



भारत सरकार GOVERNMENT OF INDIA
अंतरिक्ष विभाग DEPARTMENT OF SPACE
द्रव नोदन प्रणाली केंद्र LIQUID PROPULSION SYSTEMS CENTRE
तिरुवनंतपुरम THIRUVANANTHAPURAM - 695 547



घरेलू लोक निविदा (द्विभाग) सं . TM00 2022 036759 01 का शुद्धिपत्र.1
CORRIGENDUM No.1 To Public Tender (Two Part) No.TM00 2022 036759 01

शंक्राकार प्रवाह बनाने की मशीन-एक सेट की आपूर्ति इसके संस्थापन एवं प्रवर्तन के लिए घरेलू लो.नि(द्विभाग) सं टीएम 00 2022 036759 दिनांक 03.11.2022।

Public Tender (Two Part) No.TM00 2022 036759 01 dated 03.11.2022 for Supply, Installation and Commissioning of a conical flow forming machine - 1 Set

के स्थान पर In Place of	पढ़ें To be read as
Tender Due date: 13.12.2022, 14.30 hrs Tender opening: 14.12.2022, 10.30 hrs	Tender Due date: 24.01.2023, 14.30 hrs Tender opening: 25.01.2023, 10.30 hrs
-	आरेखण संलग्न है। Drawings attached

निविदा के विवरण एल पी एस सी के वेबसाइट www.lpsc.gov.in पर अपलोड किये गये हैं। यदि आप इच्छुक हैं तो इन्हें पढ़ें और अपना प्रस्ताव निबंधन एवं शर्तों के अनुसार प्रस्तुत करें।

Details of the tender have been uploaded in LPSC website www.lpsc.gov.in. If you are interested, please go through the same and submit your offer as per the terms and conditions.

15.11.2022

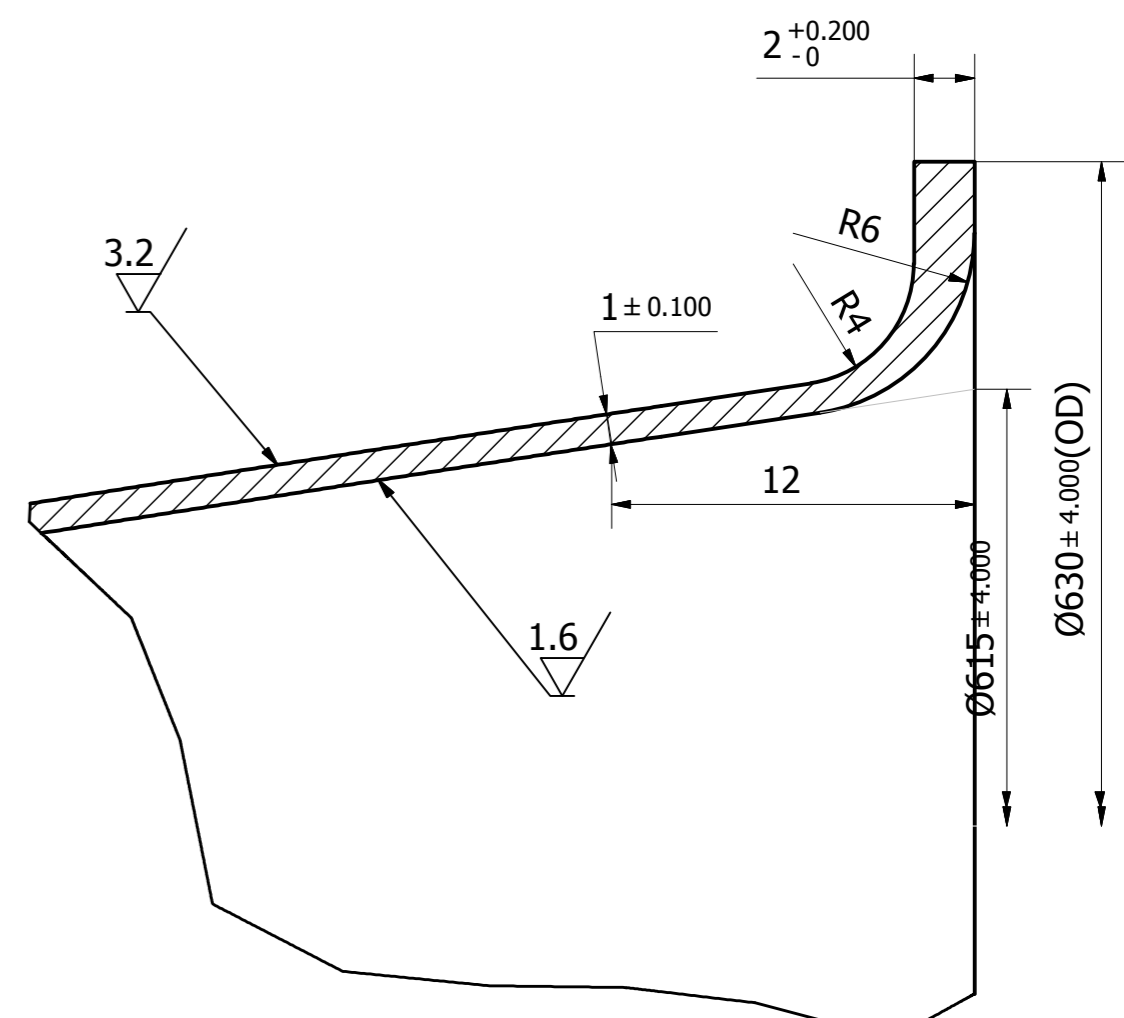
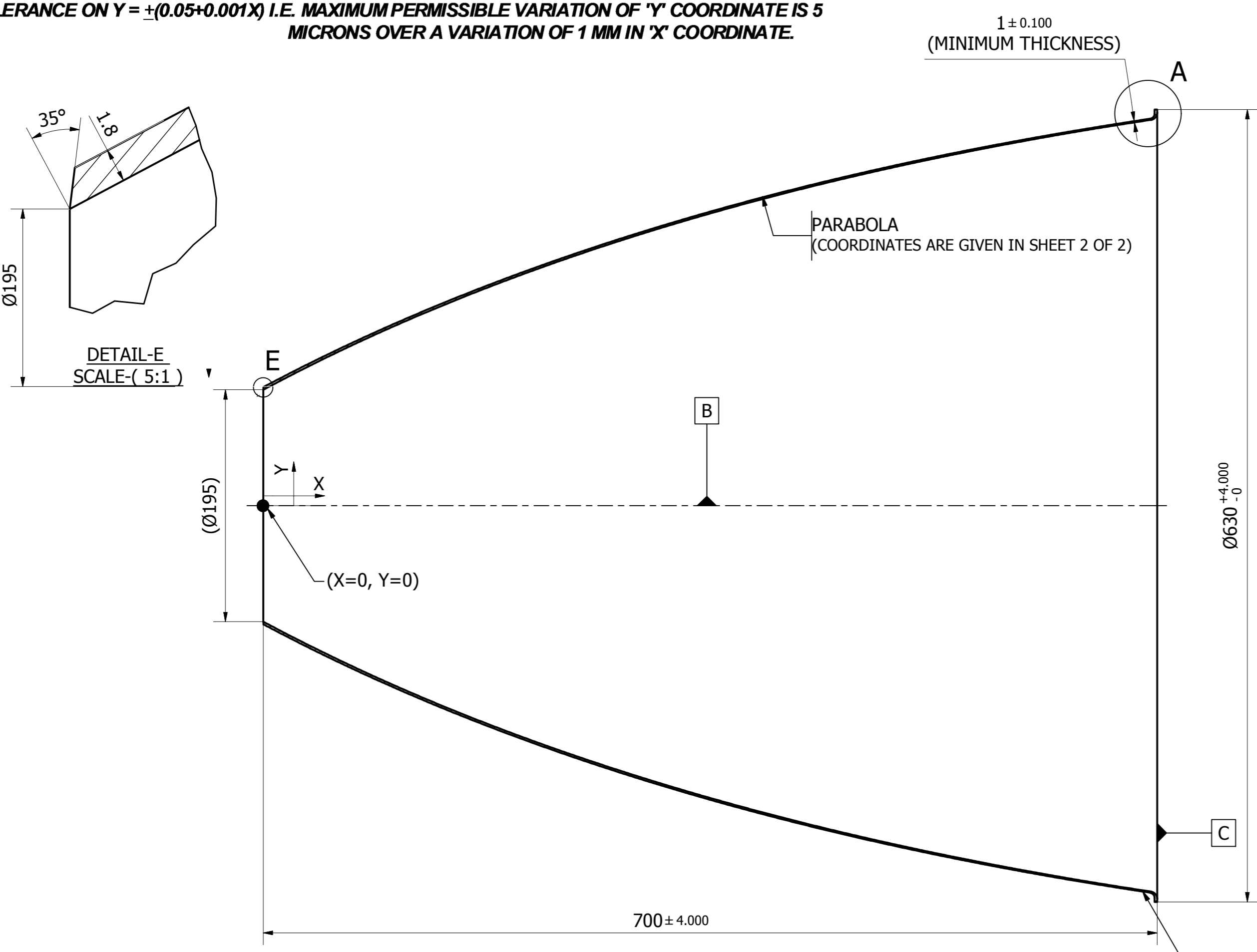
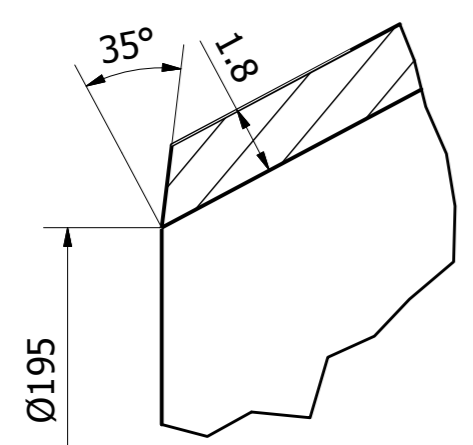
(हस्ता./Sd/-)
प्रधान, क्रय व भंडार Head, Purchase & Stores

LENGTH IN mm OF SHORTER SIDE OF ANGLE	UPTO 6	± 1'
	6 - 30	± 30'
LENGTH IN mm OF LONGER SIDE OF ANGLE	UPTO 6	± 1'
	6 - 30	± 30'
LENGTH OR DIA	UPTO 6	± 0.1
	6 - 30	± 0.2
LENGTH OR DIA	30 - 120	± 0.3
	120 - 315	± 0.5
LENGTH OR DIA	315 - 1000	± 0.8
	1000 - 2000	± 1.2
LENGTH OR DIA	2000 - 4000	± 2.0
	4000 ABOVE	± 3.0

EQUATION OF PARABOLA

$$x^2 + 2.7581044869 y^2 + 3.3215083844 xy - 4003.6681239713 x + 6390.7650223597 y - 611839.3096268440 = 0$$

TOLERANCE ON Y = ±(0.05+0.001X) I.E. MAXIMUM PERMISSIBLE VARIATION OF 'Y' COORDINATE IS 5 MICRONS OVER A VARIATION OF 1 MM IN 'X' COORDINATE.



DETAIL AT A SCALE (4:1)

TABLE FOR VARIATION OF THICKNESS	
(TO BE CHECKED AT 16 LOCATIONS EQUISPACED, CIRCUMFERENTIALLY)	
AXIAL DISTANCE (MM)	THICKNESS (mm) ± 0.10
0	1.80
50	1.73
100	1.65
150	1.57
200	1.50
250	1.45
300	1.40
350	1.35
400	1.30
450	1.25
500	1.20
550	1.15
600	1.10
650	1.05
700	1.00

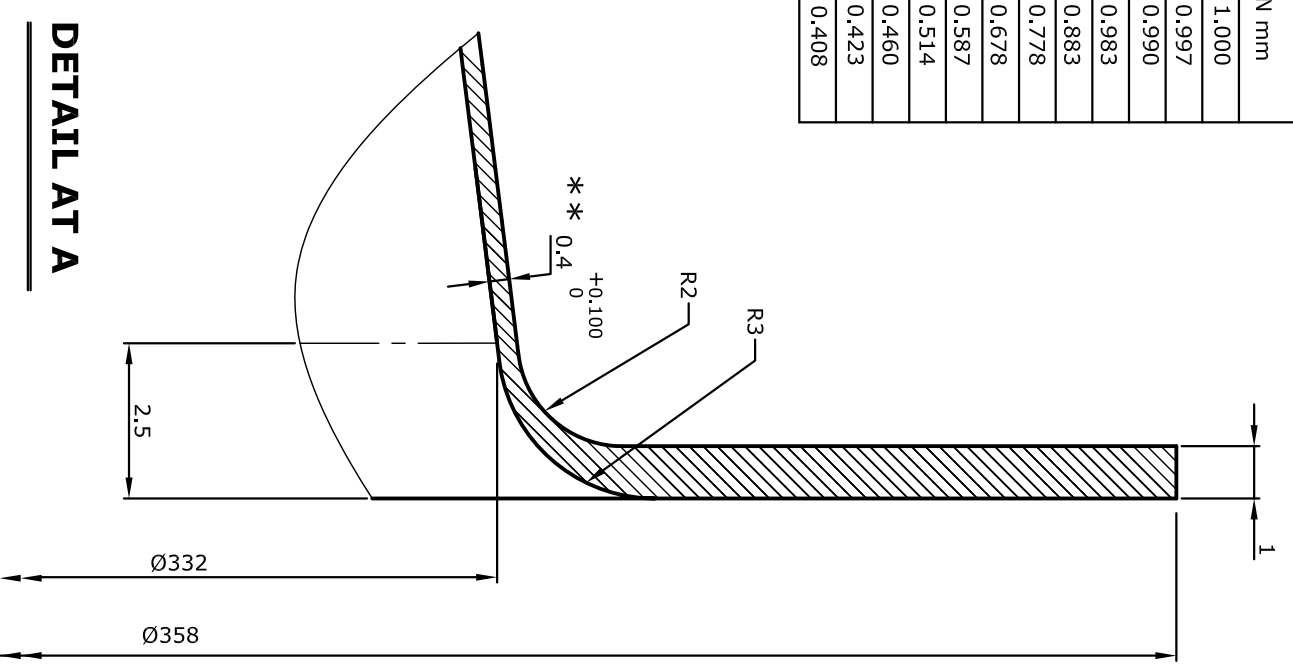
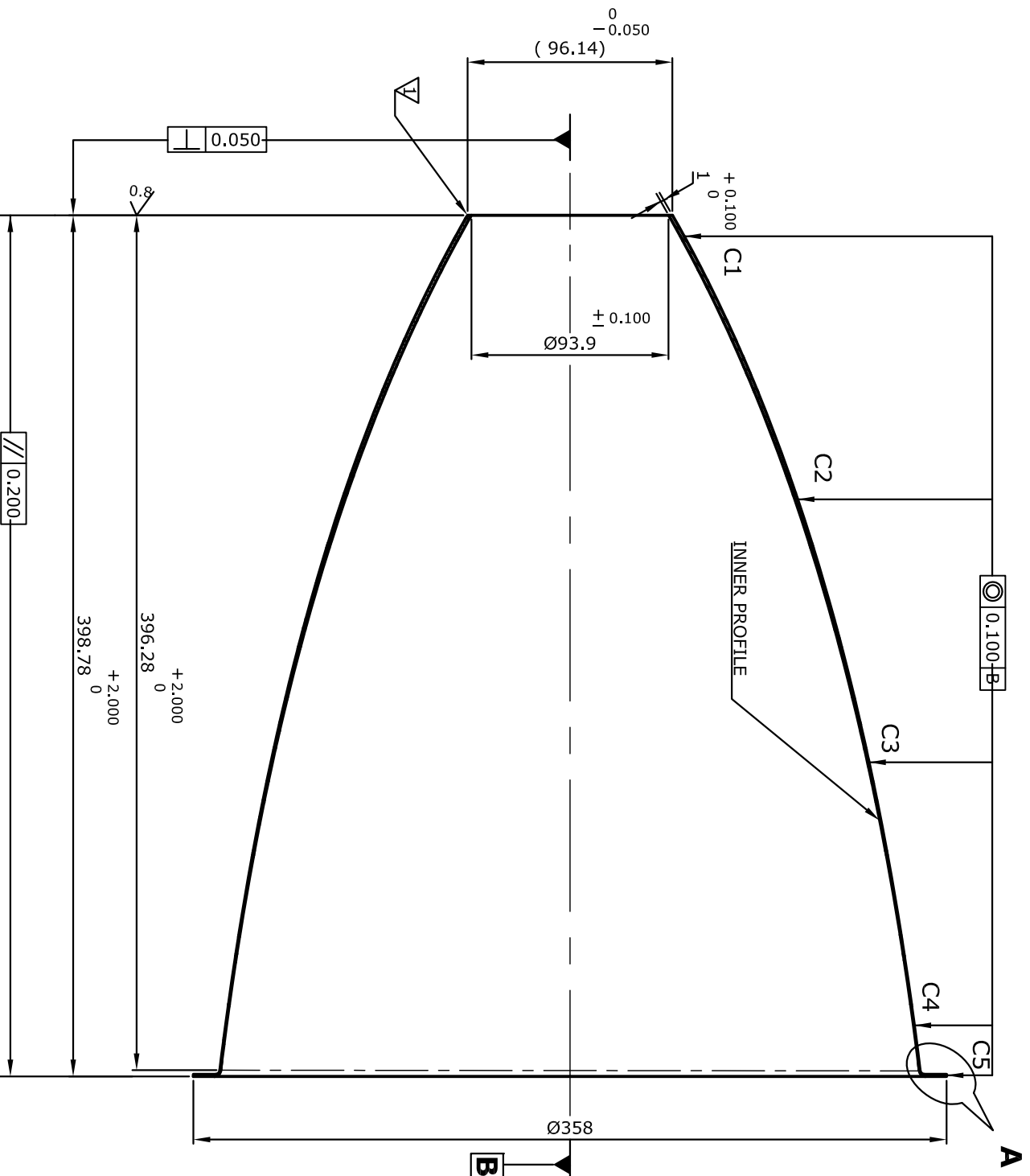
NOTES

1. THICKNESS VARIATION IS LINEAR ALONG THE AXIS.
2. INSIDE AND OUTSIDE SURFACES SHOULD BE SMOOTH AND FREE FROM DENTS AND TOOL MARKS.
3. 'X' COORDINATES AT 5mm INTERVALS AND CORRESPONDING 'Y' COORDINATES OF THE INNER CONTOUR IS GIVEN IN EXCEL SHEET.
4. THE CONTOUR SHOULD BE CONCENTRIC TO THE AXIS WITHIN 1mm.
5. OVALITY ON DIAMETER SHOULD BE WITHIN 0.8% IN FREE CONDITION.

ENGRAVE PART IDENTIFICATION

PART No: 01		TITLE Nozzle Divergent 1	
		GOVERNMENT OF INDIA INDIAN SPACE RESEARCH ORGANISATION LIQUID PROPELLION SYSTEMS CENTRE VALIAMALA TRIVANDRUM-695547	
DO NOT SCALE THE DRAWING ASK IF IN DOUBT ALL DIMENSIONS ARE IN mm.	MATERIAL KC20WN	SURFACE TREATMENT SURFACE FINISH <i>(Ra in μm)</i> 3.2(1.6)	QTY PER ASSY 1
CONCENTRICITY PERPENDICULARITY ANGULARITY PARALLELISM	General tolerance _____ Thread tolerance _____ Thread chamfer & under cut. _____	MARKING	CALCULATED MASS (kg) 12.6
THIS DRAWING IS AN EXCLUSIVE PROPERTY OF ISRO AND SHALL NOT BE COPIED, REPRODUCED OR COMMUNICATED TO OTHERS WITHOUT PROPER AUTHORISATION	Radii not specified _____ Chamfers not specified _____	DGN. _____ D.CHD. _____ DRN. _____ CHD. _____ APPD. _____ SIGN. _____ DATE _____	DRAWING No. _____ REV. No. 01 FORMAT A3
SCALE		SHEET 1 OF 2	

Sl. No.	X IN mm	THICKNESS IN mm
1	0	1.000
2	35	0.997
3	70	0.990
4	105	0.983
5	140	0.883
6	175	0.778
7	210	0.678
8	245	0.587
9	280	0.514
10	315	0.460
11	350	0.423
12	385	0.408



DETAIL AT A

- NOTE:**
1. X & Y CO-ORDINATES ARE GIVEN IN EXCEL SHEET
 2. INSIDE AND OUTSIDE SURFACES SHOULD BE VERY SMOOTH, FREE FROM ANY DENT & TOOL MARKS
 3. DO NOT ENGRAVE THE IDN. NO., USE MARKING PEN
 4. CONCENTRICITY WITH RESPECT TO THE AXIS AT C1, C2, C3, C4, C5 SHOULD BE INSPECTED, HOLDING THE JOB WITH SUITABLE FIXTURE
 5. ROUNDNESS SHOULD BE WITHIN

INNER PROFILE: $X^2 + 22.08288 Y^2 + 9.39849 XY - 6714.61959 X + 10040.40076 Y - 97875.16005 = 0$

- AT C1- 0.05mm - 10 mm FROM START
- C2, C3 & C4- 0.20 MM - 125 mm APART
- C5- 0.10 mm
- * * . MINIMUM THICKNESS TO BE MAINTAINED
- ▽ MAINTAIN SHARP CORNER

DO NOT SCALE THE DRAWING. ASK IF IN DOUBT. ALL DIMENSIONS ARE IN mm.		MATERIAL: COLUMBIUM ALLOY (C-103)		SURFACE TREATMENT	
Concentricity Perpendicularity Angularity Parallelism		General tolerance JS or js 12		SURFACE FINISH: (0.8/1.6)	
This drawing is the exclusive property of ISRO and shall not be copied, altered or reproduced in any form without proper authorization.		Thread tolerance		MARKING	
Radial not specified		Thread chamfer & under cut		Qty./per Assembly: 1	
Chamfers not specified		Chamfers not specified		Calculated weight: 1.793	
Lpsc		DGN.		CHD.	
TITLE: Nozzle Divergent 2		D.G.HD.		APPD.	
GOVERNMENT OF INDIA		DRN.		SIGN.	
INDIAN SPACE RESEARCH ORGANISATION		DATE		DATE	
LIQUID PROPELLION SYSTEMS CENTRE		SCALE: 1:2		SHEET: 1	
VALAMMALA TRIVANDRUM - 695 547		DRG.NO.		OF: 3	
GROUP: ESEG/SPEG		ISSUE No: 00		FORMAT: A2	
REVISION		MODIFICATION ORDER No & DATE			
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