pc-dmis	PART NAME : F10015802_02		October 24, 2014	07:09
	REV NUMBER :	SER NUMBER :	STATS COUNT :	1

LCLS-II PRE-PRODUCTION
HELIUM VESSEL WELDMENT

RF#97448 SAMPLE#2
SERIAL NUMBER:RFCG-HE-002
INSPECTOR: O. LIRA

⌖	MM	56 - DATUM_C_PLN							
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL		MAX	MIN
Y	0.000	0.213	0.300	0.000	0.213	0.000		0.413	0.000

⌖	MM	38 - DAT_C_PNT1					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.413	3.000	0.000	0.413	0.000	

⌖	MM	39 - DAT_C_PNT2					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.264	3.000	0.000	0.264	0.000	

⌖	MM	40 - DAT_C_PNT3					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.352	3.000	0.000	0.352	0.000	

⌖	MM	41 - DAT_C_PNT4					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.310	3.000	0.000	0.310	0.000	

⌖	MM	42 - DAT_C_PNT5					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.150	3.000	0.000	0.150	0.000	

⌖	MM	43 - DAT_C_PNT6					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.064	3.000	0.000	0.064	0.000	

⌖	MM	44 - DAT_C_PNT7					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.000	3.000	0.000	0.000	0.000	

⌖	MM	45 - DAT_C_PNT8					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.147	3.000	0.000	0.147	0.000	

⌖	MM	4 - LENGTH_PLN				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.316	962.041	0.300	0.300	-0.275	0.000

⌖	MM	46 - LENGTH_PNT1				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	961.910	0.300	0.300	-0.290	0.000

⌖	MM	47 - LENGTH_PNT2				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	962.143	0.300	0.300	-0.057	0.000

⌖	MM	50 - LENGTH_PNT3				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	962.075	0.300	0.300	-0.125	0.000

⌖	MM	51 - LENGTH_PNT4				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	961.823	0.300	0.300	-0.377	0.077

⌖	MM	52 - LENGTH_PNT5				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	961.865	0.300	0.300	-0.335	0.035

⌖	MM	53 - LENGTH_PNT6				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	962.140	0.300	0.300	-0.060	0.000

⌖	MM	54 - LENGTH_PNT7				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	962.197	0.300	0.300	-0.003	0.000

⌖	MM	55 - LENGTH_PNT8				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	962.176	0.300	0.300	-0.024	0.000

FCFPROF1_ZMINUS_PLATES	MM	⌓ .25 D	ASME_Y14_5

Feature	MEAS	OUTTOL
Set	0.310	0.185

FCFPROF1_ZMINUS_PLATES Datum Shift

Segment	Shift X	Shift Y	Shift Z	Rotation X	Rotation Y	Rotation Z
Segment 1	0.000	0.000	0.000	0.000	0.000	0.036

FCFPROF1	MM	⌓ .25 AB	ASME_Y14_5

Feature	MEAS	OUTTOL
DATUM_D_PLN	0.465	0.340

FCFPROF1 Datum Shift

Segment	Shift X	Shift Y	Shift Z	Rotation X	Rotation Y	Rotation Z
Segment 1	0.000	0.000	0.000	0.000	-0.005	0.000

FCFPARL1_ZMINUS_PADS	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD1_PLN1	0.404	0.154

FCFPARL3	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD2_PLN1	0.222	0.000

FCFPARL4	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD3_PLN1	0.166	0.000

FCFPARL5	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD4_PLN1	0.300	0.050

FCFPARL6	MM	// .25 D

Feature	MEAS	OUTTOL
Z_PLUS_PLATE1_PLN1	0.161	0.000

FCFPARL7	MM	// .25 D

Feature	MEAS	OUTTOL
Z_PLUS_PLATE2_PLN1	0.031	0.000

FCFPERP1	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_MINUS_PAD1_PLN1	0.080	0.000

FCFPERP2	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_MINUS_PAD2_PLN1	0.053	0.000

FCFPERP3	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_PLUS_PAD3_PLN1	0.111	0.000

FCFPERP4	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_PLUS_PAD4_PLN1	0.028	0.000

SIMUL1 Size	MM	Ø235.5 0.25/0

Feature	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
DATUM_A_CYL1	235.500	234.748	0.250	0.000	-0.752	0.752
DATUM_B_CYL1	235.000	235.373	0.000	0.250	0.373	0.373

SIMUL1 : FCFLOC1 Position	MM	⌖ Ø0.5 Ⓢ AB
SIMUL1 : FCFLOC2 Position	MM	⌖ Ø0.5 Ⓢ AB

Feature	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
DATUM_A_CYL1	0.000	1.897	0.500		1.897	1.397
DATUM_B_CYL1	0.000	1.079	0.500		1.079	0.579

SIMUL1 Datum Shift

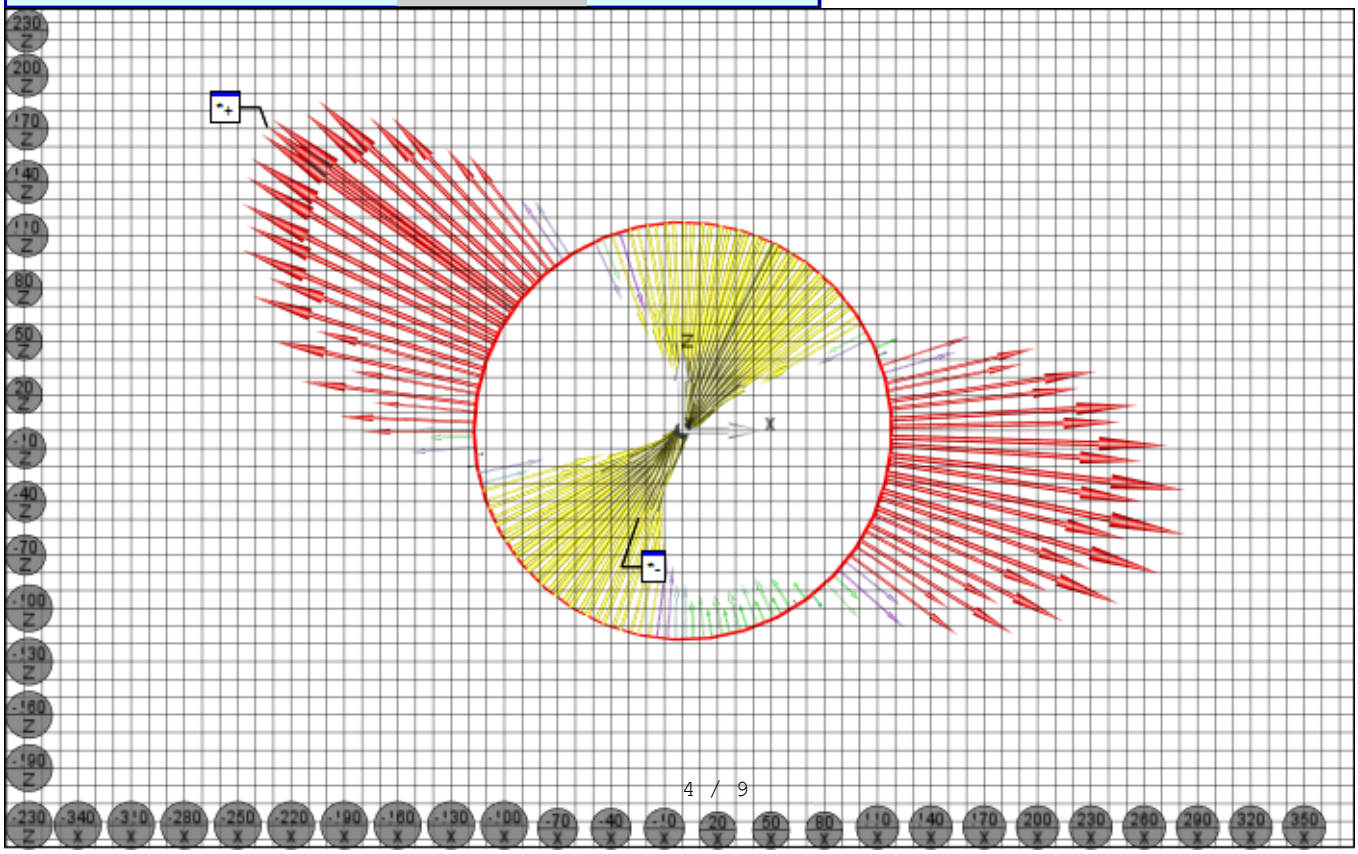
Segment	Shift X	Shift Y	Shift Z	Rotation X	Rotation Y	Rotation Z
Segment 1	0.000	0.000	0.000	0.000	0.000	0.000

SIMUL1 Summary FIT TO DATUMS=ON, DEV PERPEN CENTERLINE=ON, USE AXIS=WORST

Feature	AX	NOMINAL	MEAS	DEV
DATUM_A_CYL1 (END PT)	X	0.000	0.858	0.858
	Z	0.000	-0.432	-0.432
DATUM_B_CYL1 (END PT)	X	0.000	0.433	0.433
	Z	0.000	-0.308	-0.308

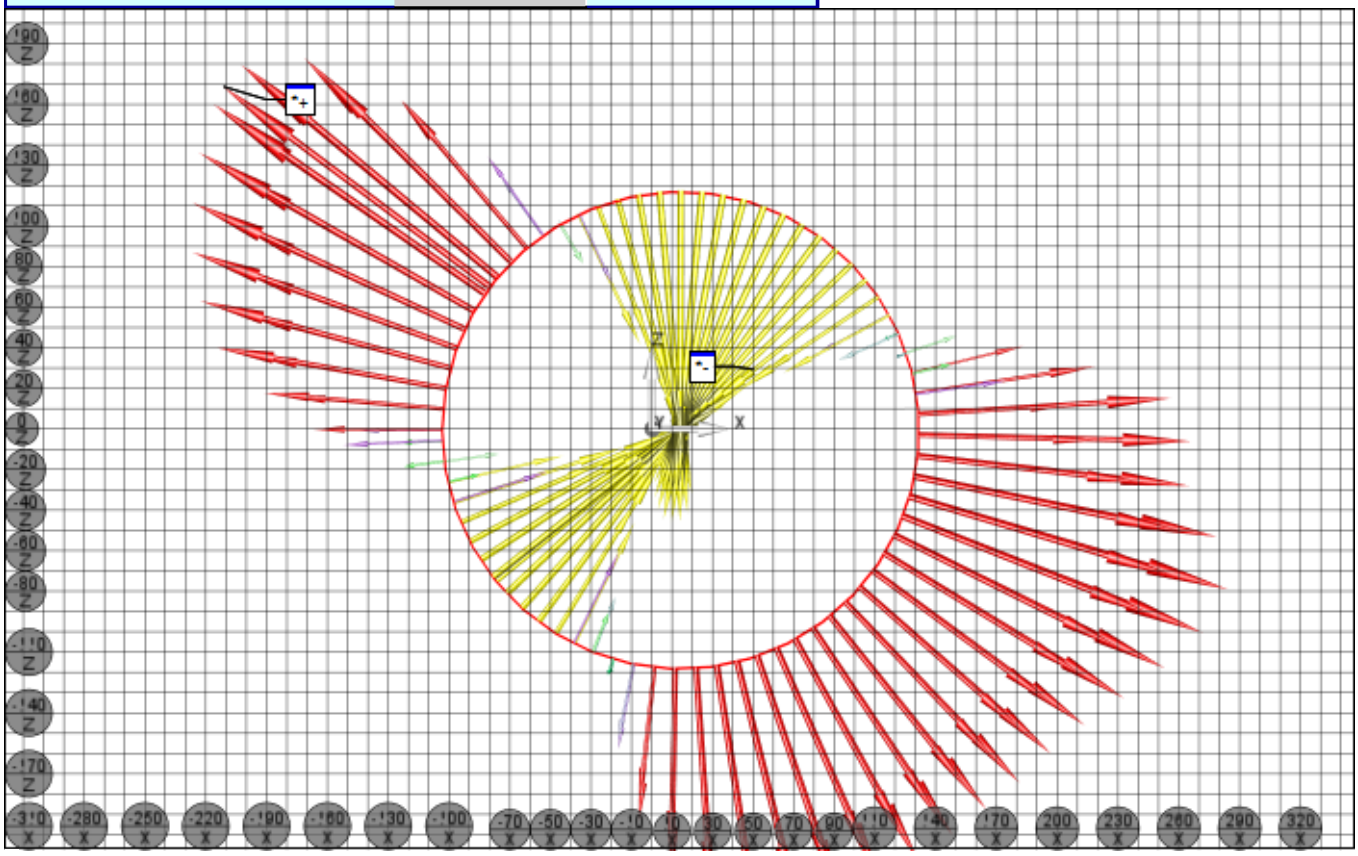
FCFCYLY1	MM	⌭ 1

Feature	MEAS	OUTTOL	MAX	MIN
DATUM_A_CYL1	3.455	2.455	1.728	-1.728



CYLINDRICITY OF DATUM A EXAGGERATION X 100 EACH SQUARE= .10

FCFCYLY2	MM	⌭ 1		
Feature	MEAS	OUTTOL	MAX	MIN
DATUM_B_CYL1	3.282	2.282	1.641	-1.641



CYLINDRICITY OF DATUM B EXAGGERATION X 100 EACH SQUARE= .10

↔	MM	DIST1 - Z_MINUS_PAD1_PLN1 TO Z_PLUS_PAD1_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.947	0.000	0.300	-0.053	0.000
↔	MM	DIST2 - Z_MINUS_PAD2_PLN1 TO Z_PLUS_PAD2_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	24.107	0.000	0.300	0.107	0.107
↔	MM	DIST3 - Z_MINUS_PAD3_PLN1 TO Z_PLUS_PAD3_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	24.120	0.000	0.300	0.120	0.120
↔	MM	DIST4 - Z_MINUS_PAD4_PLN1 TO Z_PLUS_PAD4_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.766	0.000	0.300	-0.234	0.000
↔	MM	DIST5 - Z_MINUS_PLATE1_PLN1 TO Z_PLUS_PLATE1_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	24.112	0.000	0.300	0.112	0.112
↔	MM	DIST6 - Z_MINUS_PLATE2_PLN1 TO Z_PLUS_PLATE2_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	24.088	0.000	0.300	0.088	0.088
↔	MM	DIST7 - X_MINUS_PLATE1_PLN1 TO X_PLUS_PLATE2_PLN1 (XAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	272.000	272.003	0.000	0.300	0.003	0.003
↔	MM	DIST8 - X_MINUS_PAD1_PLN1 TO X_PLUS_PAD4_PLN1 (XAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	342.000	342.267	0.000	0.300	0.267	0.267
↔	MM	DIST9 - X_MINUS_PAD2_PLN1 TO X_PLUS_PAD3_PLN1 (XAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	342.000	340.678	0.000	0.300	-1.322	1.022
⊕	MM	48 - TEE_TUBE_ID_CYL1				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
PR	300.000	298.461	1.000	1.000	-1.539	0.539
PA	39.000	39.291	1.000	1.000	0.291	0.000
D	97.384	97.190	0.500	0.550	-0.194	0.000
RN	0.000	0.845	0.100	0.000	0.845	0.745
⊕	MM	49 - TEE_TUBE_OD_CYL1				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
PR	300.000	298.448	1.000	1.000	-1.552	0.552
PA	39.000	39.293	1.000	1.000	0.293	0.000
D	101.600	101.477	0.500	0.550	-0.123	0.000
RN	0.000	0.859	0.100	0.000	0.859	0.759
↔	MM	DIST10 - DAT_C_PLN1 TO Y_MINUS_PAD1_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	104.700	104.034	0.300	0.300	-0.666	0.366

↔	MM	DIST11 - DAT_C_PLN1 TO Y_MINUS_PAD4_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	104.700	105.741	0.300	0.300	1.041	0.741

↔	MM	DIST12 - Y_MINUS_PAD1_PLN1 TO Y_MINUS_PAD2_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	650.000	649.500	0.300	0.300	-0.500	0.200

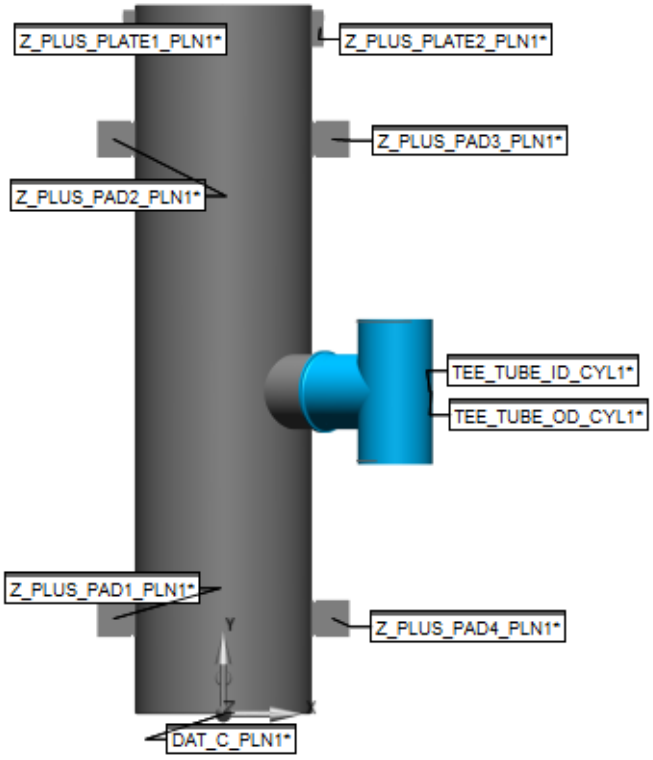
↔	MM	DIST13 - Y_MINUS_PAD4_PLN1 TO Y_MINUS_PAD3_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	650.000	648.333	0.300	0.300	-1.667	1.367

FCFPARL1	MM	// Ø.5 AB

Feature	MEAS	OUTTOL
TEE_TUBE_ID_CYL1	2.350	1.850

FCFPARL2	MM	// Ø.5 AB

Feature	MEAS	OUTTOL
TEE_TUBE_OD_CYL1	2.341	1.841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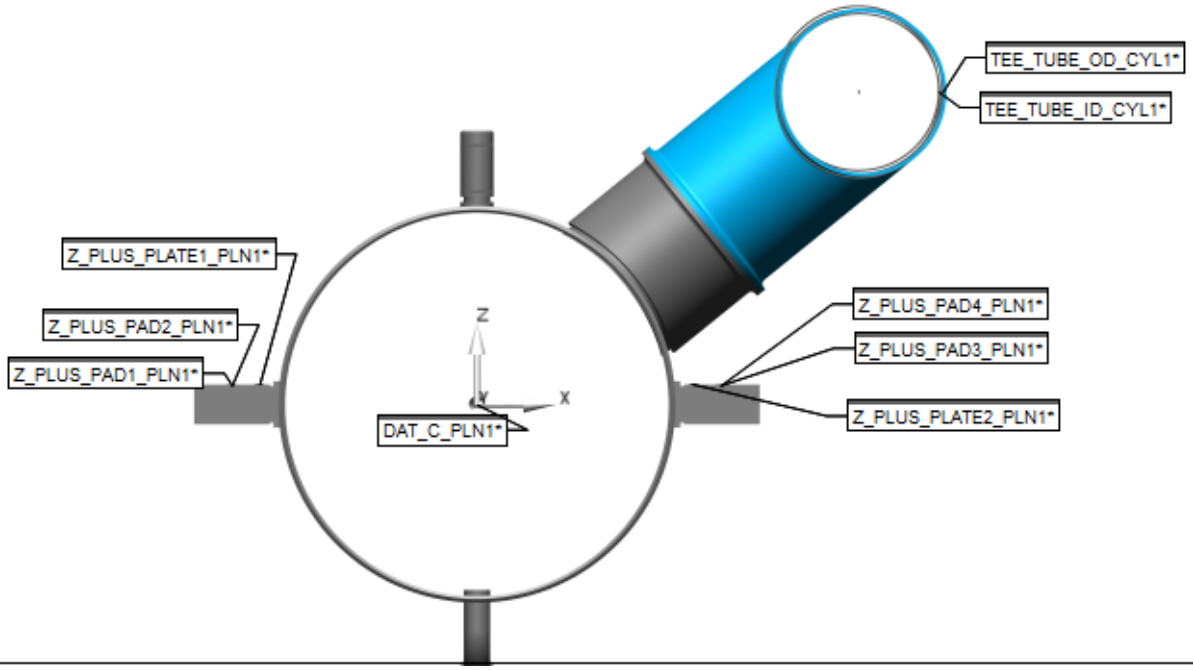
Z_PLUS_PLATE2_PLN1*
Z_PLUS_PAD3_PLN1*
Z_PLUS_PAD2_PLN1*
TEE_TUBE_ID_CYL1*
TEE_TUBE_OD_CYL1*
Z_PLUS_PAD1_PLN1*
Z_PLUS_PAD4_PLN1*
Y
DAT_C_PLN1*


TEE_TUBE_OD_CYL1*
TEE_TUBE_ID_CYL1*
Z_PLUS_PLATE1_PLN1*
Z_PLUS_PAD2_PLN1*
Z_PLUS_PAD1_PLN1*
Z
X
DAT_C_PLN1*
Z_PLUS_PAD4_PLN1*
Z_PLUS_PAD3_PLN1*
Z_PLUS_PLATE2_PLN1*