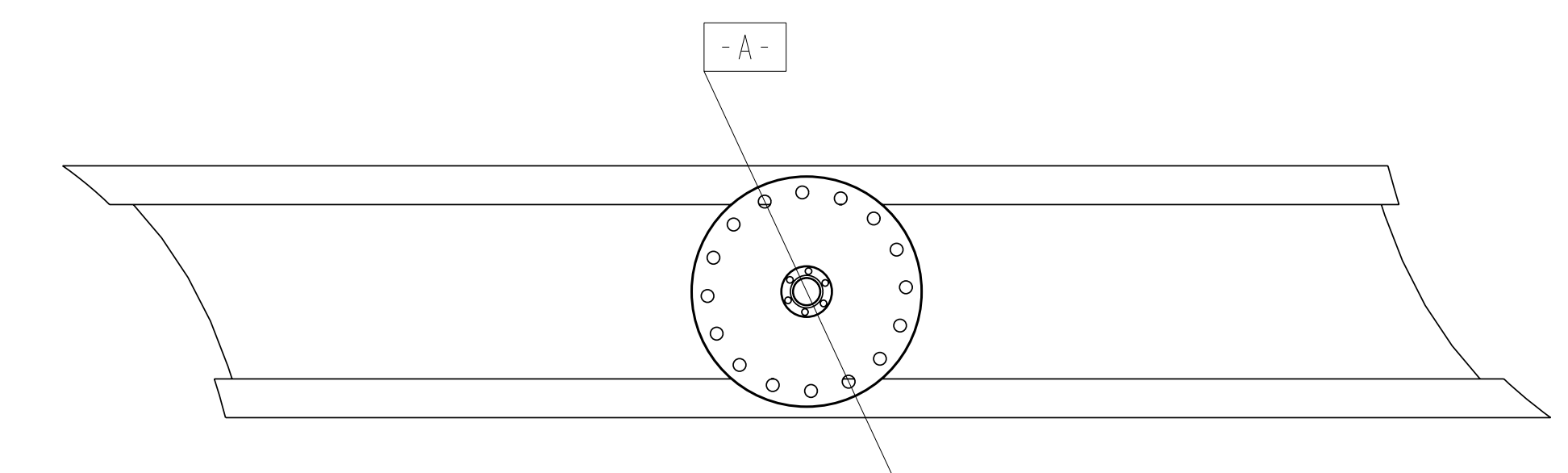
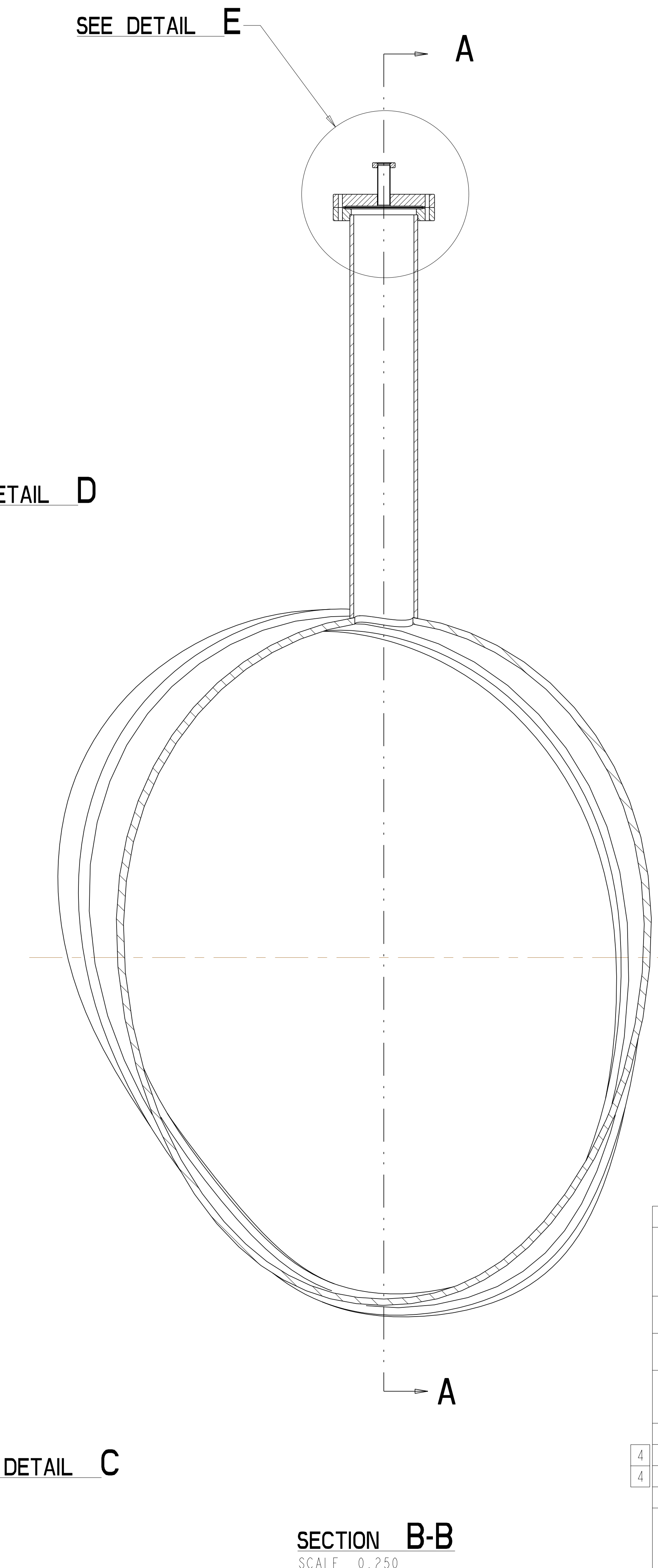
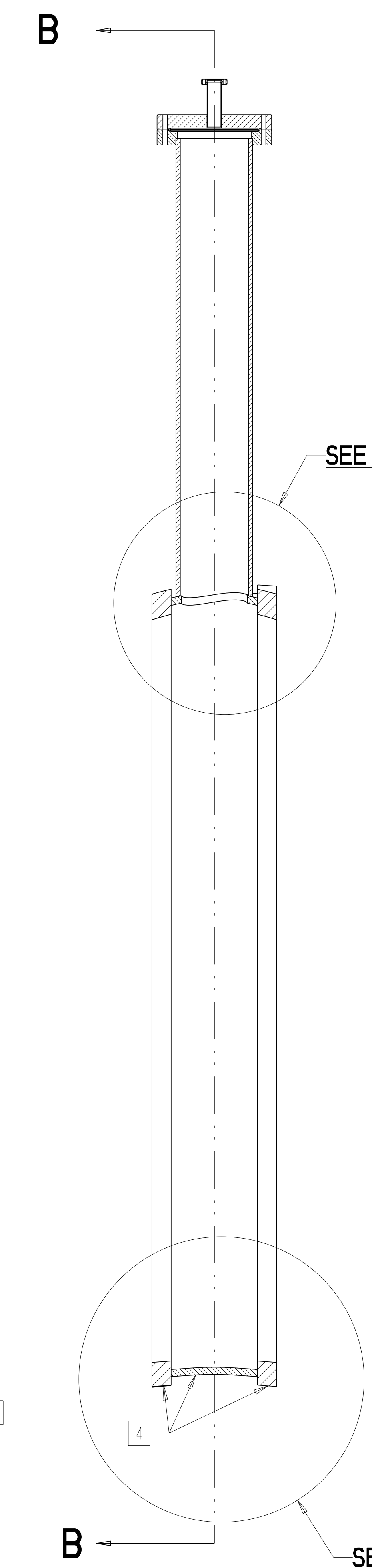
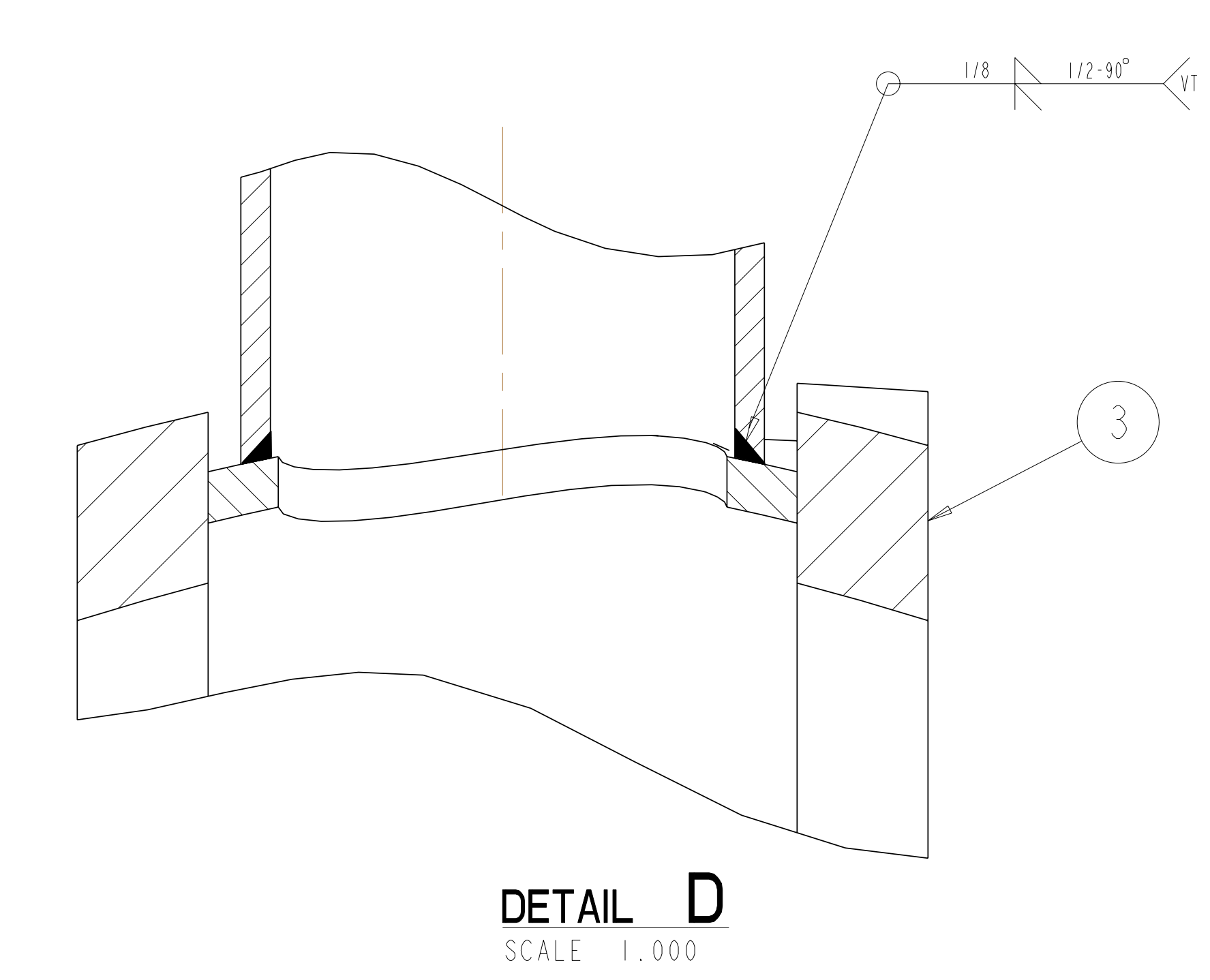


ECN-5134 only applies to VVSA #3. RFD-12-022 approved replacement flanges made of Inconel at 1.25" vs. original thickness of 1.00" => with this change the overall face-to-face distance will be 7" vs. the original 6.5" (Rev 1-d)



- NOTES:**
1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
 2. DIMENSIONS ARE IN INCHES.
 3. FABRICATION, INSPECTION, AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION NCSX-CSPEC-121-02 AND STATEMENT OF WORK NCSX-SOW-121-03.
 4. PROFILE TOLERANCE IS BILATERAL, i.e., ±0.1875 EITHER SIDE OF REFERENCE SURFACE.
 5. LEAK CHECK ITEM -8 (REDUCING NIPPLE) IS OPTIONAL. BLANK FLANGE MAY BE SUBSTITUTED.

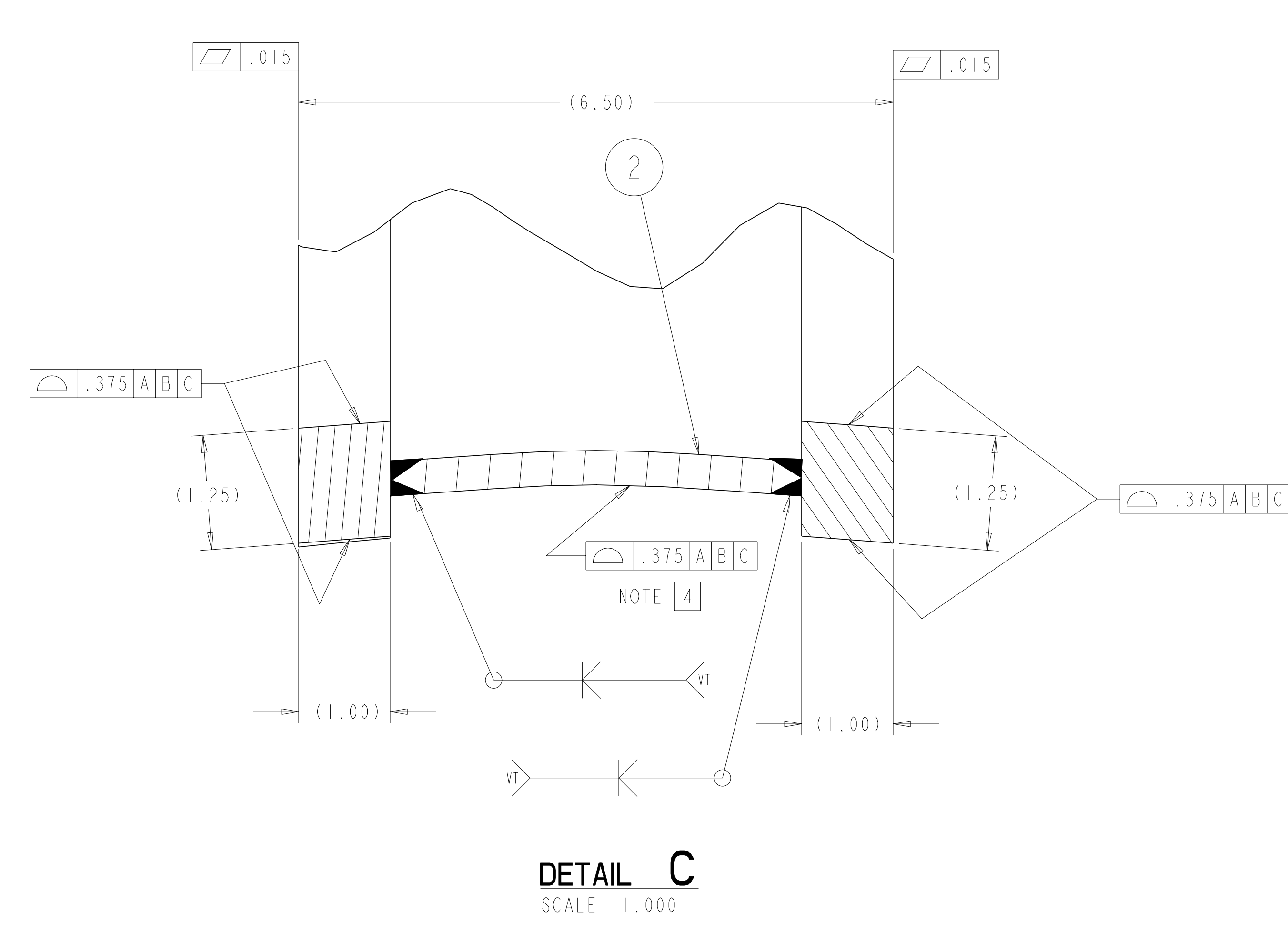


Rev 1-a: ECN-4972 (RFD-12-002R1) approved substitution of Schedule 10 for Schedule 40 piping – Applicable to All 3 VVSAs.

Rev 1-b: ECN-5114 (RFD-12-015) approved leaving excess stock on the face to provide additional flexibility for final setup. Accordingly, the 6.5" height and 1.0 thickness reference dimensions are considered as suggestions – Applicable to All 3 VVSAs.

ECN-5082. Requirement originally included grooves to facilitate leak checking by vendor. However, vendor elected another means of leak checking and therefore the grooves are no longer required. Specifically, this ECN eliminated the leak checking groove on SE121-014 (Rev 1-c) and SE1221-091 (Rev 0-a). Additionally, this ECN added a missing weld symbol to SE121-004 (Sheets 4 through 19) for joining the port extensions to the vessel (Rev 2-d).
(See ECN-5082 for details)

RELEASED FOR FABRICATION / INSTALLATION
 PPPL Drafting:



REV	DESCRIPTION	BY	DATE	CHK	DEPT	DATE	PE	REQ	DATE	ORNL	DOE	DATE
1	ADDED NOTE 5	GHJ	2/27/05	MJC								
2	REVISED PER ECN-4945	GHJ	2/27/05	MJC								

AR	CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO
		-9	WELD, FILLER METAL			9
	I	FA06000133	6 INCH REDUCING NIPPLE	VARIAN VACUUM TECHNOLOGIES 121 HARTWELL AVE. LEXINGTON, MA 02421 OR EQUIVALENT		8
	I	191013	GASKET, COPPER 4.01 ID, PKG 10 REF 6.00 FLG			7
	I	190058	BOLT SET 4.63 OD & 6.00 FLG 1/2 PT BOLT, SILVER PLTG, PKG 25	MDC VACUUM PRODUCTS CORP. 23842 CABOT BOULEVARD HAYWARD, CA. 94545-1651 OR EQUIVALENT		6
	I	130026	CONFLAT, 6.00 O.D. TAPPED			5
	AR	-4	PIPE 3 1/2 SCH 40			4
4	2	-3	SPACER FLANGE	UNS N06625		3
4	1	-2	SPACER			2
	AR	-1	SPACER WELDMENT			1

WELDING ENGINEER
 APPROVED: R. PARSELLS DATE: 6/04

SCALE	NOTED	DES	PL	GORANSON	08/03
	TOLERANCES UNLESS OTHERWISE SPECIFIED	DRW	G.H. JONES	08/03	
	FRACTIONS ± .01	CHK	M.J. COLE	6/04	
	XX DECIMALS ± .01	SECT			
	XXX DECIMALS ± .005	DEPT			
	ANGLES ± 0°15'	PE			
	BREAK SHARP EDGES .06 MAX	CR			
	FINISH .125 UNLESS OTHERWISE SPECIFIED	PJ			
		RED			
		PPPL	DRFT J. SIEGEL	6/04	

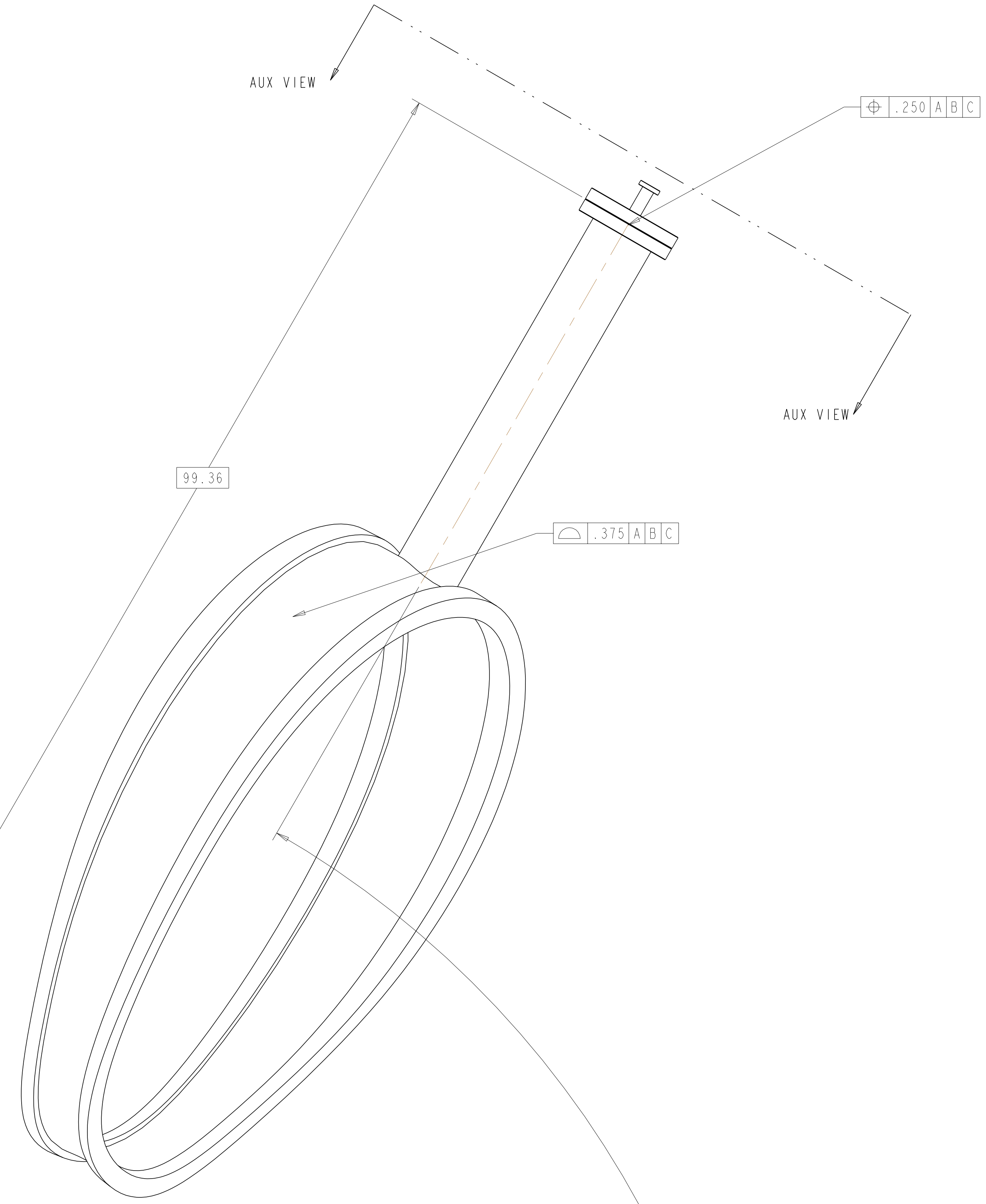
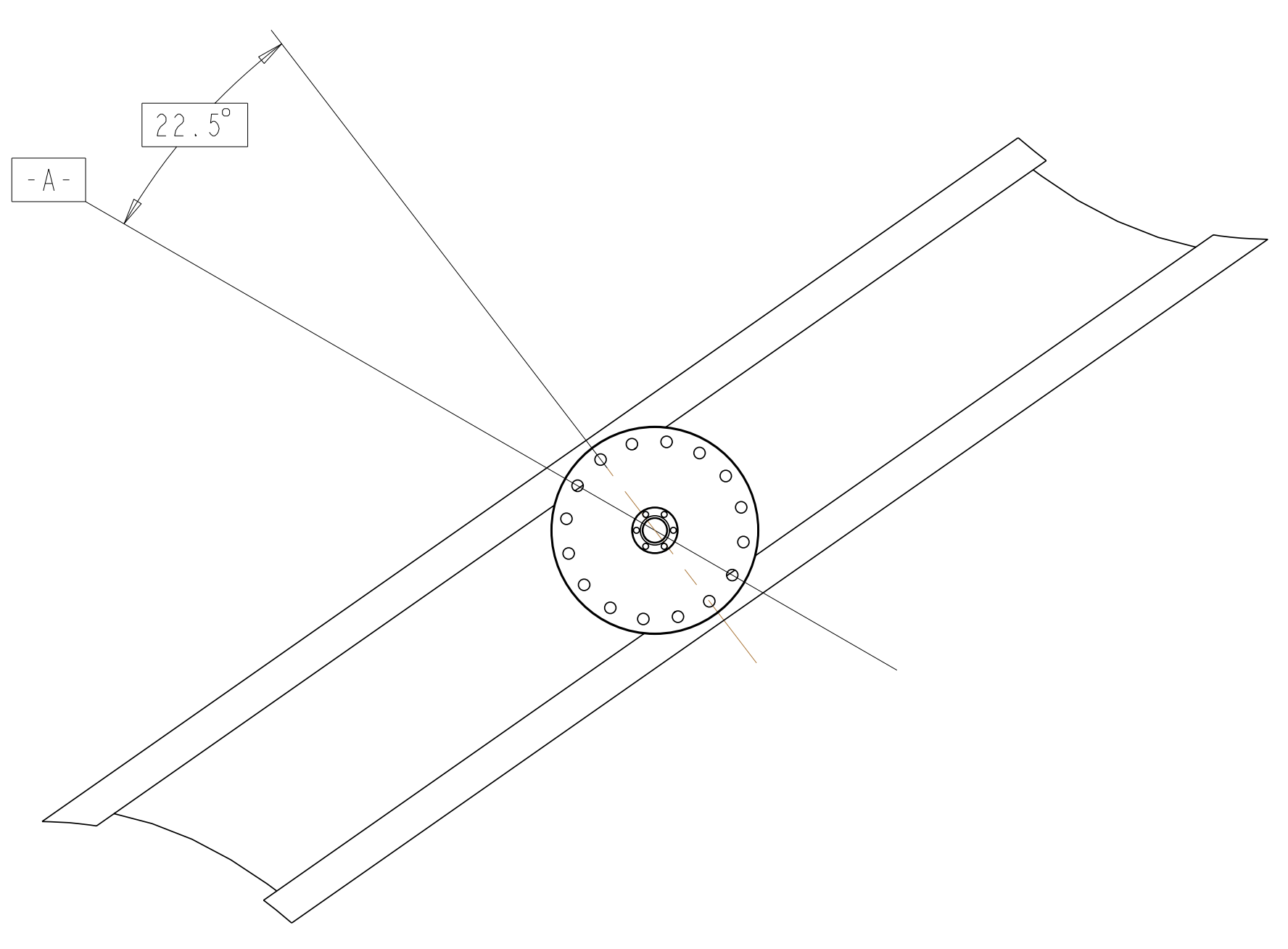
UT-BATTELLE	NATIONAL COMPACT STELLARATOR EXPERIMENT
VACUUM VESSEL SPACER WELDMENT	
VERSION NO.	PLANT
3	X-10
BLDG	FL
5700	3
SHT	OF
1	2
TYPE	CLASS
S	U
REV	REV
1	1

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P THIS DRAWING PRODUCED ON PRO-ENGINEER

H
G
F
E
D
C
B
A

FOR NOTES AND PARTS LIST SEE SHEET 1



DATUM A = PLANE THRU "XY"
 DATUM B = PLANE THRU "XZ"
 DATUM C = PLANE THRU "YZ"

SCALE 0.250

**RELEASED FOR
 FABRICATION / INSTALLATION**
 PPPL Drafting:

UT-BATTELLE		Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee					
NATIONAL COMPACT STELLARATOR EXPERIMENT							
VACUUM VESSEL SPACER WELDMENT							
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS	
1	X-10	5700	3	2 2	S	U	
RELEASE LEVEL Fabrication		SEI21-014					

-B-

SEI21-014

A