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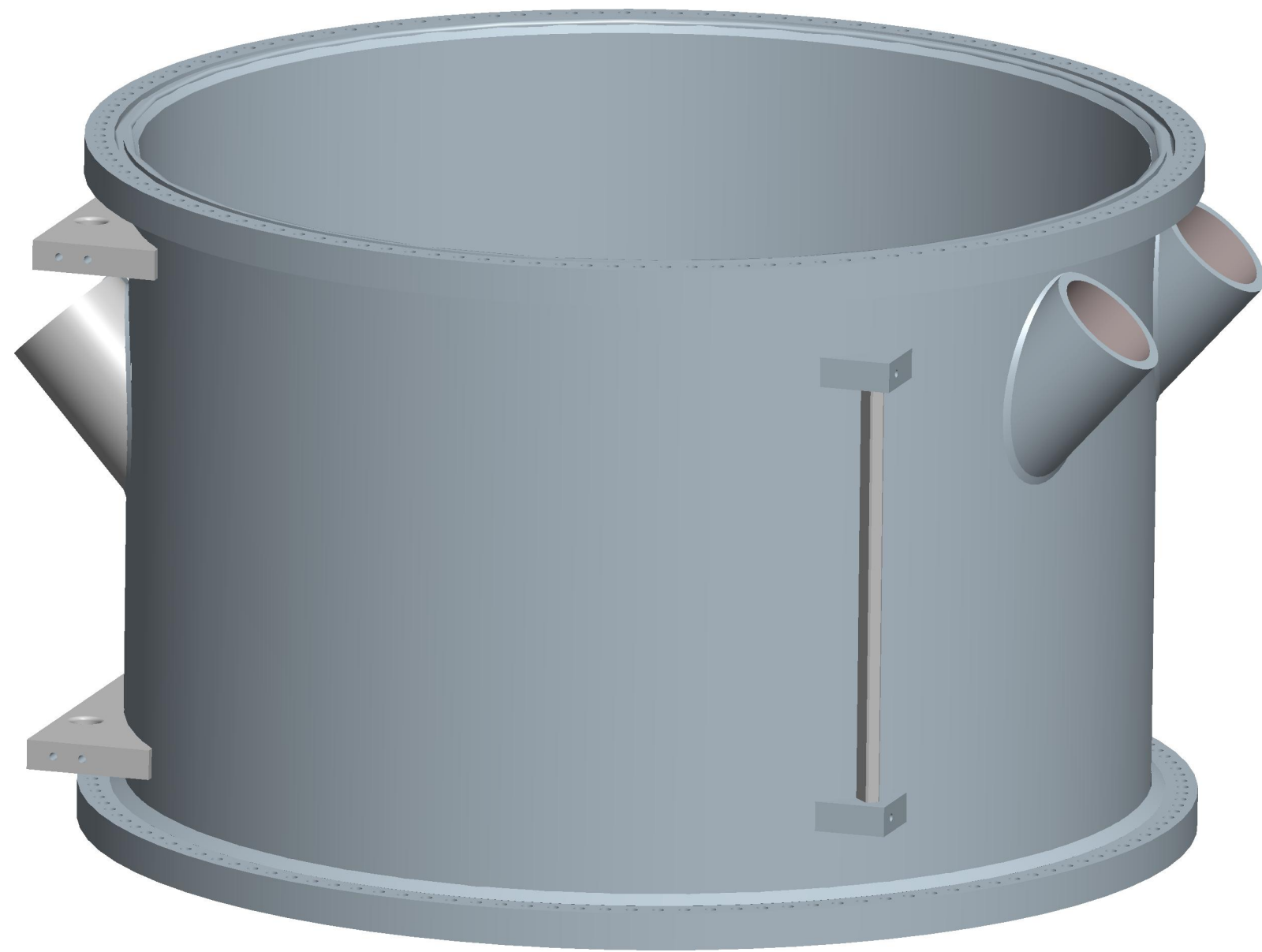
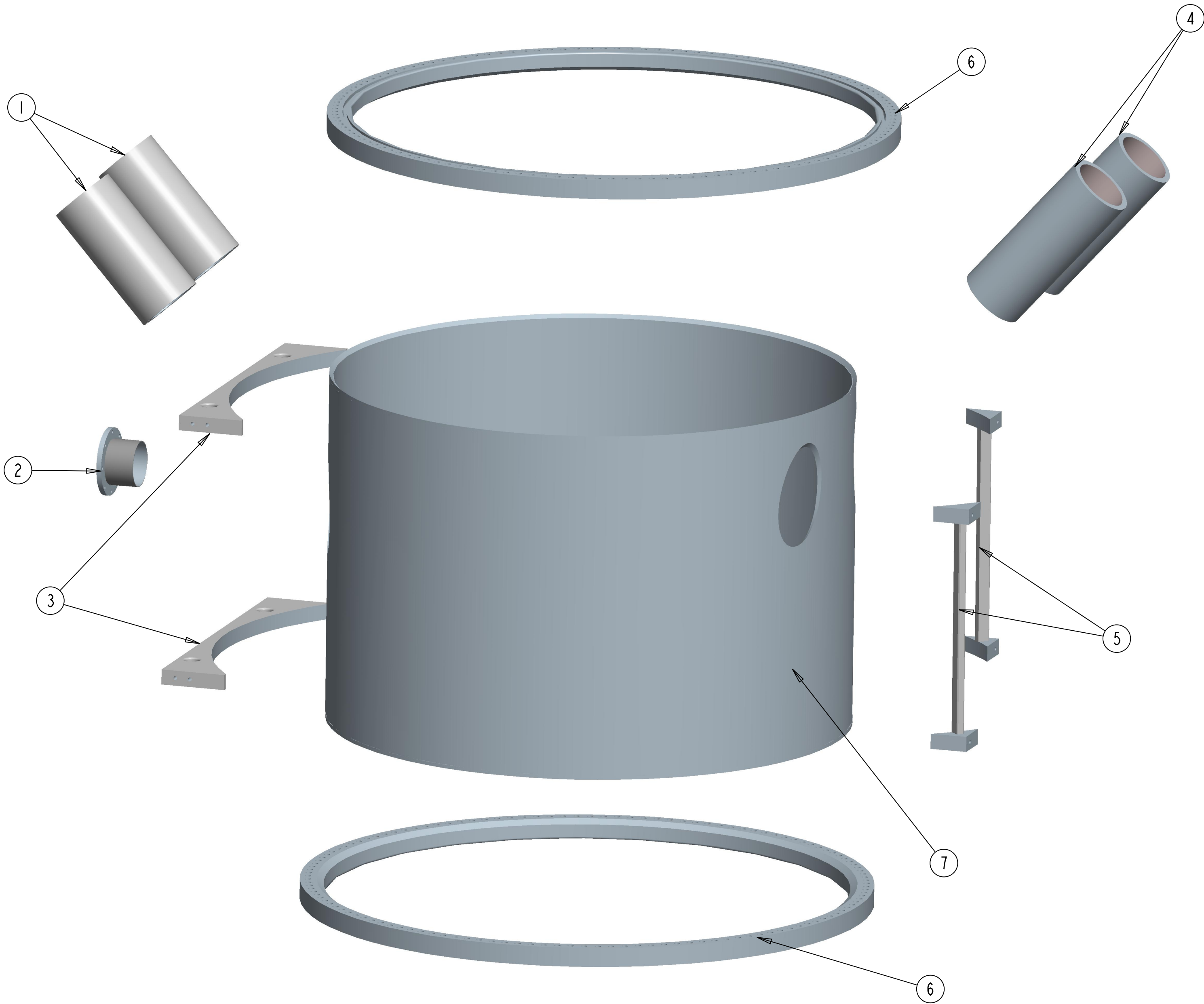
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ITEM	DESCRIPTION	MATL	QUANTITY
1	Quartz Window Assembly	ALUM	2
2	Gas Port Flange	ALUM	1
3	Craddle Bracket	ALUM	2
4	Quartz Window Assembly (Long)	ALUM	2
5	Crane Lifting Assembly	ALUM	2
6	Main Vessel Flange	ALUM	2
7	Main Vessel Cylinder	ALUM	1



ALL DIMENSIONS IN mm UNLESS OTHERWISE SPECIFIED  
TOLERANCES UNLESS OTHERWISE SPECIFIED:  
FRACTIONAL DIMENSIONS  
DECIMAL DIMENSIONS XX ± 0.5  
ANGULAR DIMENSIONS ± 0.5°  
SURFACE FINISH MILL FINISH

UNIVERSITY OF ALBERTA EDMONTON ALBERTA CANADA	
DESIGNED CHRIS NG	TELEPHONE (780) 492 5979
DRAWN CHRIS NG	FAX (780) 492 3408
CHECKED	E-MAIL:cjng@phys.ualberta.ca
APPROVED	

REF. DWGS.	REV.	DATE	REVISION	BY	
CENTER OF PARTICLE PHYSICS					
MAIN VESSEL ASSEMBLY EXPLODED					
SCALE 0.100	APPROVAL	DWG. NO.	REV.		
DATE MAR 1, 2012	CHIEF ENGR.				

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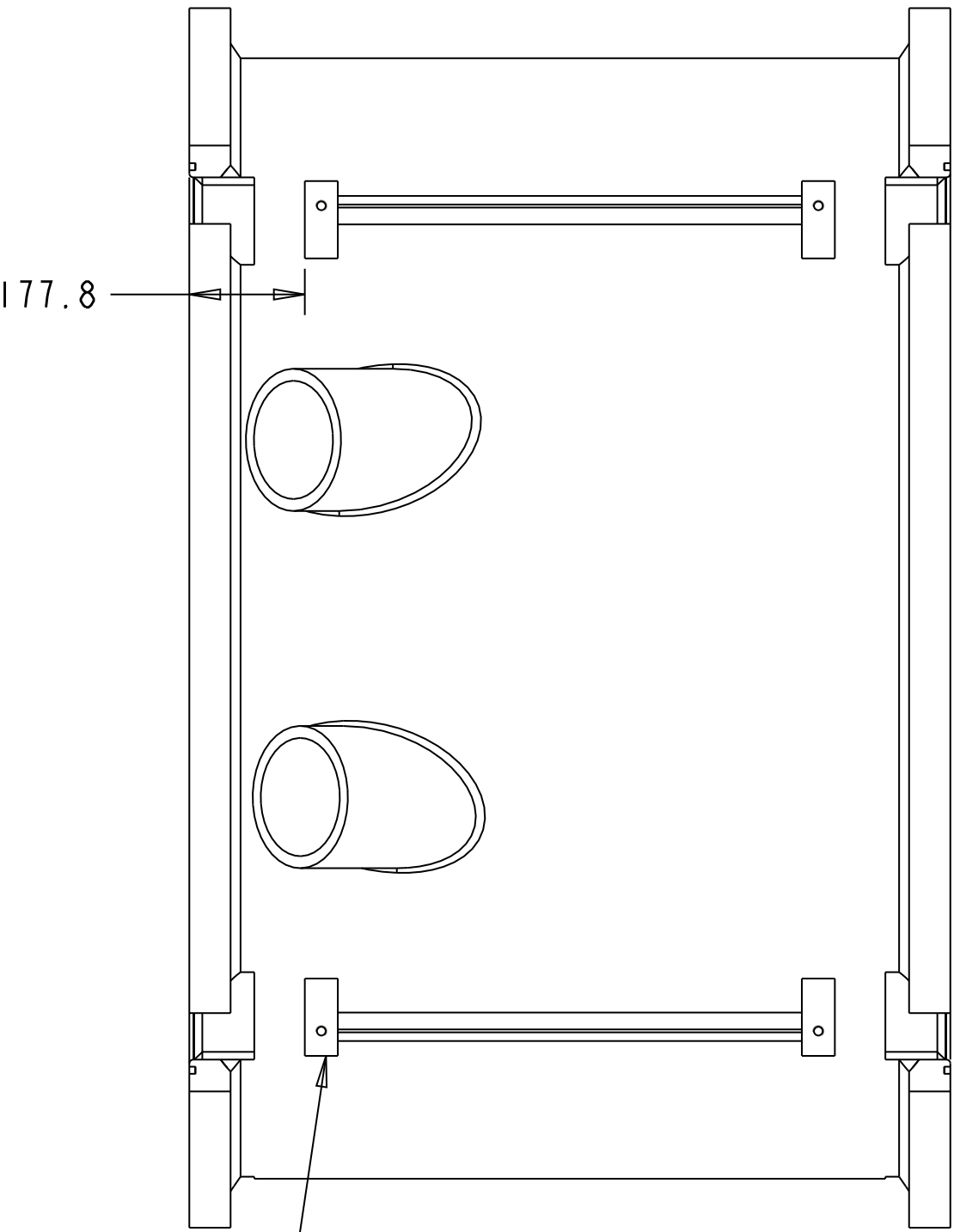
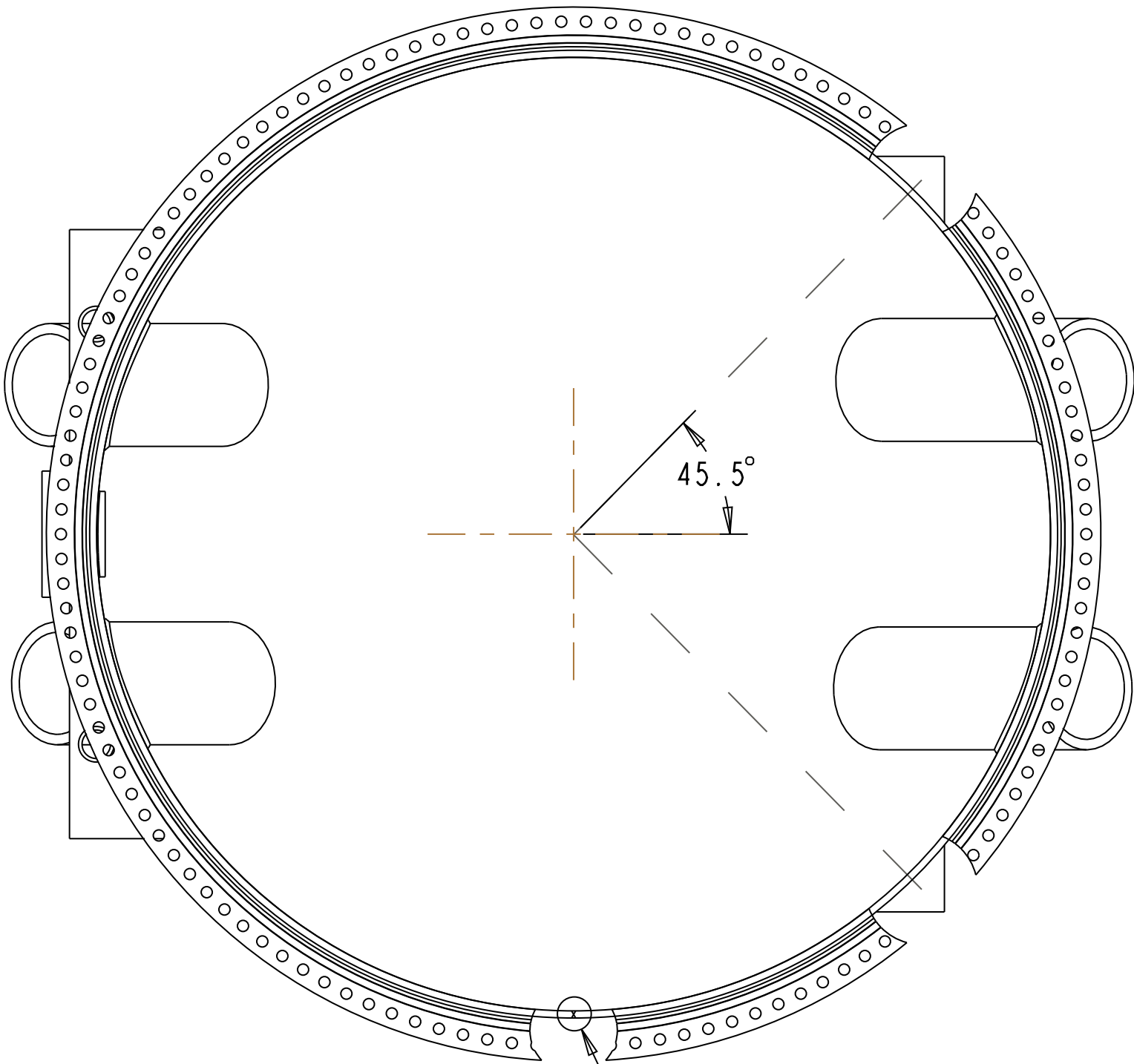
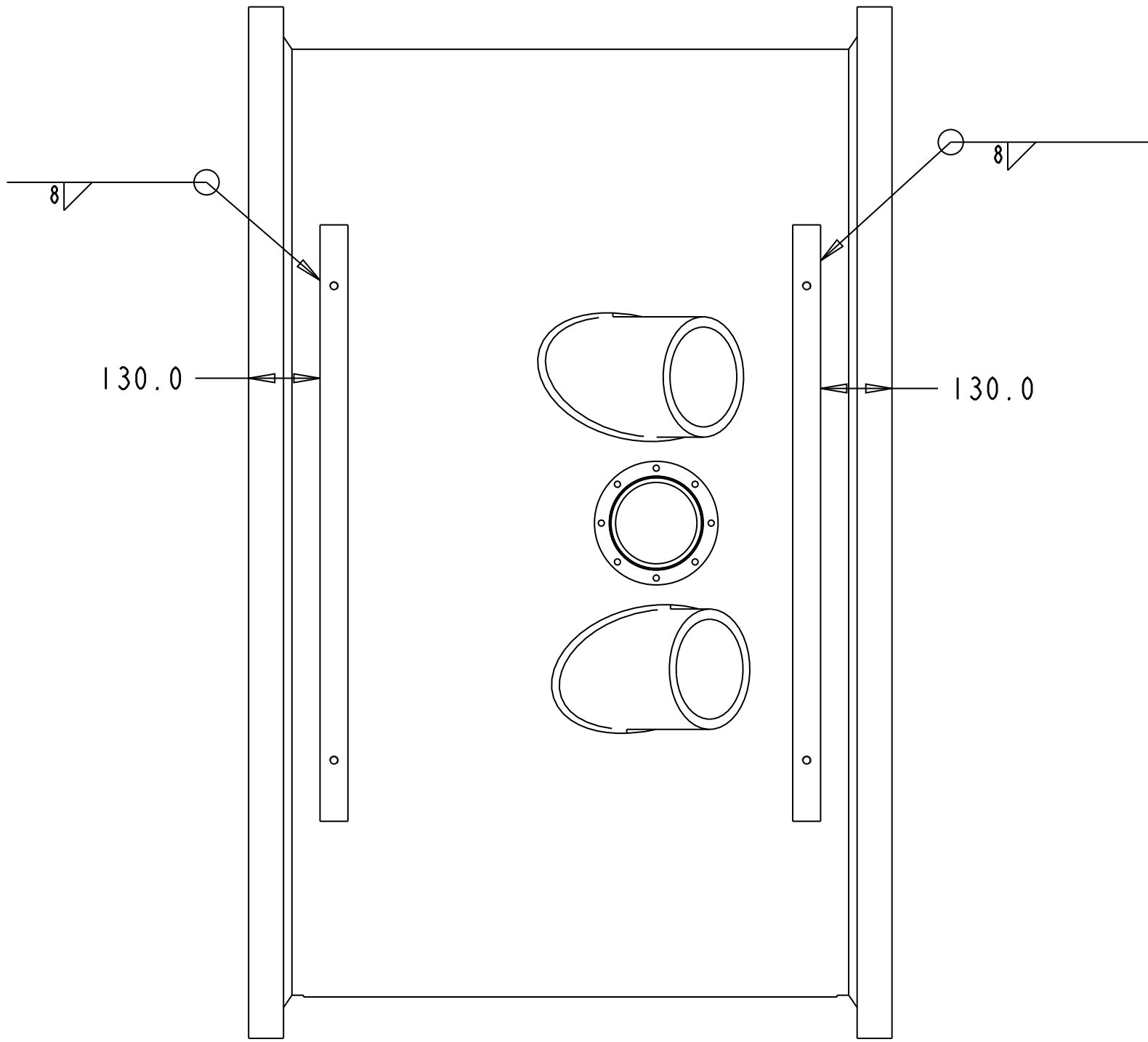
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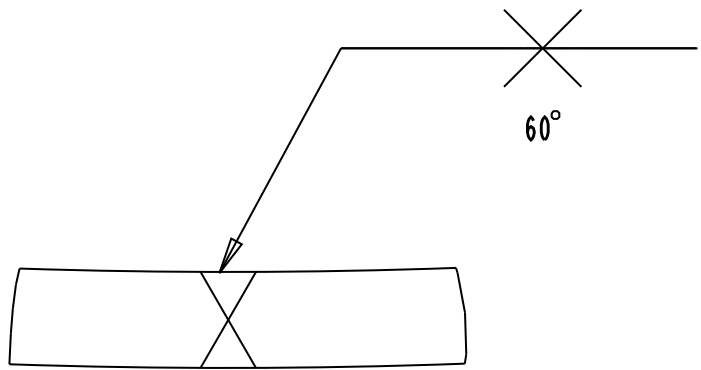
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ITEM	DESCRIPTION	MAT'L	QUANTITY



Fillet Welds around crane lifting assemblies

NOTES:  
MAKE VESSEL OUT OF ONE 0.5" SHEET OF ALUMINUM 6061-T6  
BEND INTO CYLINDRICAL SHAPE WITH OD=1725.4mm AND H=1135.4mm AND DOUBLE-V BUTT WELD END TOGETHER



DETAIL A  
SCALE 1:1.000

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SURFACE FINISH MILL FINISH	
UNIVERSITY OF ALBERTA	
EDMONTON ALBERTA CANADA	
DESIGNED	CHRIS NG
DRAWN	CHRIS NG
CHECKED	
APPROVED	
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E-MAIL:cjng@phys.ualberta.ca	

REF. DWGS.	REV.	DATE	REVISION	BY	
CENTER OF PARTICLE PHYSICS					
MAIN VESSEL ASSEMBLY					
OUTSIDE WELDS AND CYLINDRICAL WELD					
SCALE	0.100	APPROVAL	DWG. NO.	REV.	
DATE	MAR 1, 2012	CHIEF ENGR.			





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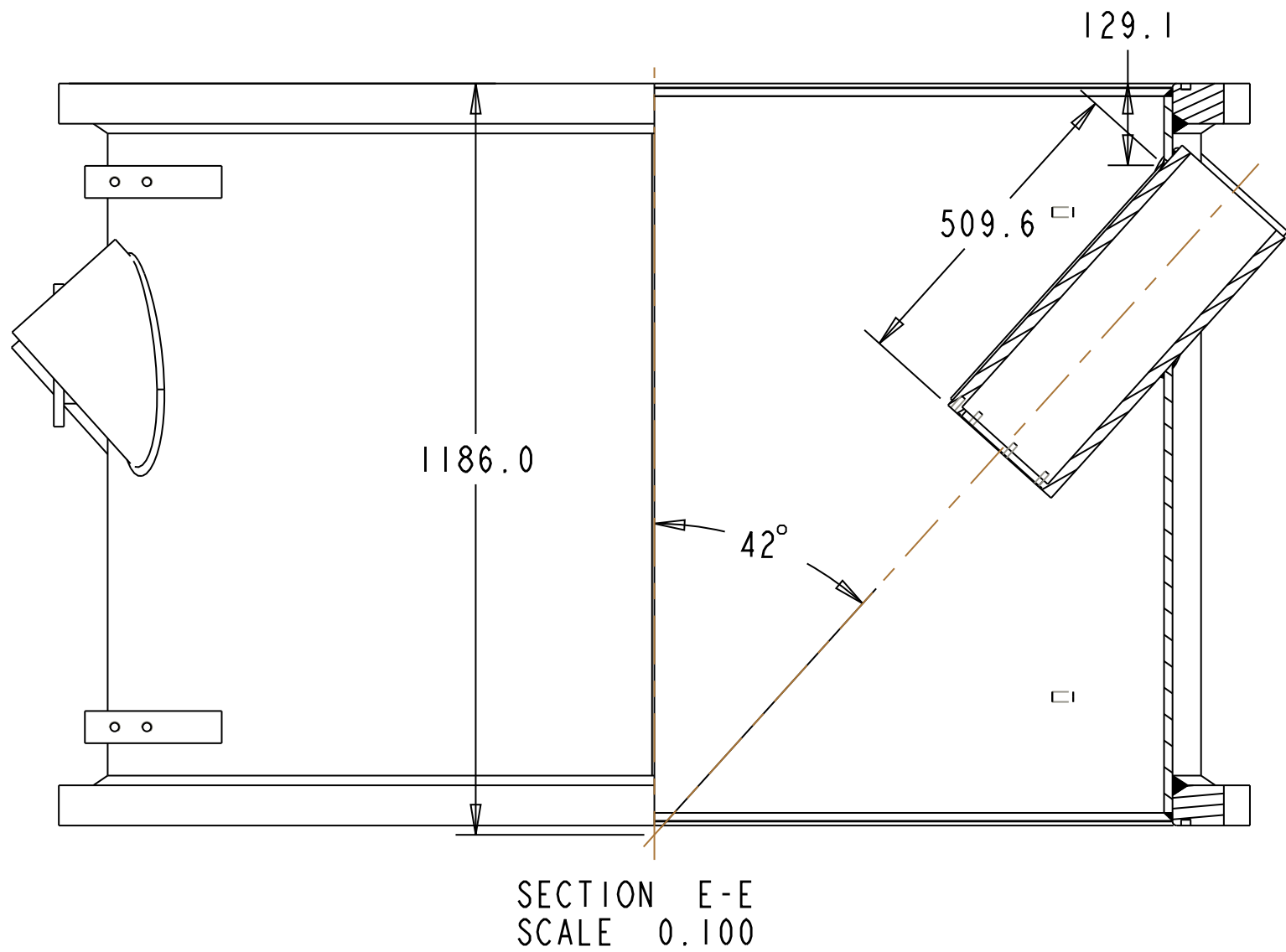
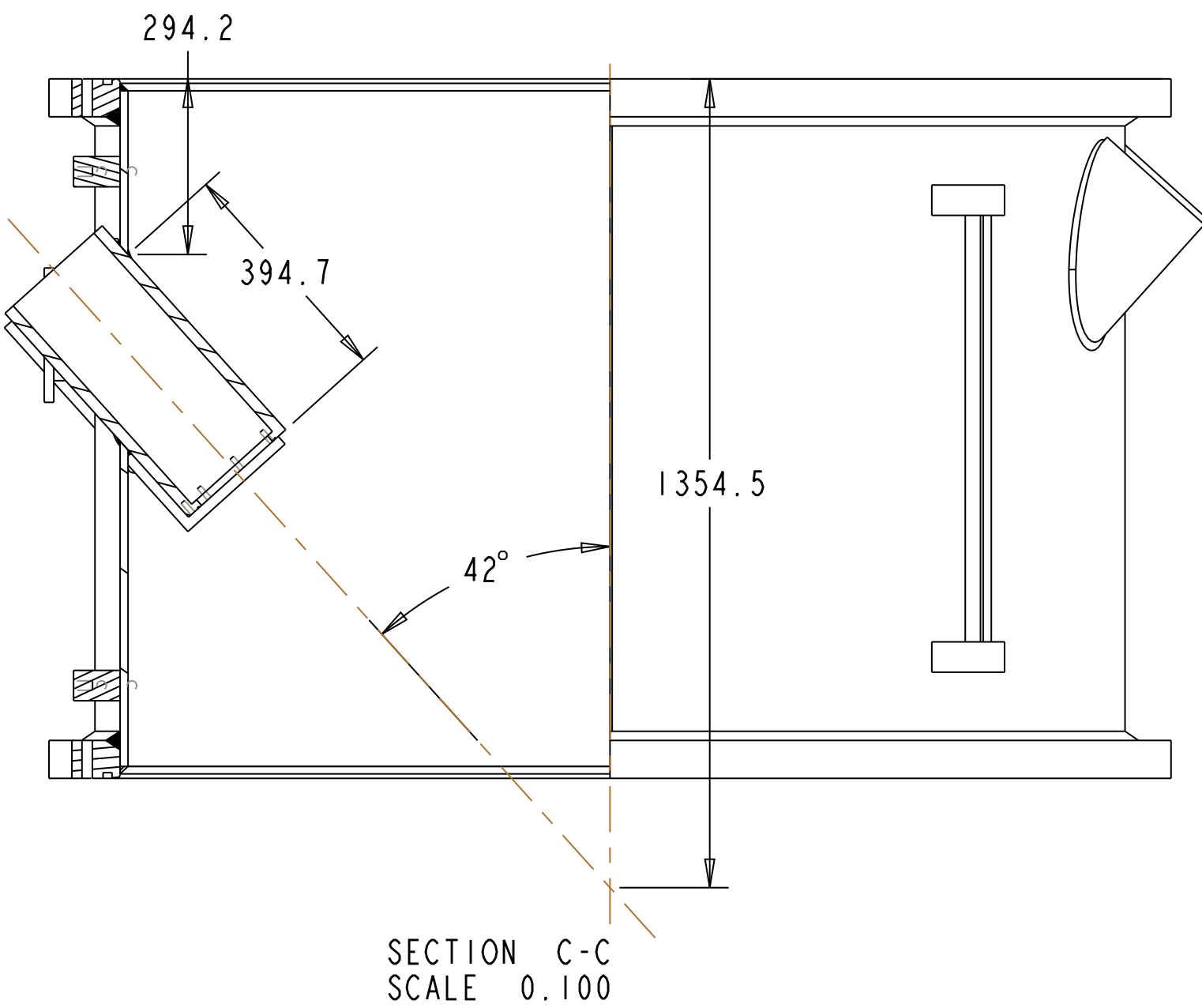
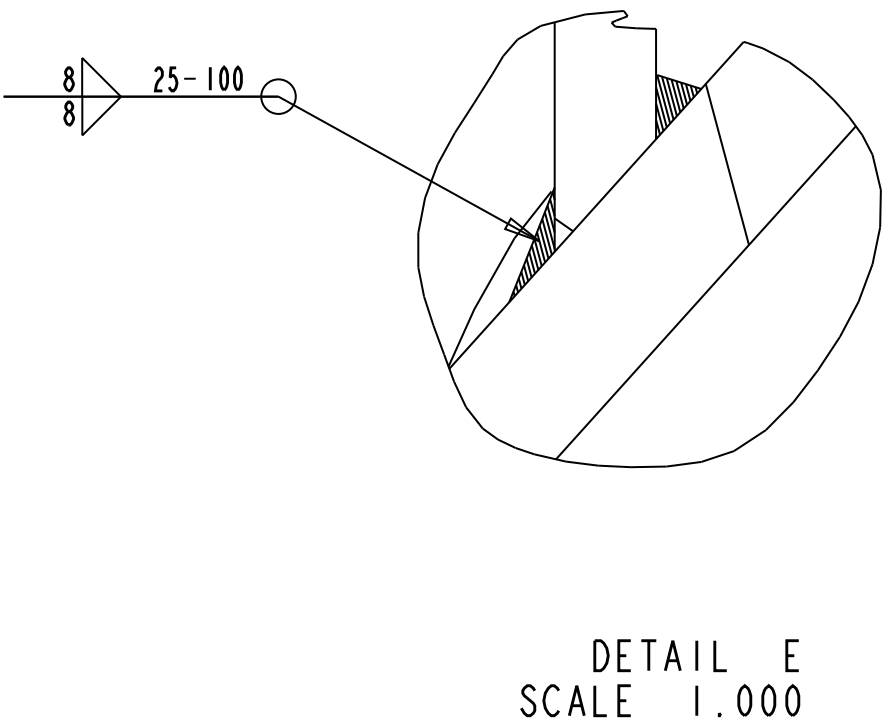
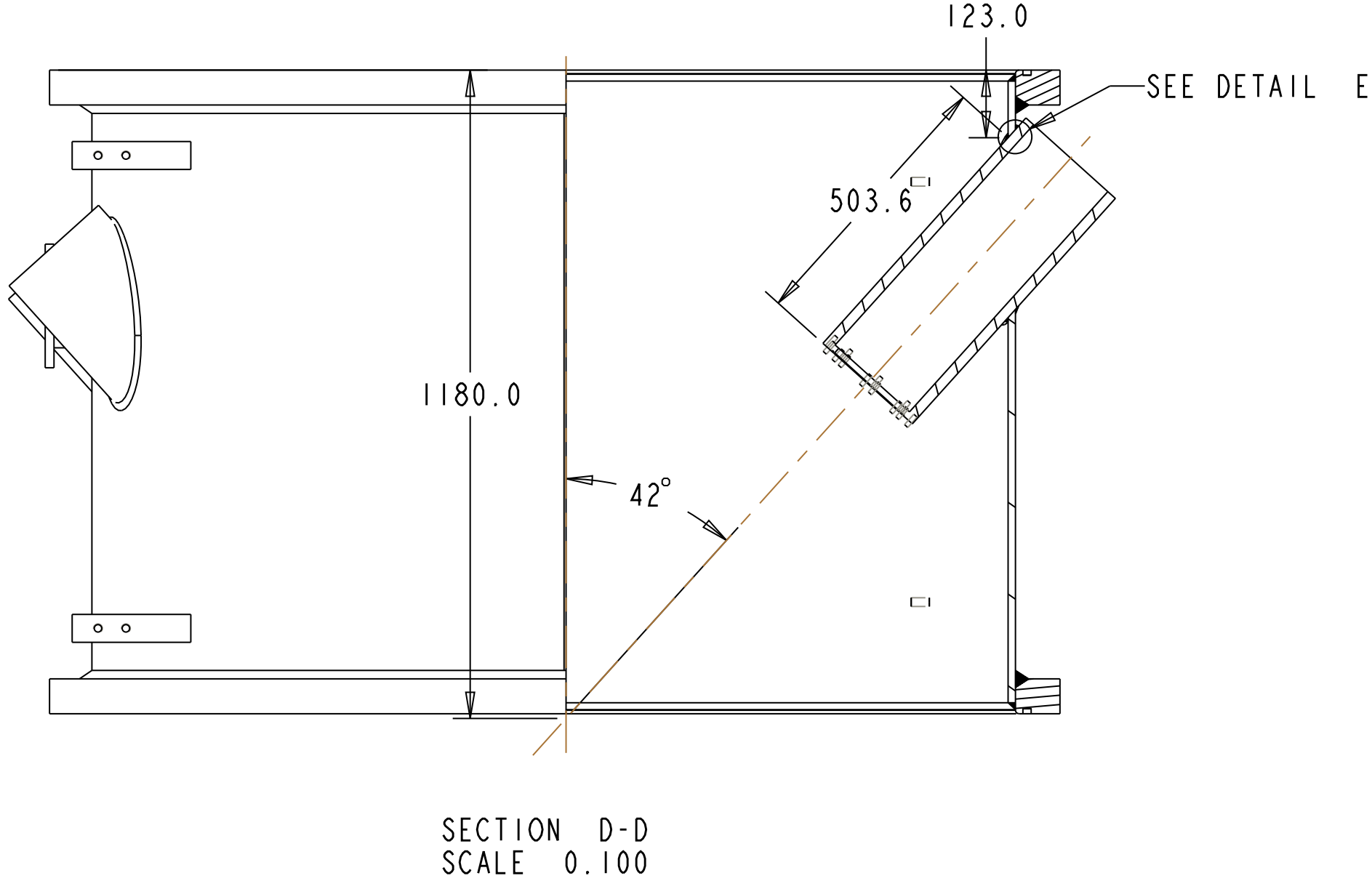
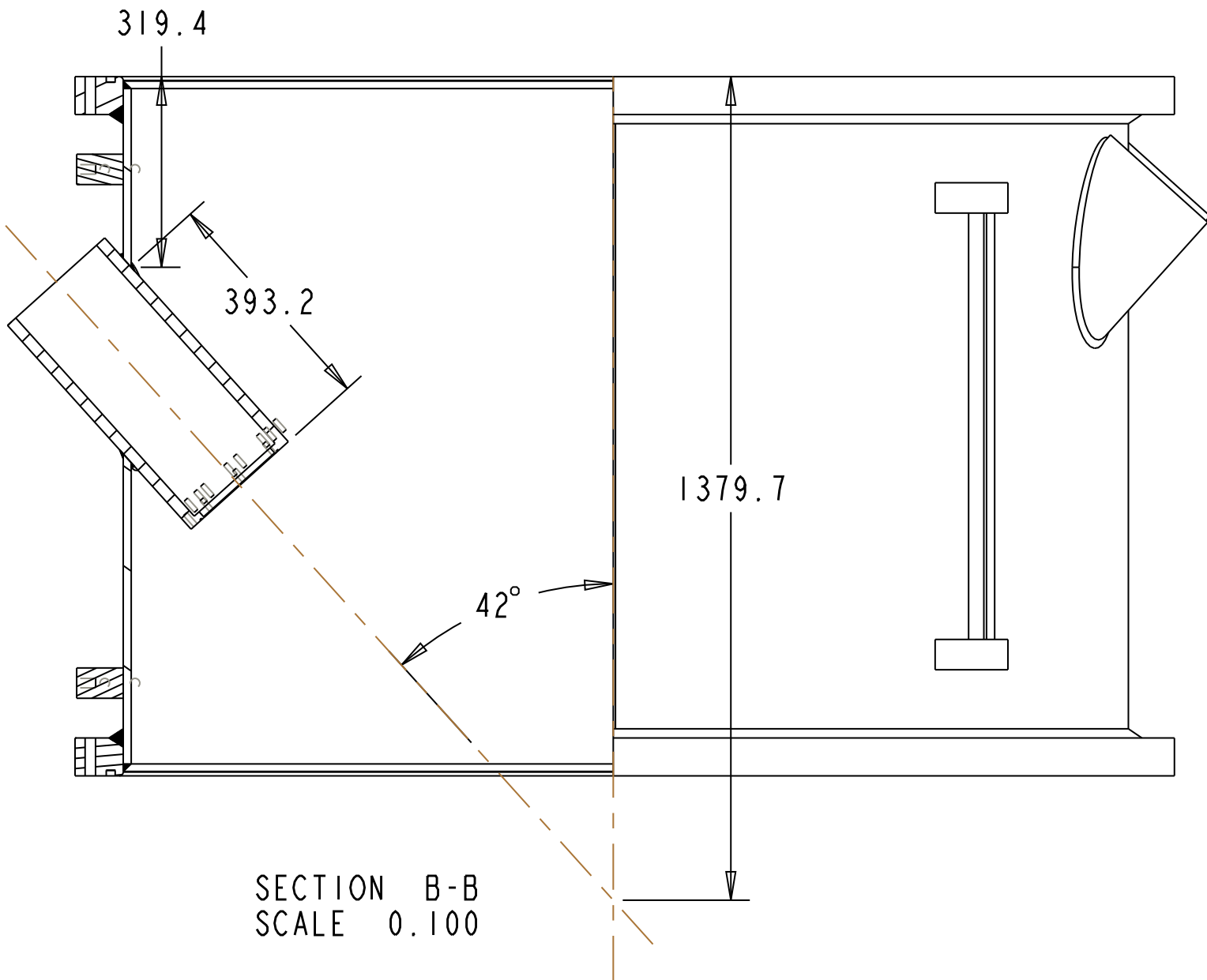
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ITEM	DESCRIPTION	MAT'L	QUANTITY



ALL DIMENSIONS IN mm UNLESS OTHERWISE SPECIFIED  
TOLERANCES UNLESS OTHERWISE SPECIFIED:  
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DECIMAL DIMENSIONS XX ± 0.5  
ANGULAR DIMENSIONS ± 0.5°  
SURFACE FINISH MILL FINISH

UNIVERSITY OF ALBERTA	
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APPROVED	

REF. DWGS.	REV.	DATE	REVISION	BY	
CENTER OF PARTICLE PHYSICS					
MAIN VESSEL ASSEMBLY QUARTZ WINDOW SLEEVE WELDS					
SCALE	APPROVAL	DWG. NO.	REV.		
DATE MAR 1, 2012	CHIEF ENGR				



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ITEM	DESCRIPTION	MAT'L	QUANTITY

NOTES:

1. CYLINDRICAL BODY SHALL BE MADE WITH CLEAN ROLLERS TO ELIMINATE ANY POSSIBILITY OF ANY INCLUSIONS BEING INTRODUCED INTO THE MATERIAL
2. WELDING SHALL CONFORM TO THE REQUIREMENTS OF CSA W59.2 OR AWS D1.2.
3. ALL WELDING TO BE DONE BY CONTRACTORS CERTIFIED UNDER A DIVISION 1 OR 2 FABRICATION SHOP IN ACCORDANCE WITH CSA W47.2. OR AWS D1.2.
4. ALL WELDS INSPECTED BY A LEVEL 3 INSPECTOR CERTIFIED IN ACCORDANCE WITH CSA W178.2-01 OR AWS CWI
5. ALL SEALING SURFACES MUST BE FREE OF NICKS/DENTS/SCRATCHES
6. DEGREASE ALL PARTS PRIOR TO WELDING
7. CYLINDRICAL BODY WELD SHOULD BE LOCATED APPROX 90 DEGREES FROM GAS PORT WELD
8. ALL INSIDE WELDS TO BE VACUUM TIGHT
9. FINISHED VESSEL TO BE VACUUM TIGHT.
10. FINISHED VESSEL TO BE DEGREASED & CLEANED FOLLOWED WITH ETHANOL OR METHANOL RINSE
11. PROVIDE BLANK-OFF FLANGES TO MATCH EACH FLANGE
12. EACH FLANGE TO BE CLAMPED WITH 130 3/4"-10 UNC 316 SS BOLTS WITH 316 SS WASHERS AND SILICON BRONZE NUTS. INSTALLATION TORQUE SHOULD BE 45 lbf-ft USING NUCLEAR NON-METALLIC HIGH TEMPERATURE ANTI-SEIZE COMPOUND
13. BOLTS/NUTS MUST HAVE MATERIAL TEST REPORTS OR A CERTIFICATE OF CONFORMANCE TO THE ASTM SPECIFICATIONS
14. SUPPLY O-RINGS FOR FLANGES AS INDICATED
15. VACUUM TEST PERFORMED AT THE VENDOR FACILITY WILL BE IN ACCORDANCE WITH ASME-V, ASNT-TC1A NON DESTRUCTIVE EXAMINATION CODE. LEAK TIGHTNESS SHOULD BE DEMONSTRATED BY RECORDING THE HELIUM MASS SPECTROMETER LEAK DETECTOR OUTPUT ON A CHART RECORD FOR A MINUMUN OF ONE HOUR. THE MAX LEAK RATE SHOULD NOT EXCEED 1x10e-8 mbar liter/sec

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SURFACE FINISH MILL FINISH	
UNIVERSITY OF ALBERTA	
EDMONTON ALBERTA CANADA	
DESIGNED	CHRIS NG
DRAWN	CHRIS NG
CHECKED	
APPROVED	
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REF. DWGS.	REV.	DATE	REVISION	BY	
CENTER OF PARTICLE PHYSICS					
MAIN VESSEL ASSEMBLY NOTES					
SCALE	APPROVAL		DWG. NO		REV.
DATE	CHIEF ENGR				



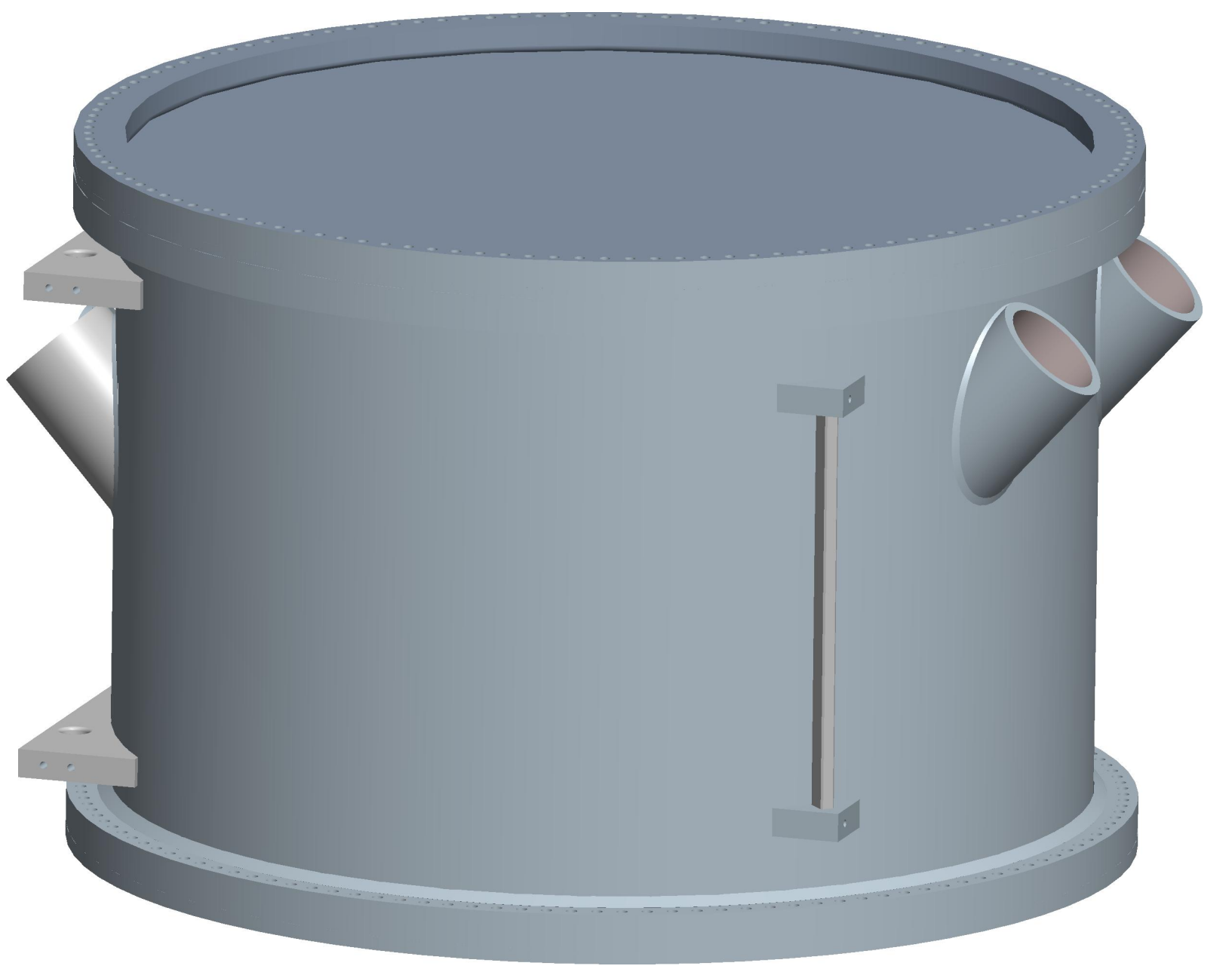
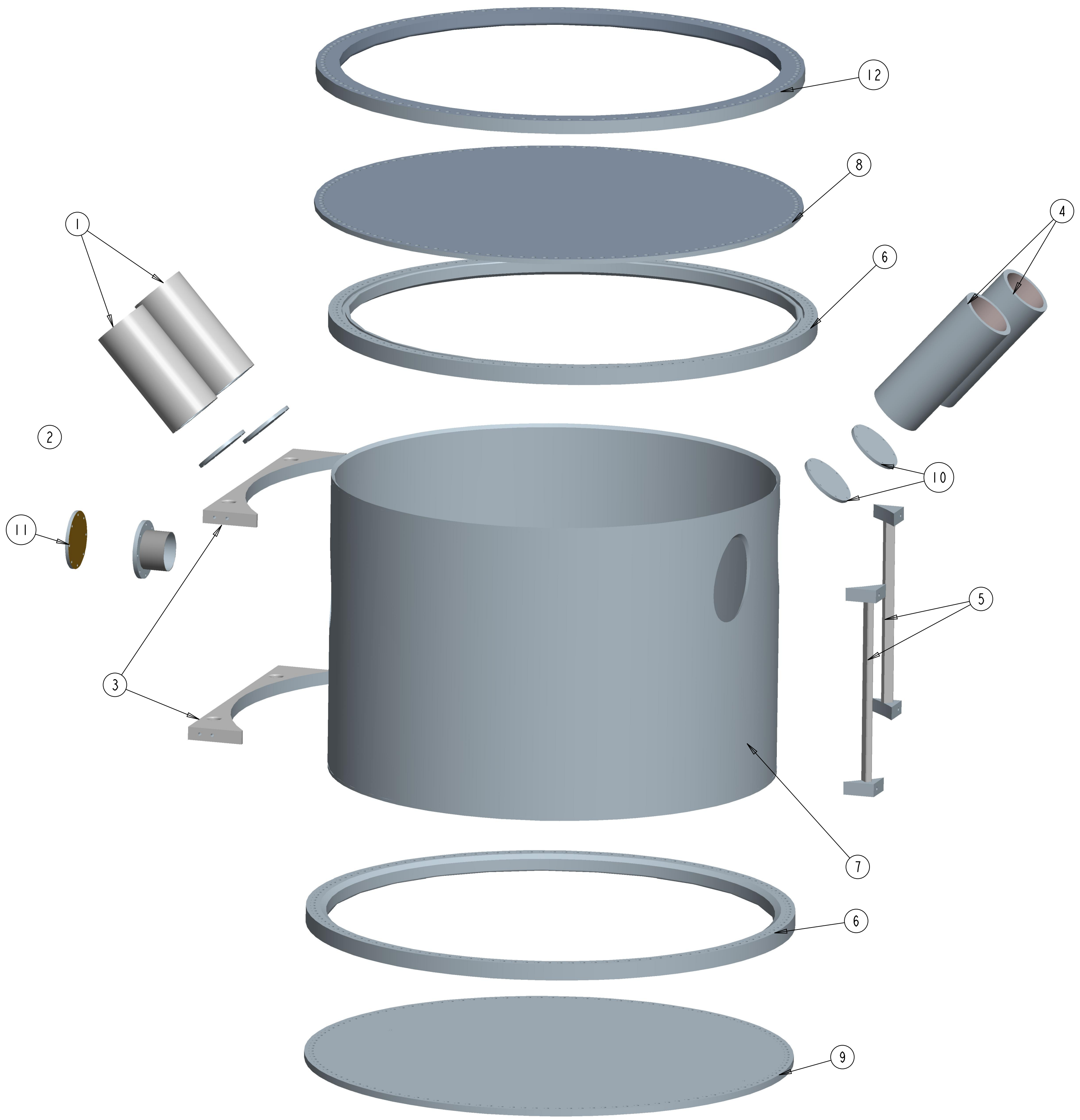


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REF. DWGS.	REV.	DATE	REVISION	BY

CENTER OF PARTICLE PHYSICS				
CHERENKOV VESSEL ASSEMBLY VACUUM TEST EXPLODED				
SCALE 0.100	APPROVAL	DWG. NO.		REV.
DATE MAR 5, 2012	CHIEF ENGR.			

ITEM	DESCRIPTION	MATL	QUANTITY
1	Quartz Window Assembly	ALUM	2
2	Gas Port Flange	ALUM	1
3	Craddle Bracket	ALUM	2
4	Quartz Window Assembly (Long)	ALUM	2
5	Crane Lifting Assembly	ALUM	2
6	Main Vessel Flange	ALUM	2
7	Main Vessel Cylinder	ALUM	1
8	Window Blank Off	STEEL	1
9	Hydroforming Plate	STEEL	1
10	Quartz Window Blank Off	STEEL	4
11	Gas Port Plate	ALUM	1
12	Window Clamp	ALUM	1

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