGAREDDY-2 LIS	बी एच ई एल  BHARAT HEAVY ELECTRICALS LTD. BHOPAL					DRN	NAME	SIGN	DATE	NO. OF VAR.
						CKD	DKJ	—sd—	13.03.21	
						APPD	AR/HK	—sd—	13.03.21	
						APPD	AM	—sd—	13.03.21	
DEPT. HTE		UNTOL. DIMS. GR. REF.DRG.NO. 32000049014		SCALE 1:5	WEIGHT(K.G.) 29.86	REF.TO ASSY.DRG. 0-214-01-20101	ITEM NO. 018	NO.OF ITEM 001		
CODE 402										
TITLE ADAPTER FLANGE 300NB (CLASS-150)						DRAWING NO. 4-214-01-20102		REV. 00		
						SHT. NO. 01			NO. OF SHT. 01	

SIZE A4

Flanges quantities variant wise for OD/ID Cutting

Sl.	Drawing No.	Var.	Qty
01	22140118601	03	64
02	32101718402	04	24
03	32101718402	06	276
04	32101718402	07	24
05	32101718403	06	112
06	32101718403	07	24
07	32101718404	01	80
08	32101718404	02	40
09	32101718404	04	80
10	32101718404	06	148
11	32101718404	07	42
12	32101718404	08	208
13	32101718405	01	200
14	32101718405	02	100
15	32101718405	04	80
16	32101718405	06	100
17	32101718405	08	160
18	32101718406	06	16
19	32101718406	07	8
20	32101718407	01	20
21	32101718407	02	20
22	32101718407	04	16
23	32101718407	06	16
24	32101718407	08	16
25	32101718409	00	60
26	32101718410	05	32
27	32101718411	05	32
28	32101718412	03	32
29	32101718412	05	48
30	32101718413	03	32
31	32101718413	05	48
32	32101718414	00	48
33	32101718416	01	60
34	32101718416	02	20
35	32101718417	01	52
36	32101718417	02	20
37	32101718418	01	8
38	32101718418	02	16
39	32101818401	00	200
40	32101818402	01	40
41	32101818402	02	36
42	32101818501	02	112
43	32140114503	00	28
44	32302949014	02	108
45	32302949014	04	150
46	32302949014	05	42
47	32302949014	07	390
48	32302949014	09	14
49	32302949015	02	28
50	32302949015	07	200

SIR 2H20230007

51	32302949016	02	140
52	32302949016	03	58
53	32302949016	04	84
54	32302949016	05	172
55	32302949017	02	12
56	32302949017	04	12
57	32302949017	05	14
58	32302949017	07	12
59	32302949018	02	8
60	32302949018	07	26
61	32302949019	02	14
62	32302949019	03	8
63	32302949019	04	28
64	32302949019	05	21
65	32302949019	07	6
66	42101718402	00	56
67	42101818102	00	180
68	42101818103	00	180
69	42101818104	00	6
70	42101818402	00	124
71	42101818403	00	132
72	42101818404	00	14
73	42101818405	00	166
74	42101818406	00	174
75	42101818407	00	14
76	42101818408	00	60
77	42101818409	00	60
78	42101818410	00	8
79	42140118103	00	7
80	42140118105	00	7
81	42140118106	00	7
82	42140118107	00	7
83	42140118108	00	140
84	42140120101	00	7
85	42140120102	00	7

