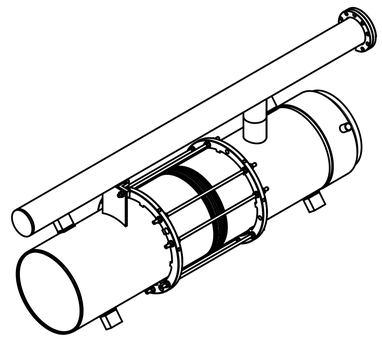
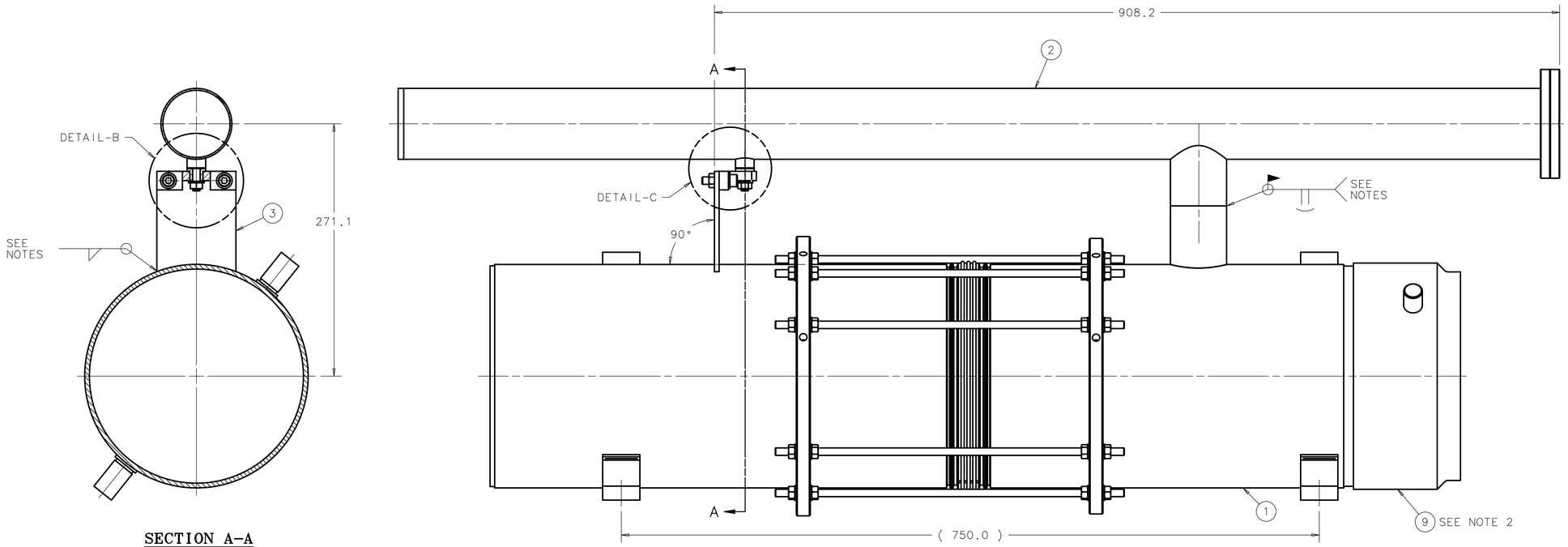
NOTES:

1. ALL FILLET WELDS TO BE SMOOTH FOR COSMETIC APPEARANCE.
2. ITEM 9 (ADJUSTER WELDMENT) IS WELDED TO THIS ASSEMBLY IN THE VERTICAL WELDING FIXTURE ALONG WITH THE 9-CELL CAVITY. IT IS NOT MECHANICALLY FASTENED TO THIS ASSEMBLY AT THIS TIME, IT'S SHOWN FOR REFERENCE ONLY.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. SEALING SURFACES ON FLANGES MUST BE FREE FROM ANY NICKS AND RADIAL SCRATCHES.
5. ASSEMBLY MUST BE FREE FROM DIRT, GREASE, OIL AND CHIPS AND PROPERLY PACKAGED TO AVOID DAMAGE DURING SHIPPING.
6. ALL WELDS MUST BE CONTAMINANT FREE. EACH JOINT MUST BE CLEANED PROPERLY TO REMOVE MILL SCALE, DIRT, DUST, GREASE OIL, MOISTURE AND OXIDATION.
7. CLEAN ALL AREAS WITHIN 25mm OF THE WELD JOINT USING A NONCHLORINATED SOLVENT SUCH AS ACETONE, TOLUENE OR METHYL ETHYL KETONE (MEK) AND A CLEAN, LINT FREE CLOTH.
8. FOLLOWING THE SOLVENT CLEANING AND IMMEDIATELY PRIOR TO WELDING, WIRE BRUSH THE ITEMS TO BE WELDED WITH A NEW, STAINLESS STEEL BRUSH. DO NOT USE A STEEL BRUSH OR STEEL WOOL.
9. AS AN ALTERNATE TO NOTES 7 & 8 ABOVE, AN ACCEPTABLE PICKLE BATH MAY BE IMPLEMENTED TO CLEAN THE WELD JOINT MATERIAL. USE A BATH OF 35% VOL. NITRIC ACID (70% CONCENTRATION) AND 5% VOL. HYDROFLUORIC ACID (48% CONCENTRATION). RINSE WITH COLD WATER AND THEN RINSE WITH HOT WATER TO FACILITATE FASTER DRYING. INSURE THAT PARTS ARE CLEAN, COMPLETELY DRY AND OXIDATION FREE PRIOR TO WELDING.
10. ALL WELDS MUST BE PERFORMED INSIDE OF A PURGED GLOVEBOX WITH AN OXYGEN COUNT OF 20 PPM OR LESS. WELDS MUST BE FREE OF ALL TITANIUM OXIDATION AND DISCOLORATION.
11. WELDER MUST BE QUALIFIED IN TITANIUM WELDING. VERIFICATION DOCUMENTS AS WELL AS SAMPLE WELDS MUST BE SUPPLIED TO FERMILAB PRIOR TO ANY PRODUCT WELDING.
12. INSPECTION OF WELDS TO BE CONDUCTED AT FERMILAB PRIOR TO ANY ULTRASONIC OR WIRE-BRUSH CLEANING. DO NOT MODIFY THE FINAL WELDS PRIOR TO PRODUCT ACCEPTANCE.
13. ALL WELDS TO BE VACUUM TIGHT. NO LEAK SHALL BE DETECTABLE ON THE MOST SENSITIVE SCALE OF A HELIUM LEAK DETECTOR WITH A MINIMUM SENSITIVITY OF 2 X 10^{-10} ATM. CC/SEC.
14. MATERIAL CERTIFICATIONS ARE REQUIRED AND MUST BE INCLUDED WITH SHIPPING. THERE WILL BE NO PRODUCT ACCEPTANCE WITHOUT THE PROPER MATERIAL CERTIFICATIONS.

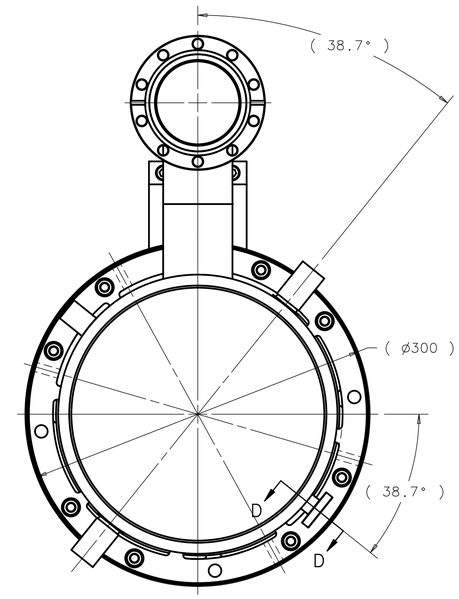
REVISION HISTORY
CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

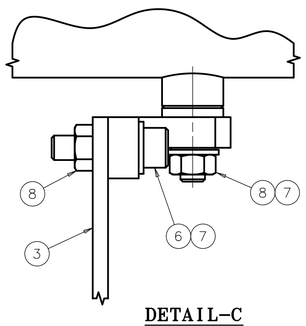
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE		



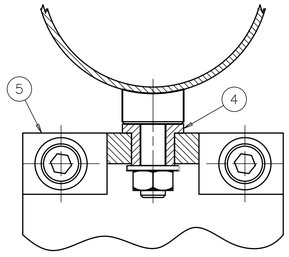


SECTION A-A

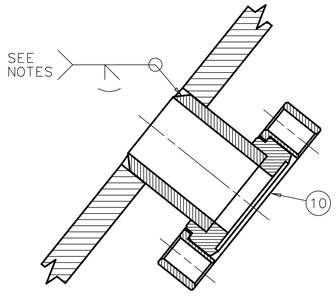




DETAIL-C
SCALE 1/1



DETAIL-B
SCALE 1/1



SECTION D-D
SCALE 2/1

ITEM	P.I.N.	DESCRIPTION	QTY
10	788335	FILL PORT WELDMENT	1
9	791565	G2 ADJUSTER WELDMENT	1
8	COM'L	M8 NUT	3
7	COM'L	M8 WASHER	3
6	COM'L	SCREW HSH ISO M8 X 30 LG.	2
5	781941	2-PHASE SUPPORT PLT ADAPTER	1
4	777851	2-PHASE PIPE BUSHING	1
3	777841	2-PHASE SUPPORT PLATE	1
2	777921	2-PHASE PIPE ASSY	1
1	791615	G2 VESSEL WELDMENT	1

PARTS LIST

NEXT ASSY	USED ON
-	-
APPLICATION	

FINISH: N/A

MATERIAL: SEE PARTS LIST

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
INTERPRET DIM PER ASME Y14.5M-1994
BREAK ALL SHARP EDGES 0.75 MAX.
ALL MACH. SURFACES 3.2 MAX.

TOLERANCES: X ± 2, X.X ± 0.8, X.XX ± 0.13, ANGLE ± 1°

THIRD ANGLE PROJECTION

DRAWN BY: S. POREMBA	DATE: 21JUN07	
CHECKED BY	DATE	
ENGINEERED BY	DATE	
DATABASE: DESY EDMS	TEAM/GROUP: T4CM DESIGN	
CAD: I-DEAS	SOLID MODEL NO.: 612003	

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY
P.O. BOX 500, BATAVIA, IL 60510-0500

TITLE
ILC CRYO MODULE
HELIUM VESSEL - BLADE TUNER
G2_VESSEL_ASSEMBLY

SIZE	CAGE CODE	DWG NO.	REV
A1	0U5R6	D00000000791625	A

SCALE 3:8 & AS NOTED | DO NOT SCALE DRAWING | SHEET 1 OF 1