pc-dmis	PART NAME : F10015802_20		September 01, 2015	10:26
	REV NUMBER :	SER NUMBER :	STATS COUNT :	1

LCLS-II PRE-PRODUCTION
HELIUM VESSEL WELDMENT

RF#98511 SAMPLE#20
SERIAL NUMBER:RFCG-HE-020
INSPECTOR: Robert Riley

⌖	MM	3 - DATUM_C_PLN					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.384	0.100	0.100	0.384	0.284	
FL	0.000	0.164	0.100	0.000	0.164	0.064	
⌖	MM	4 - DAT_C_PNT1					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.186	3.000	0.000	0.186	0.000	
⌖	MM	5 - DAT_C_PNT2					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.376	3.000	0.000	0.376	0.000	
⌖	MM	6 - DAT_C_PNT3					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.599	3.000	0.000	0.599	0.000	
⌖	MM	7 - DAT_C_PNT4					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.612	3.000	0.000	0.612	0.000	
⌖	MM	8 - DAT_C_PNT5					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.706	3.000	0.000	0.706	0.000	
⌖	MM	9 - DAT_C_PNT6					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.466	3.000	0.000	0.466	0.000	
⌖	MM	10 - DAT_C_PNT7					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.131	3.000	0.000	0.131	0.000	
⌖	MM	11 - DAT_C_PNT8					
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL	
Y	0.000	0.000	3.000	0.000	0.000	0.000	

⌖	MM	12 - LENGTH_PLN				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.113	0.300	0.300	-2.087	1.787

⌖	MM	13 - LENGTH_PNT1				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	959.889	0.300	0.300	-2.311	2.011

⌖	MM	14 - LENGTH_PNT2				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.029	0.300	0.300	-2.171	1.871

⌖	MM	15 - LENGTH_PNT3				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.153	0.300	0.300	-2.047	1.747

⌖	MM	16 - LENGTH_PNT4				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.245	0.300	0.300	-1.955	1.655

⌖	MM	17 - LENGTH_PNT5				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.108	0.300	0.300	-2.092	1.792

⌖	MM	18 - LENGTH_PNT6				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.249	0.300	0.300	-1.951	1.651

⌖	MM	19 - LENGTH_PNT7				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.102	0.300	0.300	-2.098	1.798

⌖	MM	20 - LENGTH_PNT8				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
Y	962.200	960.133	0.300	0.300	-2.067	1.767

FCFPROF1_ZMINUS_PLATES	MM	⌓ .25 D	ASME_Y14_5

Feature	MEAS	OUTTOL
Set	0.609	0.484

FCFPROF1_ZMINUS_PLATES Datum Shift

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

FCFPROF1	MM	⌓ .25 AB	ASME_Y14_5

Feature	MEAS	OUTTOL
DATUM_D_PLN	0.367	0.117

FCFPROF1 Datum Shift

Segment	Shift X	Shift Y	Shift Z	Rotation X	Rotation Y	Rotation Z
Segment 1	Fixed	Fixed	Fixed	Fixed	-0.014	Fixed

FCFPARL1_ZMINUS_PADS	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD1_PLN1	0.076	0.000

FCFPARL3	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD2_PLN1	0.056	0.000

FCFPARL4	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD3_PLN1	0.134	0.000

FCFPARL5	MM	// .25 D

Feature	MEAS	OUTTOL
Z_MINUS_PAD4_PLN1	0.176	0.000

FCFPARL6	MM	// .25 D

Feature	MEAS	OUTTOL
Z_PLUS_PLATE1_PLN1	0.133	0.000

FCFPARL7	MM	// .25 D

Feature	MEAS	OUTTOL
Z_PLUS_PLATE2_PLN1	0.231	0.000

FCFPERP1	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_MINUS_PAD1_PLN1	0.020	0.000

FCFPERP2	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_MINUS_PAD2_PLN1	0.024	0.000

FCFPERP3	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_PLUS_PAD3_PLN1	0.058	0.000

FCFPERP4	MM	⊥ .25 D

Feature	MEAS	OUTTOL
X_PLUS_PAD4_PLN1	0.059	0.000

SIMUL1 Size	MM	Ø235.5 0.25/0

Feature	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
DATUM_A_CYL1	235.500	232.523	0.250	0.000	-2.977	2.977
DATUM_B_CYL1	235.000	235.400	0.000	0.250	0.400	0.400

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	0.138	0.500		0.138	0.000
DATUM_B_CYL1	0.000	0.041	0.500		0.041	0.000

SIMUL1 Datum Shift

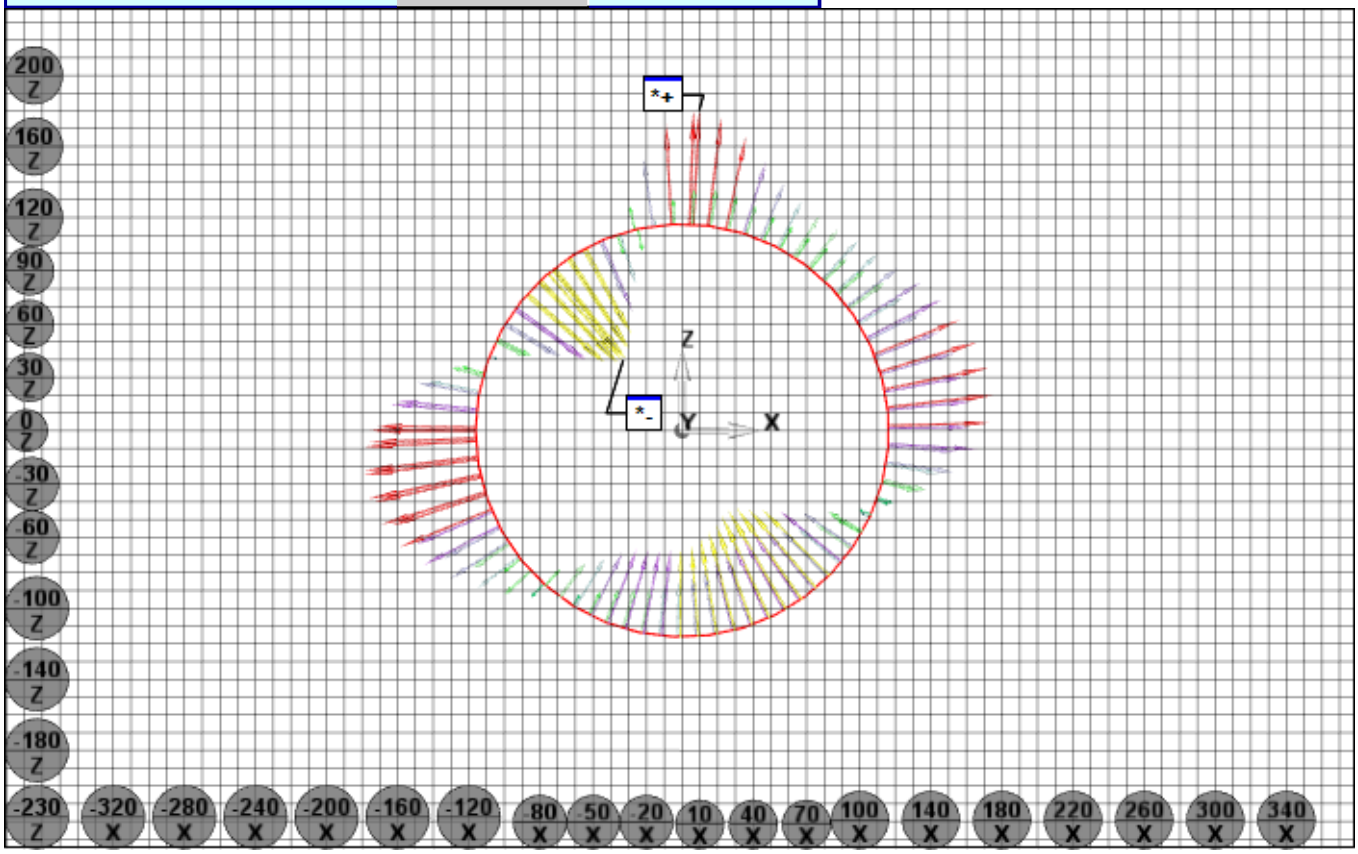
Segment	Shift X	Shift Y	Shift Z	Rotation X	Rotation Y	Rotation Z
Segment 1	0.000	0.000	0.000	0.000	26.206	0.000

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	0.070	0.071
	Z	0.000	0.000	0.000
DATUM_B_CYL1 (END PT)	X	0.000	-0.021	-0.021
	Z	0.000	-0.010	-0.010

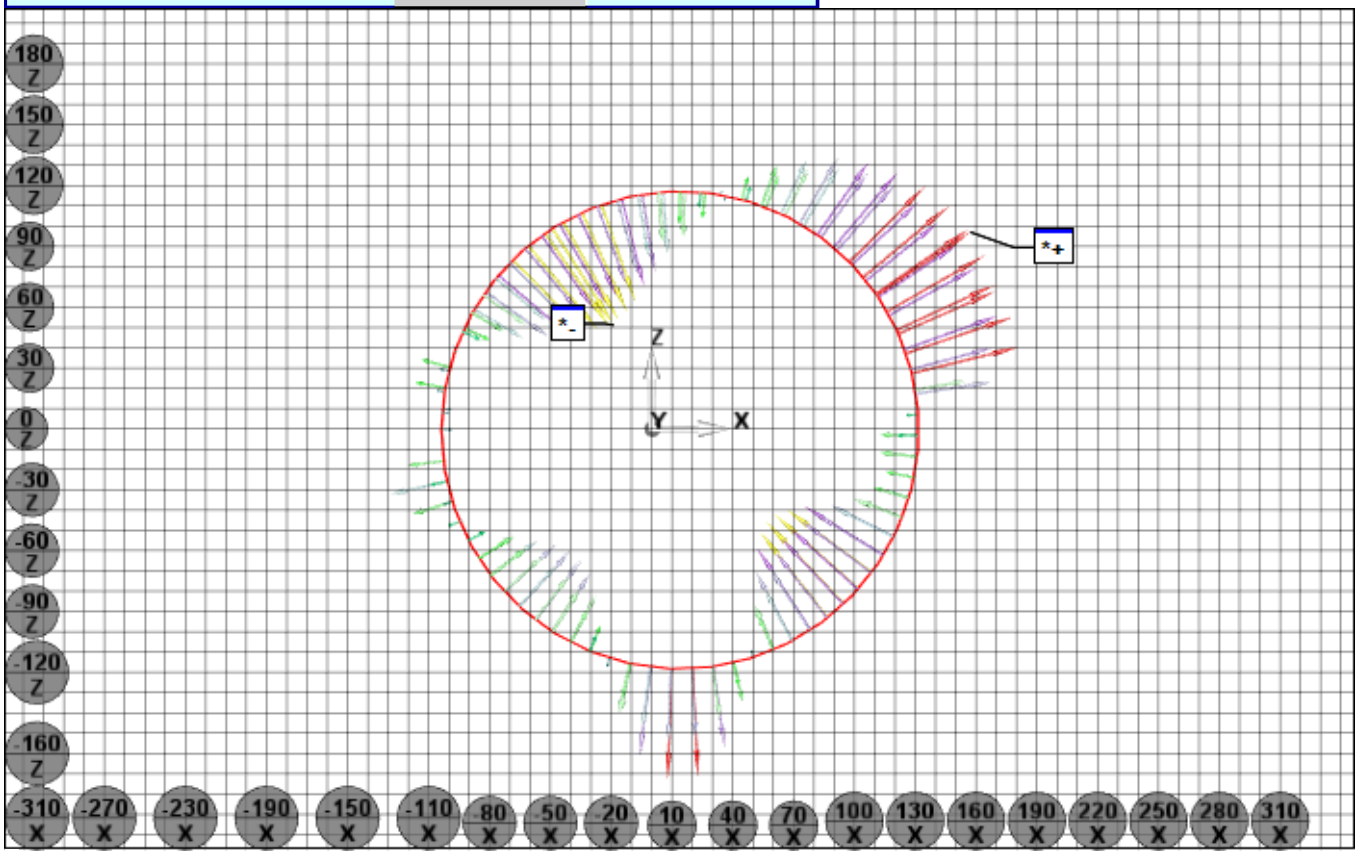
FCFCYLY1	MM	⌭ 1

Feature	MEAS	OUTTOL	MAX	MIN
DATUM_A_CYL1	1.292	0.292	0.646	-0.646



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

FCFCYLY2	MM	⌭ 1		
Feature	MEAS	OUTTOL	MAX	MIN
DATUM_B_CYL1	1.121	0.121	0.560	-0.560



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

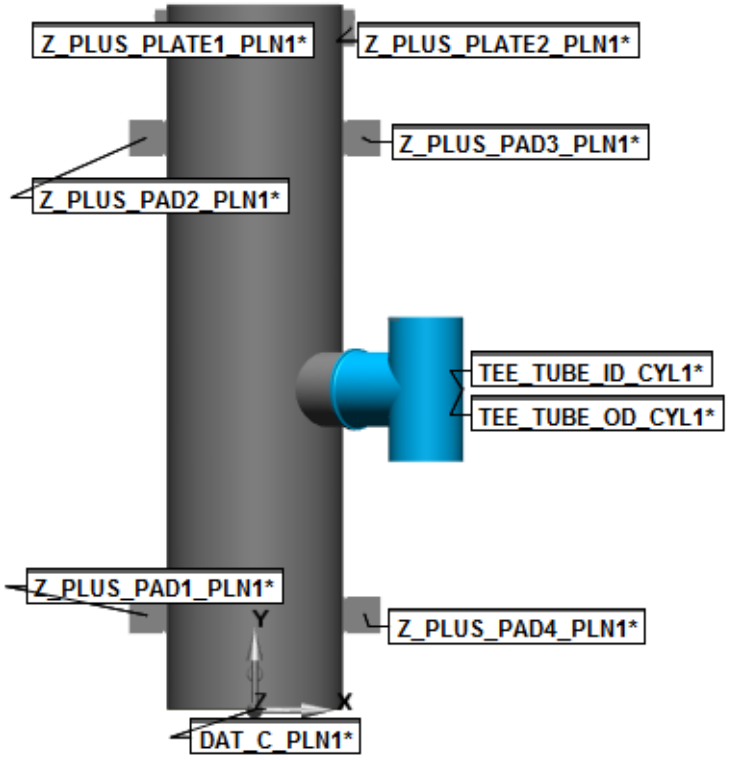
↔	MM	DIST1 - Z_MINUS_PAD1_PLN1 TO Z_PLUS_PAD1_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.878	0.000	0.300	-0.122	0.000
↔	MM	DIST2 - Z_MINUS_PAD2_PLN1 TO Z_PLUS_PAD2_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.902	0.000	0.300	-0.098	0.000
↔	MM	DIST3 - Z_MINUS_PAD3_PLN1 TO Z_PLUS_PAD3_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.871	0.000	0.300	-0.129	0.000
↔	MM	DIST4 - Z_MINUS_PAD4_PLN1 TO Z_PLUS_PAD4_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.873	0.000	0.300	-0.127	0.000
↔	MM	DIST5 - Z_MINUS_PLATE1_PLN1 TO Z_PLUS_PLATE1_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.775	0.000	0.300	-0.225	0.000
↔	MM	DIST6 - Z_MINUS_PLATE2_PLN1 TO Z_PLUS_PLATE2_PLN1 (ZAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	24.000	23.882	0.000	0.300	-0.118	0.000
↔	MM	DIST7 - X_MINUS_PLATE1_PLN1 TO X_PLUS_PLATE2_PLN1 (XAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	272.000	272.148	0.000	0.300	0.148	0.148
↔	MM	DIST8 - X_MINUS_PAD1_PLN1 TO X_PLUS_PAD4_PLN1 (XAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	342.000	342.270	0.000	0.300	0.270	0.270
↔	MM	DIST9 - X_MINUS_PAD2_PLN1 TO X_PLUS_PAD3_PLN1 (XAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	342.000	341.992	0.000	0.300	-0.008	0.000
⌖	MM	21 - TEE_TUBE_ID_CYL1				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
PR	300.000	298.660	1.000	1.000	-1.340	0.340
PA	39.000	38.894	1.000	1.000	-0.106	0.000
D	97.384	97.774	0.500	0.550	0.390	0.000
RN	0.000	0.776	0.100	0.000	0.776	0.676
⌖	MM	22 - TEE_TUBE_OD_CYL1				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
PR	300.000	298.659	1.000	1.000	-1.341	0.341
PA	39.000	38.891	1.000	1.000	-0.109	0.000
D	101.600	101.644	0.500	0.550	0.044	0.000
RN	0.000	0.790	0.100	0.000	0.790	0.690
↔	MM	DIST10 - DAT_C_PLN1 TO Y_MINUS_PAD1_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	104.681	105.040	0.300	0.300	0.359	0.059
↔	MM	DIST11 - DAT_C_PLN1 TO Y_MINUS_PAD4_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	104.681	104.634	0.300	0.300	-0.047	0.000

↔	MM	DIST12 - Y_MINUS_PAD1_PLN1 TO Y_MINUS_PAD2_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	650.000	649.773	0.300	0.300	-0.227	0.000

↔	MM	DIST13 - Y_MINUS_PAD4_PLN1 TO Y_MINUS_PAD3_PLN1 (YAXIS)				
AX	NOMINAL	MEAS	+TOL	-TOL	DEV	OUTTOL
M	650.000	649.221	0.300	0.300	-0.779	0.479

FCFPARL1	MM	// Ø.5 AB
Feature	MEAS	OUTTOL
TEE_TUBE_ID_CYL1	1.380	0.880

FCFPARL2	MM	// Ø.5 AB
Feature	MEAS	OUTTOL
TEE_TUBE_OD_CYL1	1.381	0.881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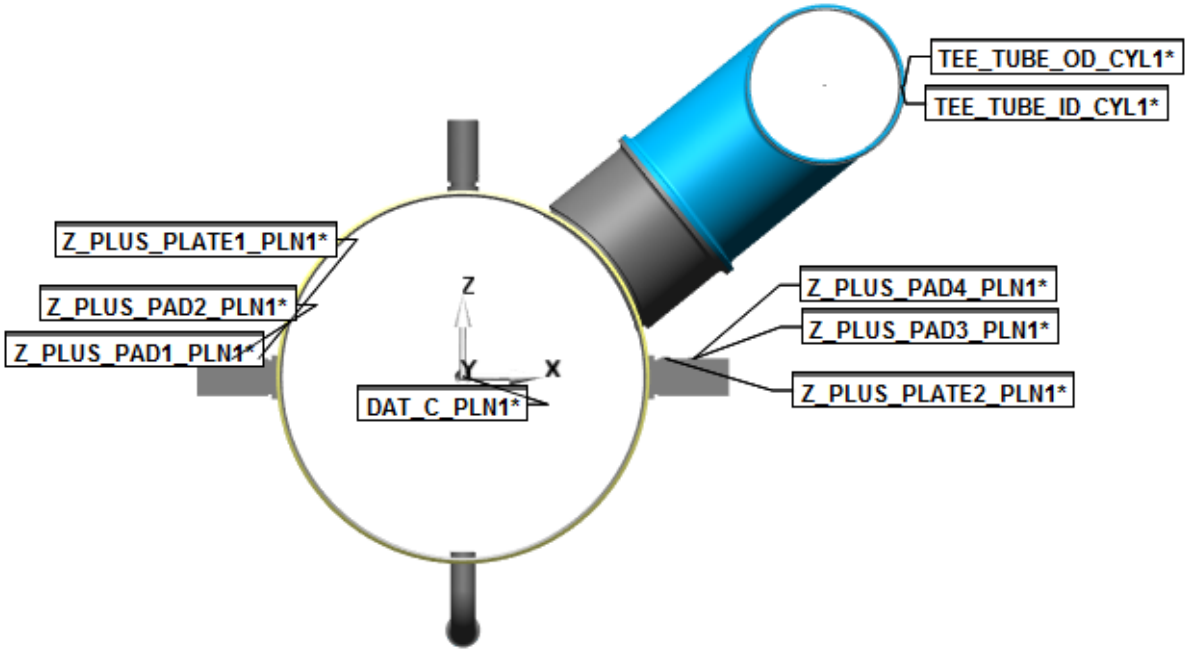
Z_PLUS_PLATE2_PLN1*
Z_PLUS_PAD3_PLN1*
Z_PLUS_PAD2_PLN1*
TEE_TUBE_ID_CYL1*
TEE_TUBE_OD_CYL1*
Z_PLUS_PAD1_PLN1*
Z_PLUS_PAD4_PLN1*
Y
Z
X
DAT_C_PLN1*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TEE_TUBE_ID_CYL1*
Z_PLUS_PLATE1_PLN1*
Z_PLUS_PAD2_PLN1*
Z_PLUS_PAD1_PLN1*
Z
Y
X
DAT_C_PLN1*
Z_PLUS_PAD4_PLN1*
Z_PLUS_PAD3_PLN1*
Z_PLUS_PLATE2_PLN1*