

Enquiry and Specification for Tender No IADD/SVS/2019/OPA/ 63625 due on 22/04/2019

To,

Subject: Minor fabrication and supply of different types of SS components (SS316, S316L, SS316LN)

Dear Sir,

Please let us have your competitive rate for *Minor fabrication and supply of different types of SS components (SS316L, SS316 LN)* as per following details:

1. The scope of work involves:
 - Supply of different types of SS components (SS316L, SS316 LN) for RF coupler as per the technical specifications, detailed scope of work and acceptance criteria given in Annexure I and drawings given in Annexure II.
 - Safe packaging and transport to the Purchasers site.
2. The supplier shall prepare the detailed fabrication drawings and must submit the drawings to undersigned for approval before starting the fabrication. Digital copies of the 3D model and drawings shall be provided to the indenter, along with hard copy of the drawings.
3. The material manufacturers are eligible to bid if they operate under a quality management system ISO 9001 or equivalent with material manufacturing (stainless steel) in the scope of the certificate. The bidder shall attach a valid certificate to this effect with their bid. Preferably, they shall have their own sales office in India.
4. Please specify the complete details of the original manufacturer of the offered material and give complete contact details (name, phone, email, web address, fax, postal address). It is mandatory to specify original manufacturer of the material.
5. The bidder should have supplied various grades of authentic SS material components to any government research unit like BARC/RRCAT/DRDO/ISRO at least on one previous occasion. All the copies of earlier work orders or purchase orders that demonstrate the required experience should be attached with the quotations. **If the supplier is unable to demonstrate suitable experience indicated above, the offer is liable to be rejected.**
6. All the fabricated components will be part of a single RF coupler. So, the bidder has to quote for all the components together. Incomplete/partial quotations will not be accepted.
7. Pan no., VAT no., Tin no. of the bidder should be mentioned clearly on the quotation.

Rights and Privileges:

Indenter reserves the right to inspect any machinery or material or equipment furnished or used by vendor or to reject any, which is found defective in workmanship, quality, and design or otherwise unsuitable for use which is not in accordance with the specification.

Note: In case any further clarification is required, the bidders may contact the undersigned at phone no. 022-2559-1475.

Your quotation duly filled in the prescribed format, addressed to “Head, IADD, Van-de-Graff Bldg, BARC, Trombay, Mumbai – 400085” in a sealed envelope quoting tender number and due date, must reach on or before **22/04/2019** date by 3 PM **through speed post only**. On top of envelop it must also be written “kind attention to Sonal Sharma, IADD”.

Sonal Sharma
SO/E, IADD

Enclosures:

Specifications (Annexure I)
Drawings (Annexure II)

Annexure I

Technical specifications

1. Technical requirement:

This specification describes the requirements for manufacturing and supply of components (Vacuum tubes/port, sleeves, gaskets, seals and flanges) from supplier's material as per enclosed sketches (refer Annexure II). All the fabricated components will be part of coaxial RF coupler being developed at BARC. Precise machining of all the components is important. These components will be used in vacuum. Some of these components will be used in cryogenic environment.

2. Scope of work:

1. The supplier has to deliver items as per details mentioned in table 1.
2. The supplier has to prepare final manufacturing drawings as per preliminary drawings of Annexure II and send it for approval in soft and hard copy format. Approval of drawings does not relieve supplier from responsibility of meeting factory acceptance test.
3. The supplier will procure raw material and will send all its test reports for approval.
4. After manufacturing of components as per approved drawings, the supplier will prepare dimensional inspection report of all manufactured components.
5. The components to be supplied shall be free from surface cracks, porosity and other internal flaws.
6. Knife edges and sealing surfaces should not have any scratch/dent mark.
7. All surfaces should be chemically clean, free of dirt, grease, oil and chips and look aesthetically good. Surfaces shall be visibly inspected and wiped down with a white cloth. In order to be considered free of contamination, no discoloration should appear on the white cloth.
8. Packaging and shipment should be such that final component does not undergo shocks, deformations, surface damages, moisture or anything having negative effects on its design and operation intent.

3. Deliverables

Table 1: list of deliverable

S. No	Name & Description of Items	Material	Qty.	Sketches as per Annexure II
1	Vacuum Tube SS316L	UNS S31603	2(two)	Fig 1
2	Vacuum tube port for e pickup SS316L	UNS S31603	2(two)	Fig 2
3	CF flange SS316L	UNS S31603	2(two)	Fig 3
4	<u>Flange 1</u> : OD: 140.6 mm, thickness: 20mm SS316LN	UNS S31653	2(two)	Fig 4
5	<u>Flange 2</u> : OD: 168 mm, thickness: 18mm SS316LN	UNS S31653	2(two)	Fig 5
6	<u>Flange 3</u> : OD: 140mm, thickness: 13mm SS316LN	UNS S31653	2(two)	Fig 6
7	<u>Flange 4</u> : hexseal type(OD:172 mm, thickness: 22.4mm) SS316LN	UNS S31653	2(two)	Fig 7

4. Pre-dispatch inspection:

- Pre-dispatch inspection will be carried out at supplier's place by the purchaser or its representative.
- Supplier will keep all test certificates, dimensional inspection reports, instruments etc. and packaging ready at the time of PDI.

5. Acceptance Criteria:

- The supplier will send final manufacturing drawings for approval. After getting these drawings approved, the supplier will commence manufacturing.
- The chemical composition test certificates and ultrasonic test certificates as per ASTM standard of all raw materials should be submitted by the supplier for approval before commencement of manufacturing. The test certificate should be issued of government of India certified laboratory.
- In case of Original manufacturer's mill test certificate, the batch number on mill test certificate shall be traceable on each pieces of the manufactured component.
- Material found to satisfy and qualify the relevant ASTM standard shall be accepted. Clearance for manufacturing will be issued after marking/stamping of the accepted lot.

- The supplier has to start manufacturing after clearance of raw material and its accepted lot from purchaser.
- After completion of manufacturing, the supplier should provide dimensional inspection report for approval.
- The supplier has to fulfill all the scope of work mentioned in point 2, failing which the components may be rejected at any stage.
- Purchaser may reject offers which do not offer manufacturer's certificates. All such testing will be on account of the supplier and the test samples/ coupons shall be prepared from material of same lot, as intended to be supplied here. Purchaser reserves right for inspection for all above tests, to confirm results specified in mill test certificate.

6. MANDATORY TECHNICAL QUESTIONNAIRE

(TO BE FILLED IN BY THE BIDDER & SUBMITTED ALONGWITH THE OFFER)

Instruction-1 *Table A.1 and Table A.2: The rightmost column should be filled in by the Bidder.*

Instruction-2 *Failure to submit a fully completed, duly signed and stamped questionnaire will result in the rejection of the offer.*

Instruction-3 *Wherever, the response is Yes/No, please strike out the inapplicable response*

Table-A.1: General Information

Qualification of the Material Manufacturer

A.1.1.	Name of the Material Manufacturer	
A.1.2.	Contact details of the manufacturer (Give full address, email, phone and fax numbers.)	
A.1.3.	Do the manufacturers have their own corporate office in India? (Give full address, email, phone and fax numbers.)	Yes/No.
A.1.4	Do you have ISO 9001 or equivalent certification?	Yes/No

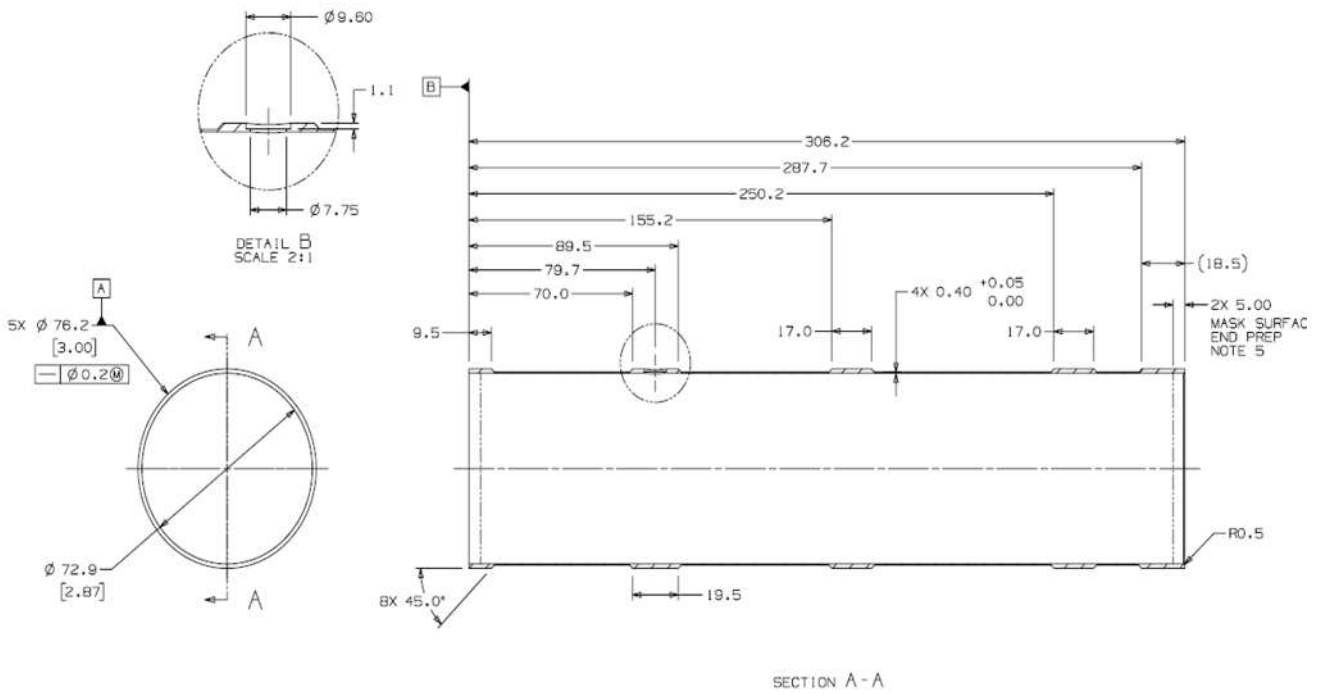
Qualification of Authorized Dealers of the Qualified Manufacturers

A.1.5	Is the Bidder duly authorized by the manufacturer for selling the material in India?	Yes/No
A.1.6	Have you attached the authorization certificate?	Yes/No

Table-A.2: Technical Information

S.No.	Question	Response
A.2.1.	Have you offered grade SS316, SS316L, SS316LN and SS304?	Yes/No
A.2.2.	Whether you will provide mill certificate or test certificate issued by an approved lab?	Mill certificate / test certificates by approved lab (strike out the inapplicable response)
A.2.3.	Do you have testing facility required for testing material as specified in the specifications? If not where do you propose to do these tests?	Yes/No If no then provide name, address and contact details of the material testing lab.
A.2.4.	Is the temper of material "solution annealed"	Yes/No
A.2.5. composition,	Will you provide certificates for Chemical Mechanical properties, Ultrasonic Examination and Intergranular corrosion test?	Yes/No

Annexure II

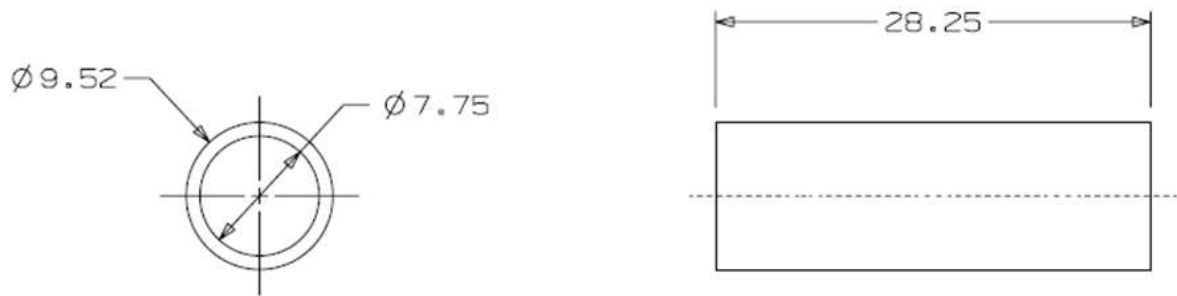


NOTES (UNLESS OTHERWISE SPECIFIED):

1. WELDMENT MUST BE FREE OF DIRT, GREASE, OIL, AND CHIPS.
2. WELDMENT TO BE FREE OF ALL SHARP EDGES, CORNERS, AND BURRS. A MAXIMUM OF 0.5MM X 45° TS ALLOWED.
3. BRAZE ITEM 5 BEFORE WELDING.
4. LEAK CHECK. NO LEAK SHALL BE DETECTABLE ON THE MOST SENSITIVE SCALE OF A HELIUM LEAK DETECTOR WITH A MINIMUM SENSITIVITY OF 2×10^{-10} MBAR X LITER/SEC. THE VACUUM LEVEL DURING THE LEAK CHECK SHALL BE LESS THAN 1×10^{-9} TORR.
5. AS PART OF FERMILAB'S ACCEPTANCE CRITERIA, MATERIAL CERTIFICATION MUST BE SUPPLIED, THE WELDMENT WILL NOT BE ACCEPTED WITHOUT MATERIAL CERTIFICATIONS.
6. THE FOLLOWING DOCUMENTS WILL BE SUPPLIED WITH DELIVERY OF WELDMENT:
 - A. WELD PROCEDURE SPECIFICATIONS (WPS).
 - B. PROCEDURE QUALIFICATION RECORDS (PQR).
 - C. WELDER PERFORMANCE QUALIFICATIONS (WPQ).
 - D. EXAMINATION REPORT.
7. TRAILING ZEROS ON DIMENSIONS DENOTE TOLERANCE.

Note: all the dimensions are in mm

Fig 1. Stainless steel (SS 316 L) tube

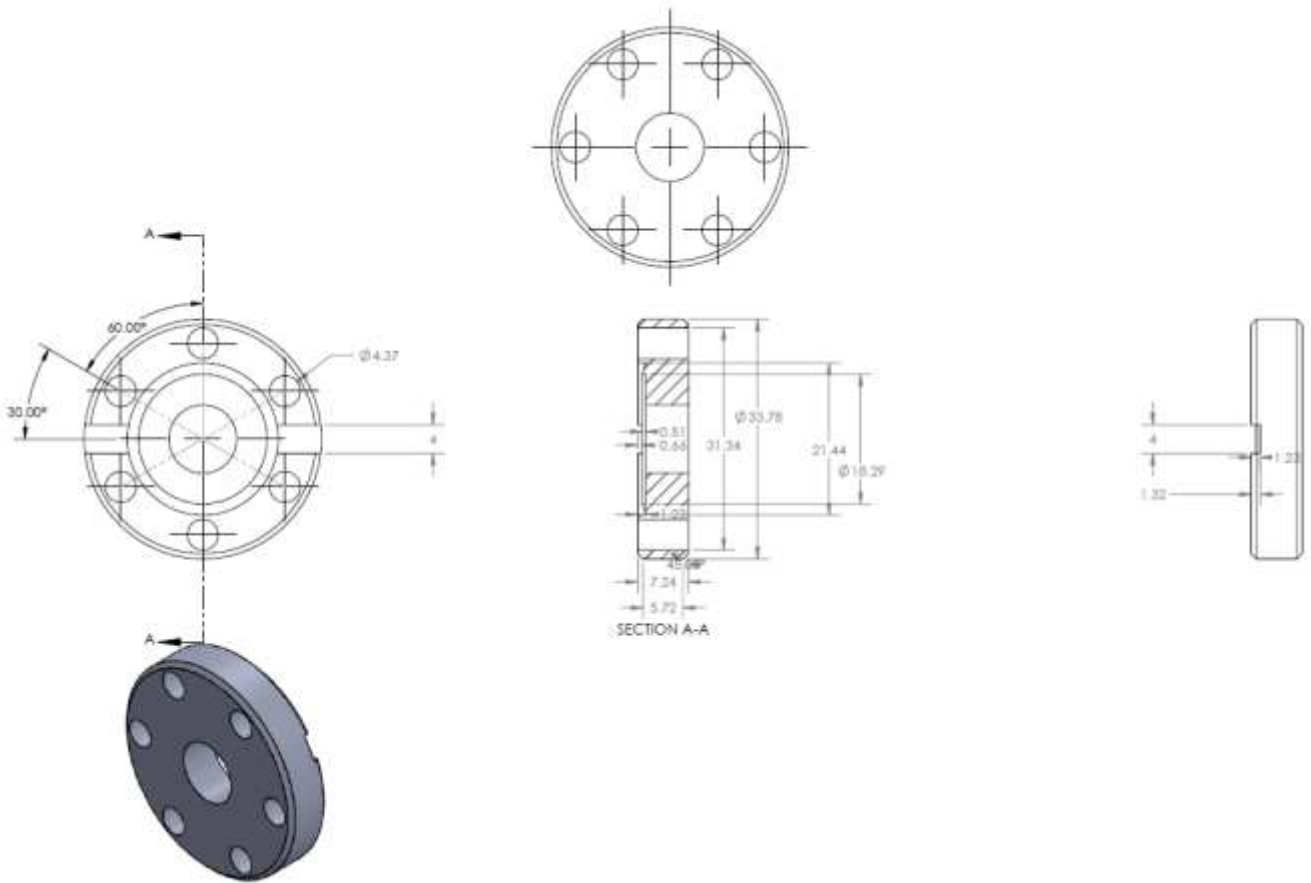


NOTES (UNLESS OTHERWISE SPECIFIED):

1. PART MUST BE FREE OF DIRT, GREASE, OIL, AND CHIPS.
2. PART TO BE FREE OF ALL SHARP EDGES, CORNERS, AND BURRS.
3. TRAILING ZEROS ON DIMENSIONS DENOTE TOLERANCE.
4. DIMENSIONS IN [] ARE IN INCHES.

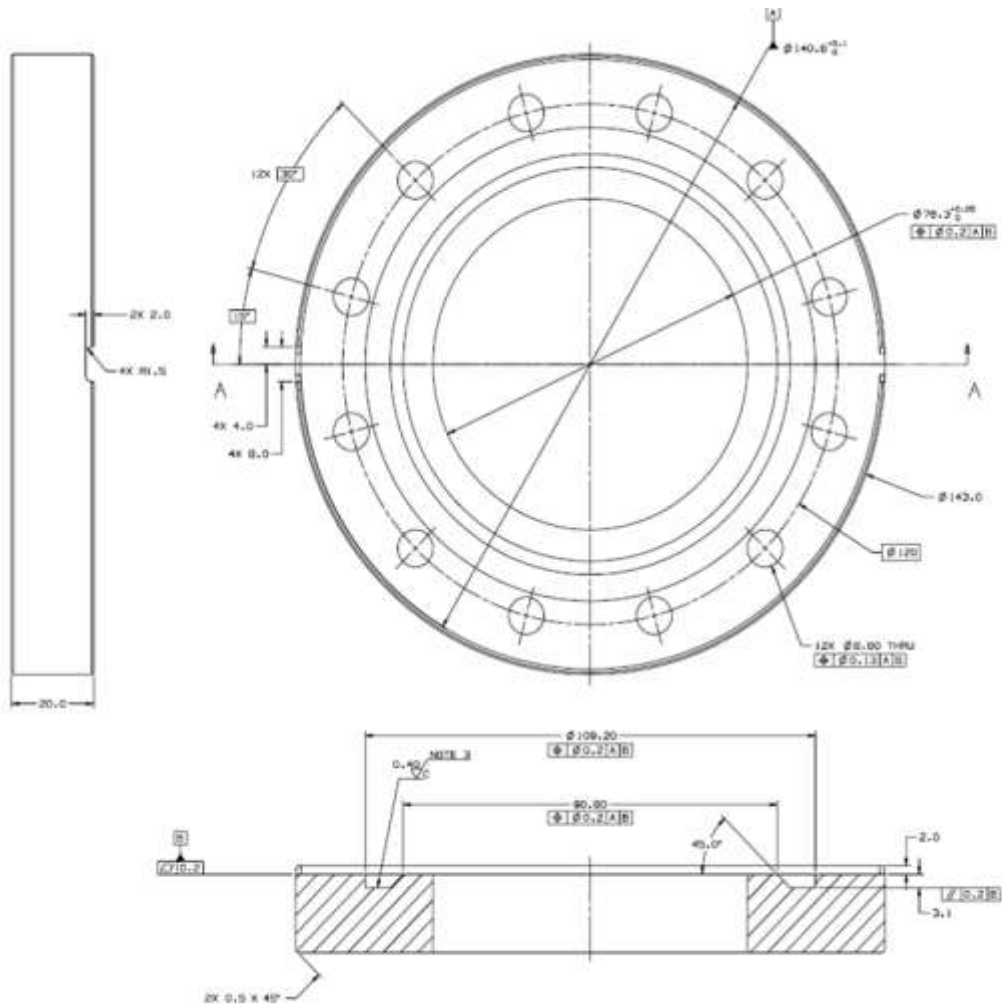
Note: Here all the dimensions are in inches

Fig 2 Stainless steel (SS316 L) tube port for e pickup



Note: all the dimensions are in mm

Fig 3 Stainless steel (SS316 L) CF flange



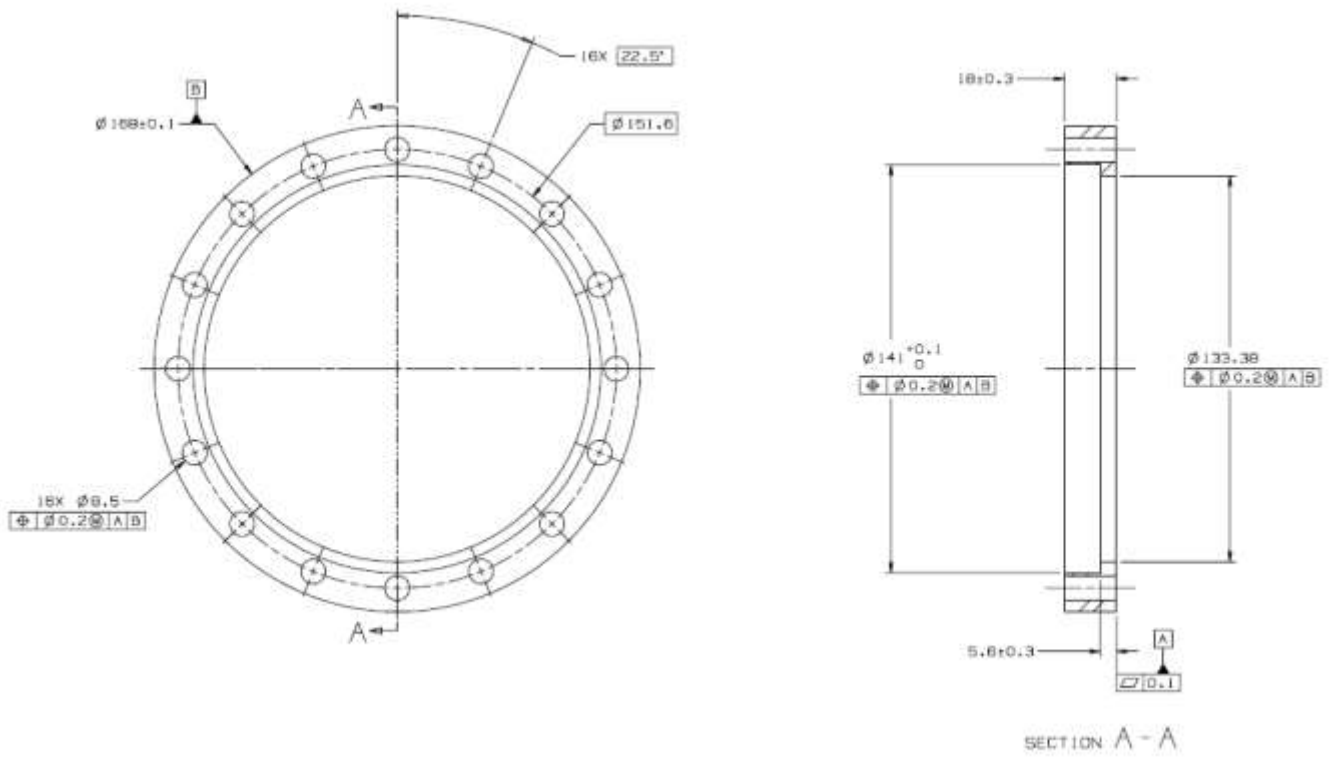
SECTION A-A

NOTES (UNLESS OTHERWISE SPECIFIED):

1. PART MUST BE FREE OF DIRT, GREASE, OIL AND CHIPS.
2. PART TO BE FREE OF ALL SHARP EDGES, CORNERS, AND BURRS.
3. SEALING SURFACE TO BE FREE OF SCRATCHES, DENTS AND RADIAL SCORING.
4. VENDOR MUST SUPPLY MATERIAL CERTIFICATION.
5. TRAILING ZEROS ON DIMENSIONS DENOTE TOLERANCE.

Note: all the dimensions are in mm

Fig 4: Stainless steel SS316 LN flanges (flange 1)

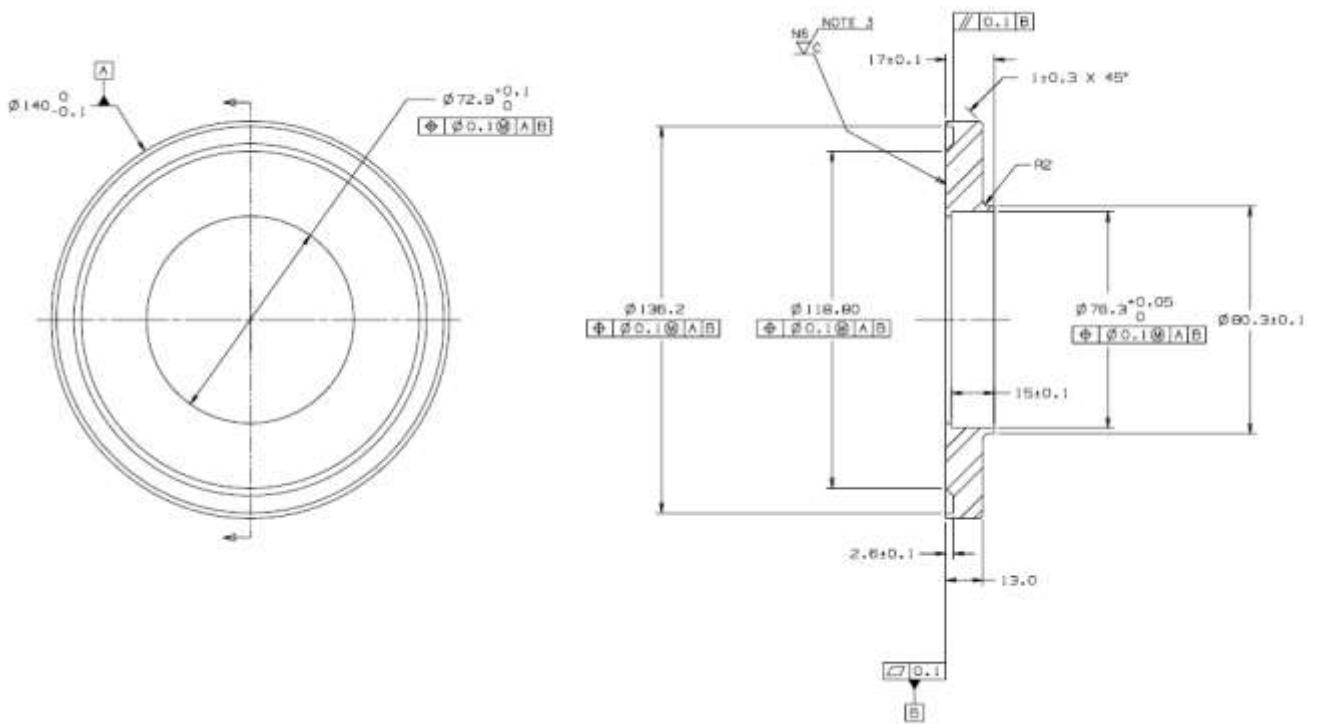


NOTES (UNLESS OTHERWISE SPECIFIED):

1. PART TO BE FREE OF DIRT, GREASE, OIL, AND CHIPS.
2. PART TO BE FREE OF ALL SHARP EDGES, CORNERS, AND BURRS.

Note: all the dimensions are in mm

Fig 5: Stainless steel SS316 LN flanges (flange 2)

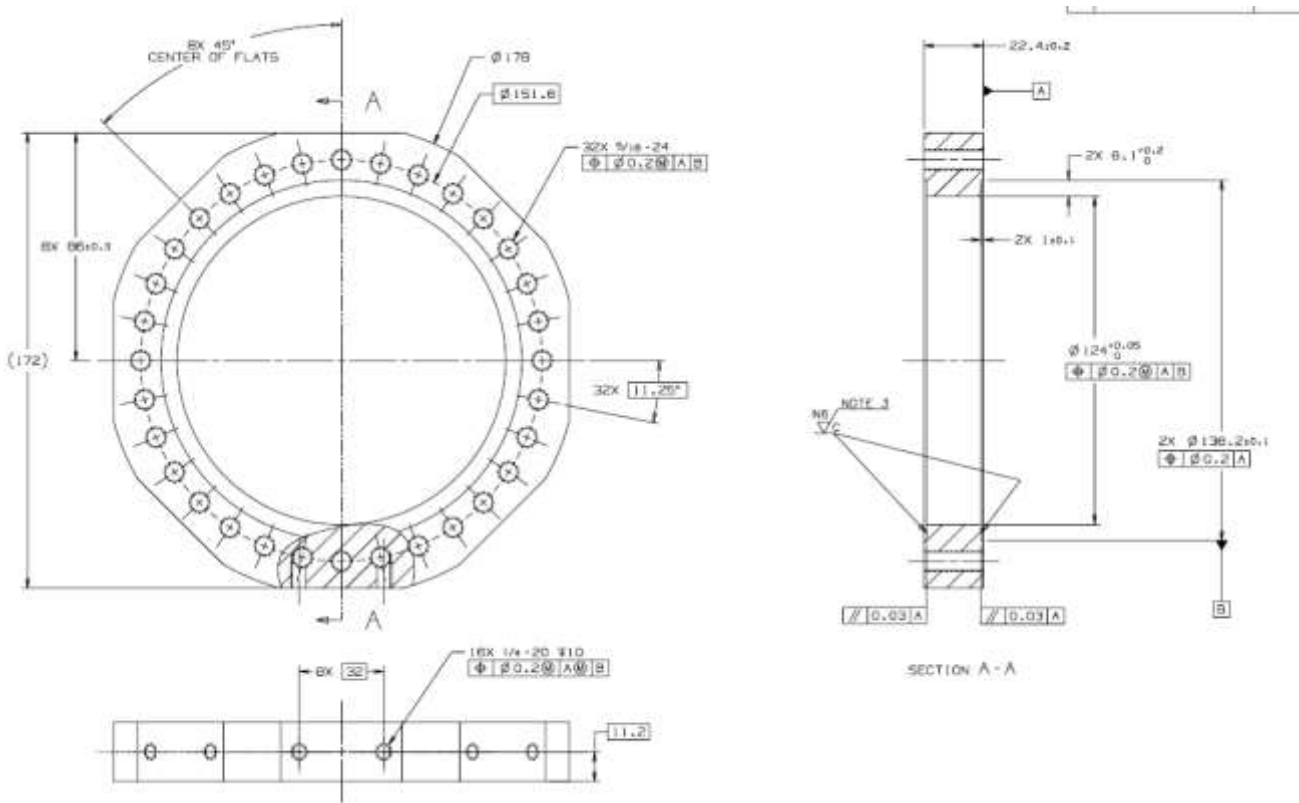


NOTES (UNLESS OTHERWISE SPECIFIED):

1. PART TO BE FREE OF DIRT, GREASE, OIL, AND CHIPS.
2. PART TO BE FREE OF ALL SHARP EDGES, CORNERS, AND BURRS.
3. SEALING SURFACES MUST BE FREE OF SCRATCHES AND NICKS WITH NO RADIAL SCORING.

Note: all the dimensions are in mm

Fig 6: Stainless steel SS316 LN flanges (flange 3)



NOTES (UNLESS OTHERWISE SPECIFIED):

1. PART MUST BE FREE OF DIRT, GREASE, OIL AND CHIPS.
2. PART TO BE FREE OF ALL SHARP EDGES, CORNERS, AND BURRS.
3. SEALING SURFACES MUST BE FREE OF SCRATCHES AND NICKS WITH NO RADIAL SCORING.

Note: all the dimensions are in mm

fig 7: Stainless steel SS316 LN flanges (flange 4)