DATE=6/9/2009 TIME=1:46:13 PM
PART NAME : PN440004-n-Trans-Rings-180-TB9AES004-v1-IR
REV NUMBER :
SER NUMBER :
STATS COUNT : 1

440004-n
FNAL 1.3GHZ TESLA
RF CAVITY
ASSEMBLY
measurement of Transition Rings
@ 000 rotational orientation

'Inspected by ' : Robert Riley
'Cavity Number' : TB9AES004
' ' :

Datum Discs

MM DIM LOC1= LOCATION OF CIRCLE CIRC_DATUM_DISC_MC

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.000	0.000	0.000	0.000	0.000
Y	25.000	25.667	0.667	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.766	-0.234	0.050	0.050	0.184
RN	0.000	0.082	0.082	0.050	0.000	0.032

MM DIM LOC2= LOCATION OF CIRCLE CIRC_DATUM_DISC_FP

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.000	0.000	0.000	0.000	0.000
Y	-1032.384	-1031.152	1.232	10.000	10.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	111.000	110.693	-0.307	0.050	0.050	0.257
RN	0.000	0.098	0.098	0.050	0.000	0.048

Datum Disc planes

MM DIM LOC3= LOCATION OF PLANE PLNC_DD_MC

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	27.000	28.092	1.092	10.000	10.000	0.000
FL	0.000	0.061	0.061	0.100	0.000	0.000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:13 PM

MM	DIM LOC4= LOCATION OF PLANE PLNC_DD_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1034.384	-1033.273	1.111	10.000	10.000	0.000
FL	0.000	0.077	0.077	0.100	0.000	0.000

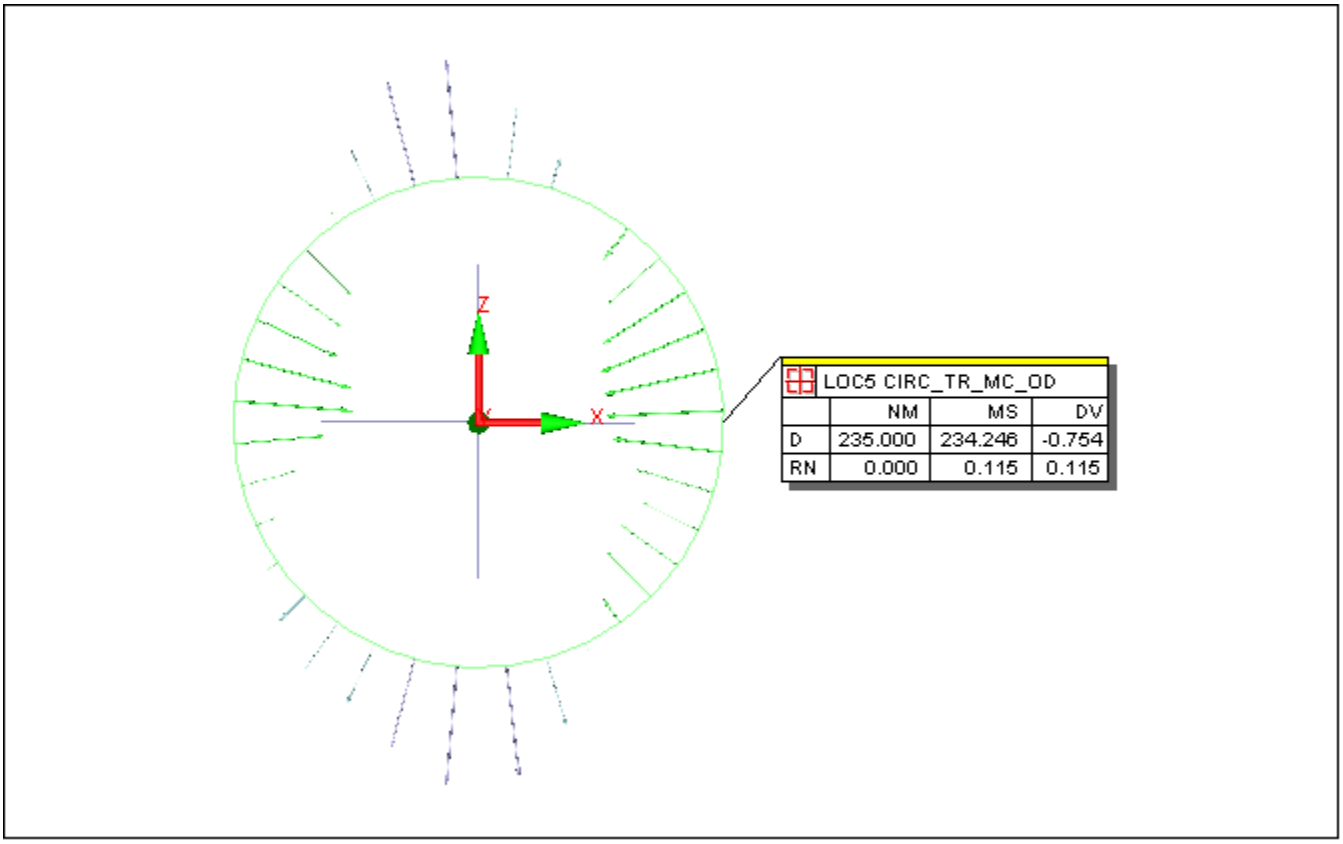
Distance between Datum Disc planes

MM	DIM DIST1= 2D DISTANCE FROM PLANE PLNC_DD_FP TO PLANE PLNC_DD_MC PAR TO YAXIS					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1061.060	1061.365	0.305	0.200	0.200	0.105

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:13 PM
Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
235.0 O.D.

MM	DIM LOC5= LOCATION OF CIRCLE CIRC_TR_MC_OD					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.062	-0.062	0.250	0.250	0.000
Y	0.000	-1.278	-1.278	2000.000	2000.000	0.000
Z	0.000	0.221	0.221	0.250	0.250	0.000
D	235.000	234.246	-0.754	0.250	0.250	0.504
RN	0.000	0.115	0.115	0.250	0.000	0.000

MM	DIM RND1= ROUNDNESS OF CIRCLE CIRC_TR_MC_OD					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.115	0.115	0.250	0.000	0.000



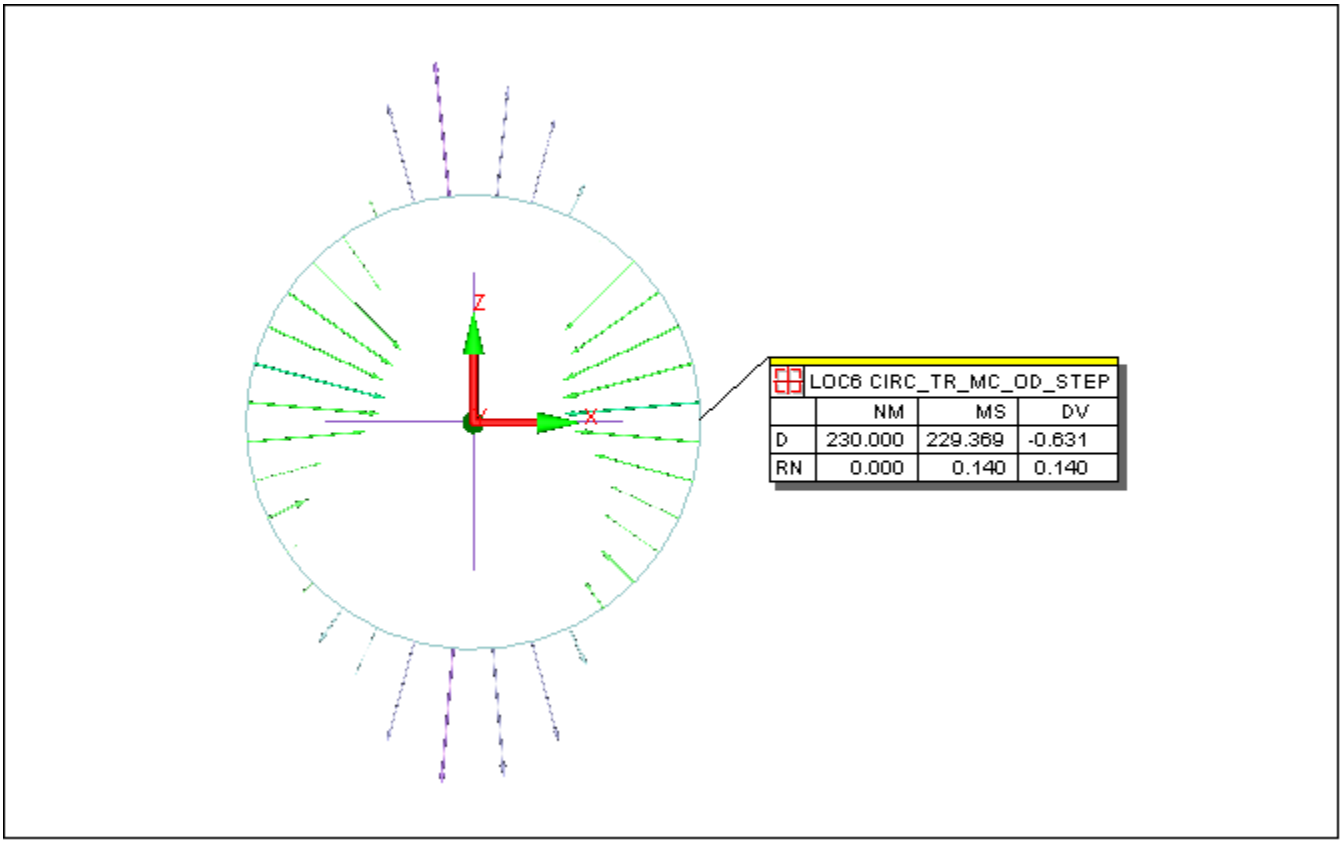
Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
235.0 O.D. x1000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:13 PM

Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
233.00 O.D. step

MM	DIM LOC6= LOCATION OF CIRCLE CIRC_TR_MC_OD_STEP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.081	-0.081	0.250	0.250	0.000
Y	0.000	-5.214	-5.214	2000.000	2000.000	0.000
Z	0.000	0.250	0.250	0.250	0.250	0.000
D	230.000	229.369	-0.631	0.000	0.250	0.381
RN	0.000	0.140	0.140	0.250	0.000	0.000

MM	DIM RND2= ROUNDNESS OF CIRCLE CIRC_TR_MC_OD_STEP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.140	0.140	0.250	0.000	0.000



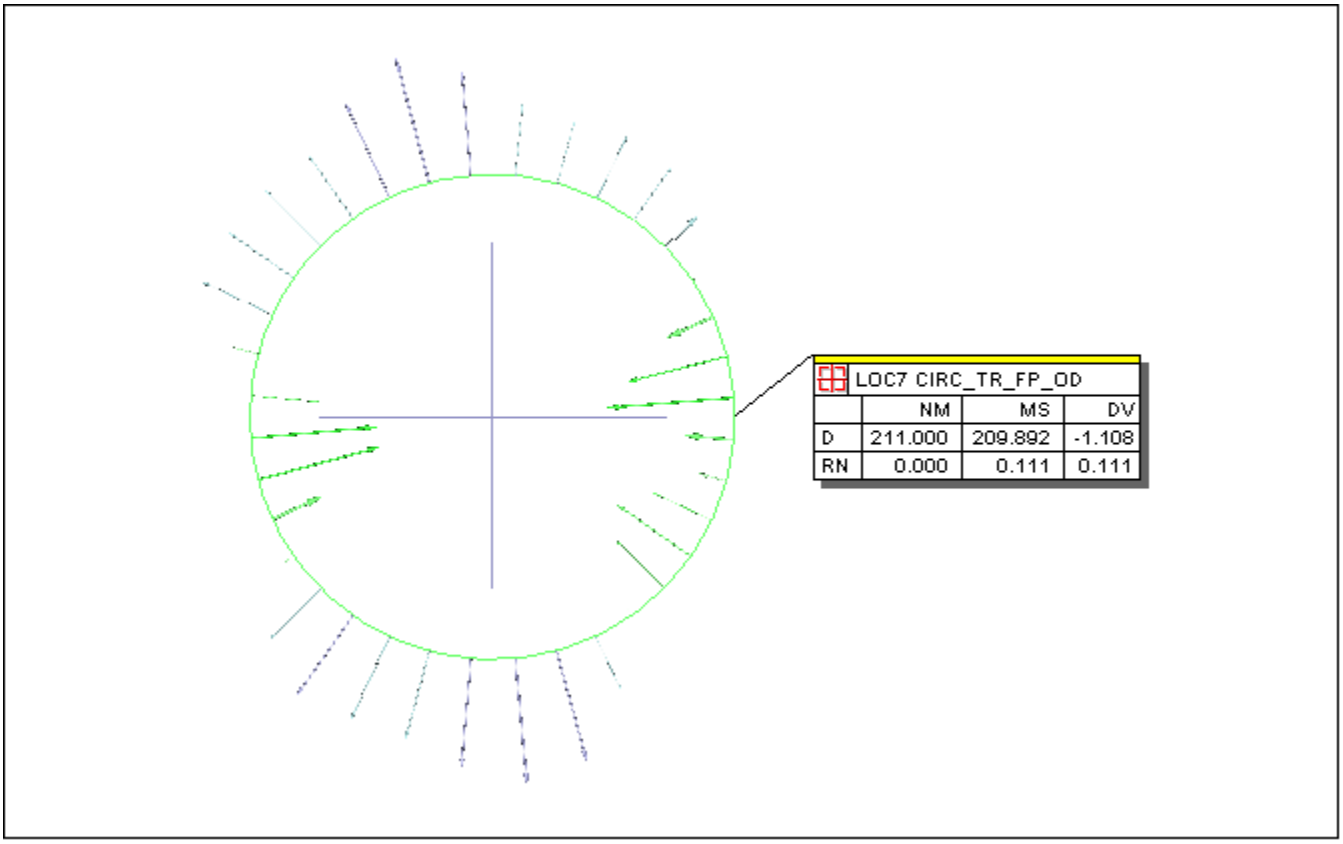
Minimum Circumscribed 36 point constructed circle
Transition Ring Main Coupler end
233.00 O.D. step x1000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:13 PM

Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
211.0 O.D.

MM	DIM LOC7= LOCATION OF CIRCLE CIRC_TR_FP_OD					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.044	0.044	0.250	0.250	0.000
Y	0.000	-1003.803	-1003.803	2000.000	2000.000	0.000
Z	0.000	0.086	0.086	0.250	0.250	0.000
D	211.000	209.892	-1.108	0.250	0.250	0.858
RN	0.000	0.111	0.111	0.250	0.000	0.000

MM	DIM RND3= ROUNDNESS OF CIRCLE CIRC_TR_FP_OD					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.111	0.111	0.250	0.000	0.000

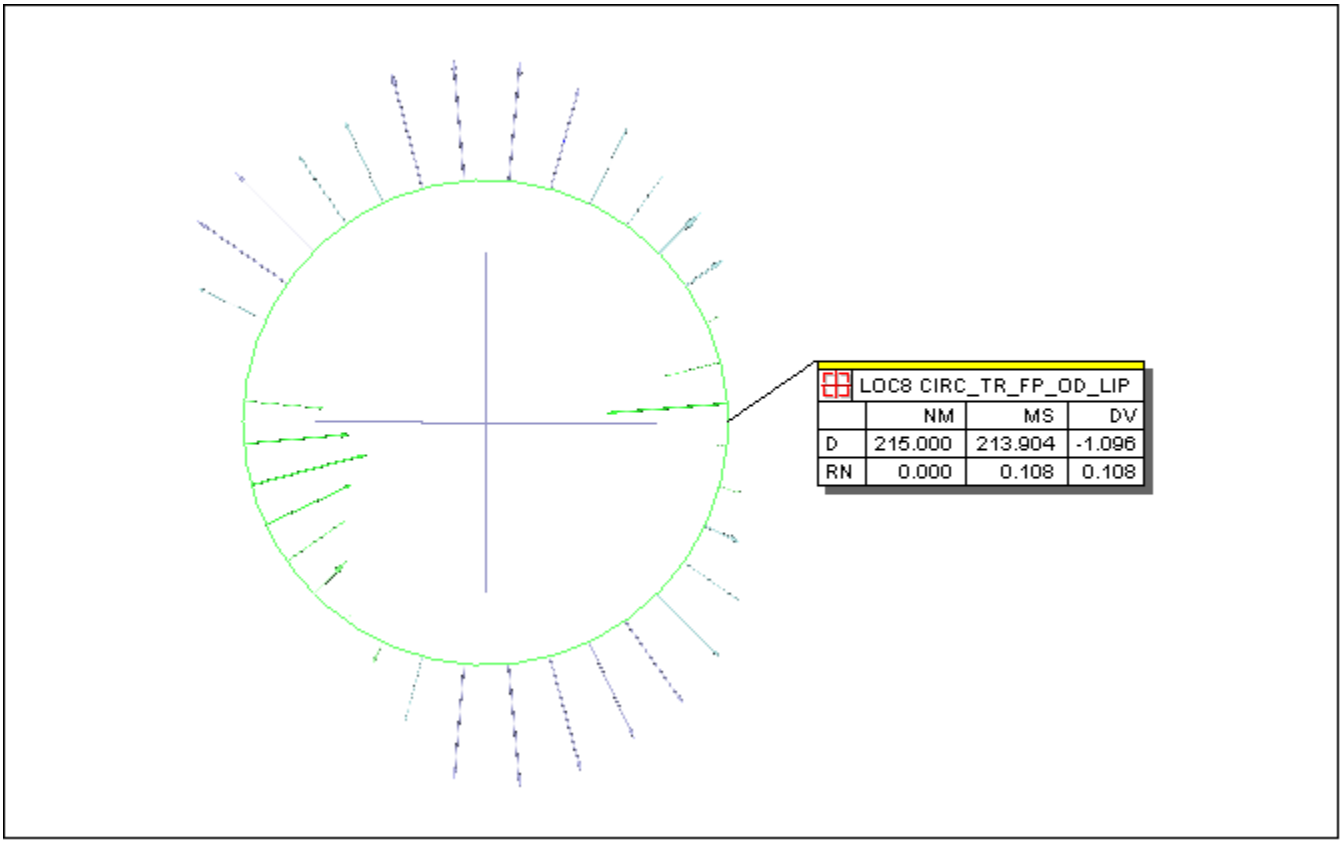


Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
211.0 O.D. x1000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:13 PM
Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
215.0 O.D. lip

MM	DIM LOC8= LOCATION OF CIRCLE CIRC_TR_FP_OD_LIP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.008	0.008	0.250	0.250	0.000
Y	0.000	-999.303	-999.303	2000.000	2000.000	0.000
Z	0.000	0.090	0.090	0.250	0.250	0.000
D	215.000	213.904	-1.096	0.250	0.250	0.846
RN	0.000	0.108	0.108	0.250	0.000	0.000

MM	DIM RND4= ROUNDNESS OF CIRCLE CIRC_TR_FP_OD_LIP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.108	0.108	0.250	0.000	0.000



Minimum Circumscribed 36 point constructed circle
Transition Ring Field Probe end
215.0 O.D. lip x1000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:13 PM

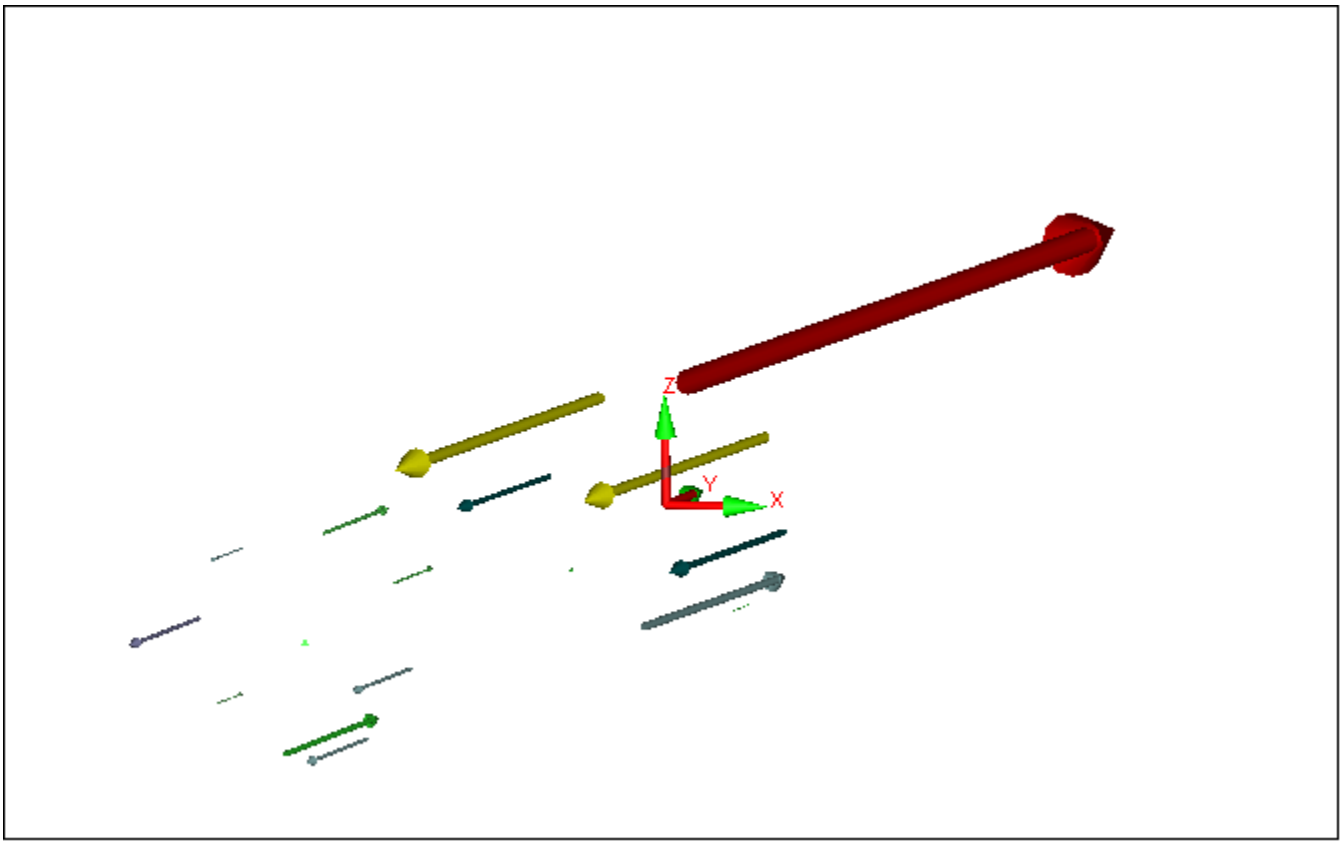
Transition Ring planes

MM	DIM LOC9= LOCATION OF PLANE PLNC_TR_MC					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.000	0.000	0.000	0.000	0.000
FL	0.000	0.348	0.348	0.200	0.000	0.148

MM	DIM LOC10= LOCATION OF PLANE PLNC_TR_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.546	-0.046	10.000	10.000	0.000
FL	0.000	0.091	0.091	0.200	0.000	0.000

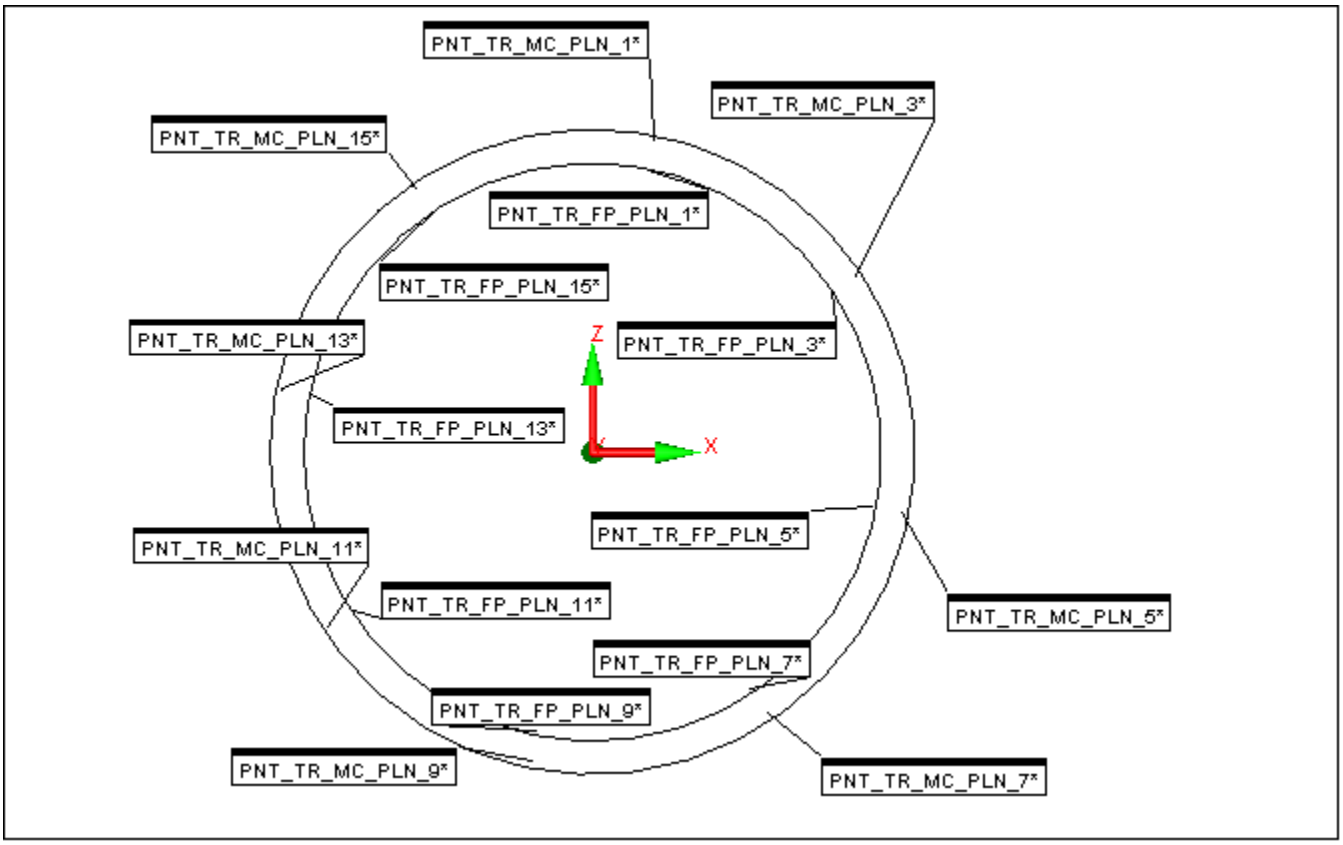
MM	DIM FLAT3= FLATNESS OF PLANE PLNC_TR_MC					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.348	0.348	0.250	0.000	0.098

MM	DIM FLAT4= FLATNESS OF PLANE PLNC_TR_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.091	0.091	0.250	0.000	0.000



Flatness of Transition Rings
x5000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM
""



Transition Ring points Main Coupler end

MM	DIM LOC11= LOCATION OF POINT PNT_TR_MC_PLN_1					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	1.066	1.066	1.000	1.000	0.066
PR	115.000	115.068	0.068	1.000	1.000	0.000
PA	101.250	101.254	0.004	1.000	1.000	0.000

MM	DIM LOC12= LOCATION OF POINT PNT_TR_MC_PLN_3					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.080	0.081	1.000	1.000	0.000
PR	115.000	115.063	0.063	1.000	1.000	0.000
PA	146.250	146.225	-0.025	1.000	1.000	0.000

MM	DIM LOC13= LOCATION OF POINT PNT_TR_MC_PLN_5					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.638	-0.638	1.000	1.000	0.000
PR	115.000	115.011	0.011	1.000	1.000	0.000
PA	-168.750	-168.780	-0.030	1.000	1.000	0.000

MM	DIM LOC14= LOCATION OF POINT PNT_TR_MC_PLN_7					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.986	-0.985	1.000	1.000	0.000
PR	115.000	114.956	-0.044	1.000	1.000	0.000
PA	-123.750	-123.770	-0.021	1.000	1.000	0.000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM

MM	DIM LOC15= LOCATION OF POINT PNT_TR_MC_PLN_9					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.752	-0.752	1.000	1.000	0.000
PR	115.000	114.923	-0.077	1.000	1.000	0.000
PA	-78.750	-78.753	-0.003	1.000	1.000	0.000

MM	DIM LOC16= LOCATION OF POINT PNT_TR_MC_PLN_11					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	-0.177	-0.177	1.000	1.000	0.000
PR	115.000	114.951	-0.050	1.000	1.000	0.000
PA	-33.750	-33.729	0.021	1.000	1.000	0.000

MM	DIM LOC17= LOCATION OF POINT PNT_TR_MC_PLN_13					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.525	0.525	1.000	1.000	0.000
PR	115.000	115.003	0.003	1.000	1.000	0.000
PA	11.250	11.283	0.033	1.000	1.000	0.000

MM	DIM LOC18= LOCATION OF POINT PNT_TR_MC_PLN_15					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	0.000	0.882	0.882	1.000	1.000	0.000
PR	115.000	115.047	0.047	1.000	1.000	0.000
PA	56.250	56.272	0.022	1.000	1.000	0.000

Transition Ring points Field Probe end

MM	DIM LOC19= LOCATION OF POINT PNT_TR_FP_PLN_1					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.685	-0.185	1.000	1.000	0.000
PR	104.000	104.037	0.037	1.000	1.000	0.000
PA	101.250	101.233	-0.017	1.000	1.000	0.000

MM	DIM LOC20= LOCATION OF POINT PNT_TR_FP_PLN_3					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.483	0.017	1.000	1.000	0.000
PR	104.000	104.011	0.011	1.000	1.000	0.000
PA	146.250	146.232	-0.019	1.000	1.000	0.000

MM	DIM LOC21= LOCATION OF POINT PNT_TR_FP_PLN_5					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.345	0.155	1.000	1.000	0.000
PR	104.000	103.985	-0.015	1.000	1.000	0.000
PA	-168.750	-168.768	-0.018	1.000	1.000	0.000

MM	DIM LOC22= LOCATION OF POINT PNT_TR_FP_PLN_7					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.290	0.210	1.000	1.000	0.000
PR	104.000	103.956	-0.044	1.000	1.000	0.000
PA	-123.750	-123.751	-0.001	1.000	1.000	0.000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM

MM DIM LOC23= LOCATION OF POINT PNT_TR_FP_PLN_9

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.318	0.182	1.000	1.000	0.000
PR	104.000	103.893	-0.107	1.000	1.000	0.000
PA	-78.750	-78.709	0.041	1.000	1.000	0.000

MM DIM LOC24= LOCATION OF POINT PNT_TR_FP_PLN_11

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.572	-0.072	1.000	1.000	0.000
PR	104.000	103.971	-0.029	1.000	1.000	0.000
PA	-33.750	-33.671	0.080	1.000	1.000	0.000

MM DIM LOC25= LOCATION OF POINT PNT_TR_FP_PLN_13

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.818	-0.318	1.000	1.000	0.000
PR	104.000	104.079	0.080	1.000	1.000	0.000
PA	11.250	11.307	0.057	1.000	1.000	0.000

MM DIM LOC26= LOCATION OF POINT PNT_TR_FP_PLN_15

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
Y	-1007.500	-1007.854	-0.354	1.000	1.000	0.000
PR	104.000	104.134	0.134	1.000	1.000	0.000
PA	56.250	56.265	0.015	1.000	1.000	0.000

Distances between matching points on Transition Rings

MM DIM DIST_PA_11.25= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_13 TO POINT PNT_TR_FP_PLN_13 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1008.343	0.843	1.000	1.000	0.000

MM DIM DIST_PA_56.25= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_15 TO POINT PNT_TR_FP_PLN_15 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1008.736	1.236	1.000	1.000	0.236

MM DIM DIST_PA_101.25= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_1 TO POINT PNT_TR_FP_PLN_1 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1008.751	1.251	1.000	1.000	0.251

MM DIM DIST_PA_146.25= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_3 TO POINT PNT_TR_FP_PLN_3 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1007.563	0.063	1.000	1.000	0.000

MM DIM DIST_PA_-168.75= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_5 TO POINT PNT_TR_FP_PLN_5 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1006.707	-0.793	1.000	1.000	0.000

MM DIM DIST_PA_-123.75= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_7 TO POINT PNT_TR_FP_PLN_7 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1006.305	-1.195	1.000	1.000	0.195

MM DIM DIST_PA_-78.75= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_9 TO POINT PNT_TR_FP_PLN_9 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1006.566	-0.934	1.000	1.000	0.000

MM DIM DIST_PA_-33.75= 2D DISTANCE FROM POINT PNT_TR_MC_PLN_11 TO POINT PNT_TR_FP_PLN_11 PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1007.395	-0.105	1.000	1.000	0.000

MM DIM DIST_BETWEEN_PLANES= 2D DISTANCE FROM PLANE PLNC_TR_MC TO PLANE PLNC_TR_FP PAR TO YAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1007.500	1007.546	0.046	1.000	1.000	0.000

LOCATIONS OF CONSTRUCTED CIRCLES
ON 18 HALF CELLS

MM DIM LOC_CC3= LOCATION OF CIRCLE CIRC_CAV_1_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.055	-0.055	0.200	0.200	0.000
Y	0.000	-968.253	-968.253	2000.000	2000.000	0.000
Z	0.000	0.275	0.275	0.200	0.200	0.075
D	210.300	211.046	0.746	0.200	0.200	0.546
RN	0.000	0.152	0.152	0.200	0.000	0.000

MM DIM LOC_CC4= LOCATION OF CIRCLE CIRC_CAV_1_2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.042	-0.042	0.200	0.200	0.000
Y	0.000	-959.269	-959.269	2000.000	2000.000	0.000
Z	0.000	0.282	0.282	0.200	0.200	0.082
D	210.300	210.992	0.692	0.200	0.200	0.492
RN	0.000	0.165	0.165	0.200	0.000	0.000

MM DIM LOC_CC5= LOCATION OF CIRCLE CIRC_CAV_2_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.060	0.060	0.200	0.200	0.000
Y	0.000	-852.122	-852.122	2000.000	2000.000	0.000
Z	0.000	0.736	0.736	0.200	0.200	0.536
D	210.300	211.429	1.129	0.200	0.200	0.929
RN	0.000	0.196	0.196	0.200	0.000	0.000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM

MM DIM LOC_CC6= LOCATION OF CIRCLE CIRC_CAV_2_2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.042	0.042	0.200	0.200	0.000
Y	0.000	-843.251	-843.251	2000.000	2000.000	0.000
Z	0.000	0.753	0.753	0.200	0.200	0.553
D	210.300	211.333	1.033	0.200	0.200	0.833
RN	0.000	0.166	0.166	0.200	0.000	0.000

MM DIM LOC_CC7= LOCATION OF CIRCLE CIRC_CAV_3_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.104	0.104	0.200	0.200	0.000
Y	0.000	-736.915	-736.915	2000.000	2000.000	0.000
Z	0.000	1.121	1.121	0.200	0.200	0.921
D	210.300	211.369	1.069	0.200	0.200	0.869
RN	0.000	0.247	0.247	0.200	0.000	0.047

MM DIM LOC_CC8= LOCATION OF CIRCLE CIRC_CAV_3_2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.164	0.164	0.200	0.200	0.000
Y	0.000	-727.883	-727.883	2000.000	2000.000	0.000
Z	0.000	1.214	1.214	0.200	0.200	1.014
D	210.300	211.223	0.923	0.200	0.200	0.723
RN	0.000	0.180	0.180	0.200	0.000	0.000

MM DIM LOC_CC9= LOCATION OF CIRCLE CIRC_CAV_4_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.146	0.146	0.200	0.200	0.000
Y	0.000	-621.742	-621.742	2000.000	2000.000	0.000
Z	0.000	1.499	1.499	0.200	0.200	1.299
D	210.300	211.328	1.028	0.200	0.200	0.828
RN	0.000	0.183	0.183	0.200	0.000	0.000

MM DIM LOC_CC10= LOCATION OF CIRCLE CIRC_CAV_4_2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.119	0.119	0.200	0.200	0.000
Y	0.000	-613.333	-613.333	2000.000	2000.000	0.000
Z	0.000	1.486	1.486	0.200	0.200	1.286
D	210.300	211.340	1.040	0.200	0.200	0.840
RN	0.000	0.134	0.134	0.200	0.000	0.000

MM DIM LOC_CC11= LOCATION OF CIRCLE CIRC_CAV_5_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.101	0.101	0.200	0.200	0.000
Y	0.000	-506.181	-506.181	2000.000	2000.000	0.000
Z	0.000	1.537	1.537	0.200	0.200	1.337
D	210.300	211.504	1.204	0.200	0.200	1.004
RN	0.000	0.126	0.126	0.200	0.000	0.000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM

MM DIM LOC_CC12= LOCATION OF CIRCLE CIRC_CAV_5_2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.156	0.156	0.200	0.200	0.000
Y	0.000	-497.373	-497.373	2000.000	2000.000	0.000
Z	0.000	1.532	1.532	0.200	0.200	1.332
D	210.300	211.512	1.212	0.200	0.200	1.012
RN	0.000	0.218	0.218	0.200	0.000	0.018

MM DIM LOC_CC13= LOCATION OF CIRCLE CIRC_CAV_6_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	0.056	0.056	0.200	0.200	0.000
Y	0.000	-390.429	-390.429	2000.000	2000.000	0.000
Z	0.000	1.465	1.465	0.200	0.200	1.265
D	210.300	211.429	1.129	0.200	0.200	0.929
RN	0.000	0.183	0.183	0.200	0.000	0.000

MM DIM LOC_CC14= LOCATION OF CIRCLE CIRC_CAV_6_2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.001	-0.001	0.200	0.200	0.000
Y	0.000	-381.795	-381.795	2000.000	2000.000	0.000
Z	0.000	1.435	1.435	0.200	0.200	1.235
D	210.300	211.418	1.118	0.200	0.200	0.918
RN	0.000	0.179	0.179	0.200	0.000	0.000

MM DIM LOC_CC15= LOCATION OF CIRCLE CIRC_CAV_7_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.071	-0.071	0.200	0.200	0.000
Y	0.000	-275.074	-275.074	2000.000	2000.000	0.000
Z	0.000	1.261	1.261	0.200	0.200	1.061
D	210.300	211.363	1.063	0.200	0.200	0.863
RN	0.000	0.260	0.260	0.200	0.000	0.060

MM DIM LOC_CC16= LOCATION OF CIRCLE CIRC_CAV_7_2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.069	-0.069	0.200	0.200	0.000
Y	0.000	-266.785	-266.785	2000.000	2000.000	0.000
Z	0.000	1.333	1.333	0.200	0.200	1.133
D	210.300	211.393	1.093	0.200	0.200	0.893
RN	0.000	0.224	0.224	0.200	0.000	0.024

MM DIM LOC_CC17= LOCATION OF CIRCLE CIRC_CAV_8_1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.213	-0.213	0.200	0.200	0.013
Y	0.000	-159.927	-159.927	2000.000	2000.000	0.000
Z	0.000	1.009	1.009	0.200	0.200	0.809
D	210.300	211.274	0.974	0.200	0.200	0.774
RN	0.000	0.228	0.228	0.200	0.000	0.028

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM

MM	DIM LOC_CC18= LOCATION OF CIRCLE CIRC_CAV_8_2					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.191	-0.191	0.200	0.200	0.000
Y	0.000	-151.489	-151.489	2000.000	2000.000	0.000
Z	0.000	1.006	1.006	0.200	0.200	0.806
D	210.300	211.445	1.145	0.200	0.200	0.945
RN	0.000	0.199	0.199	0.200	0.000	0.000

MM	DIM LOC_CC19= LOCATION OF CIRCLE CIRC_CAV_9_1					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.289	-0.289	0.200	0.200	0.089
Y	0.000	-44.490	-44.490	2000.000	2000.000	0.000
Z	0.000	0.500	0.500	0.200	0.200	0.300
D	210.300	210.971	0.671	0.200	0.200	0.471
RN	0.000	0.130	0.130	0.200	0.000	0.000

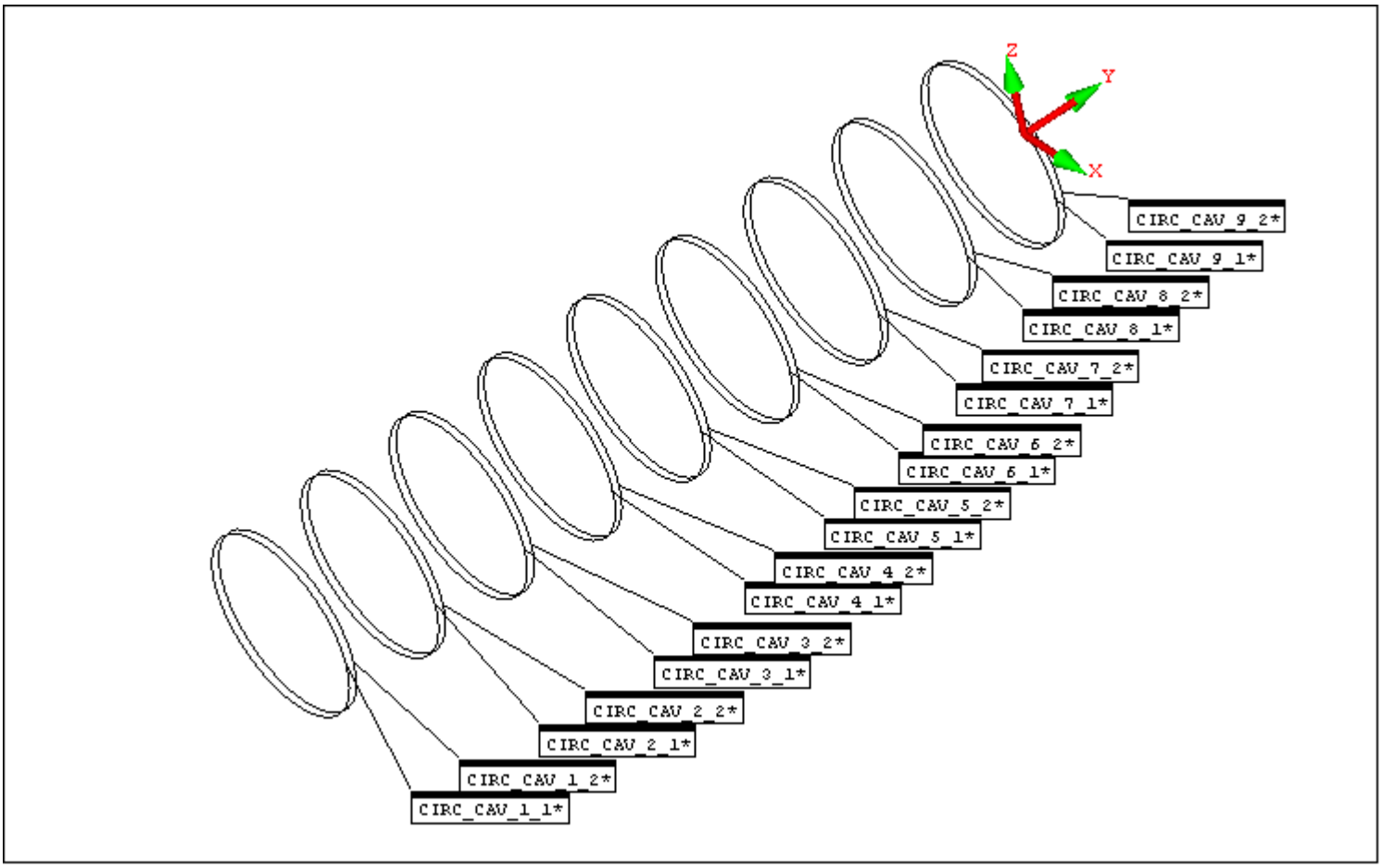
MM	DIM LOC_CC20= LOCATION OF CIRCLE CIRC_CAV_9_2					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.170	-0.170	0.200	0.200	0.000
Y	0.000	-36.168	-36.168	2000.000	2000.000	0.000
Z	0.000	0.434	0.434	0.200	0.200	0.234
D	210.300	210.922	0.622	0.200	0.200	0.422
RN	0.000	0.210	0.210	0.200	0.000	0.010

Location of End Flanges

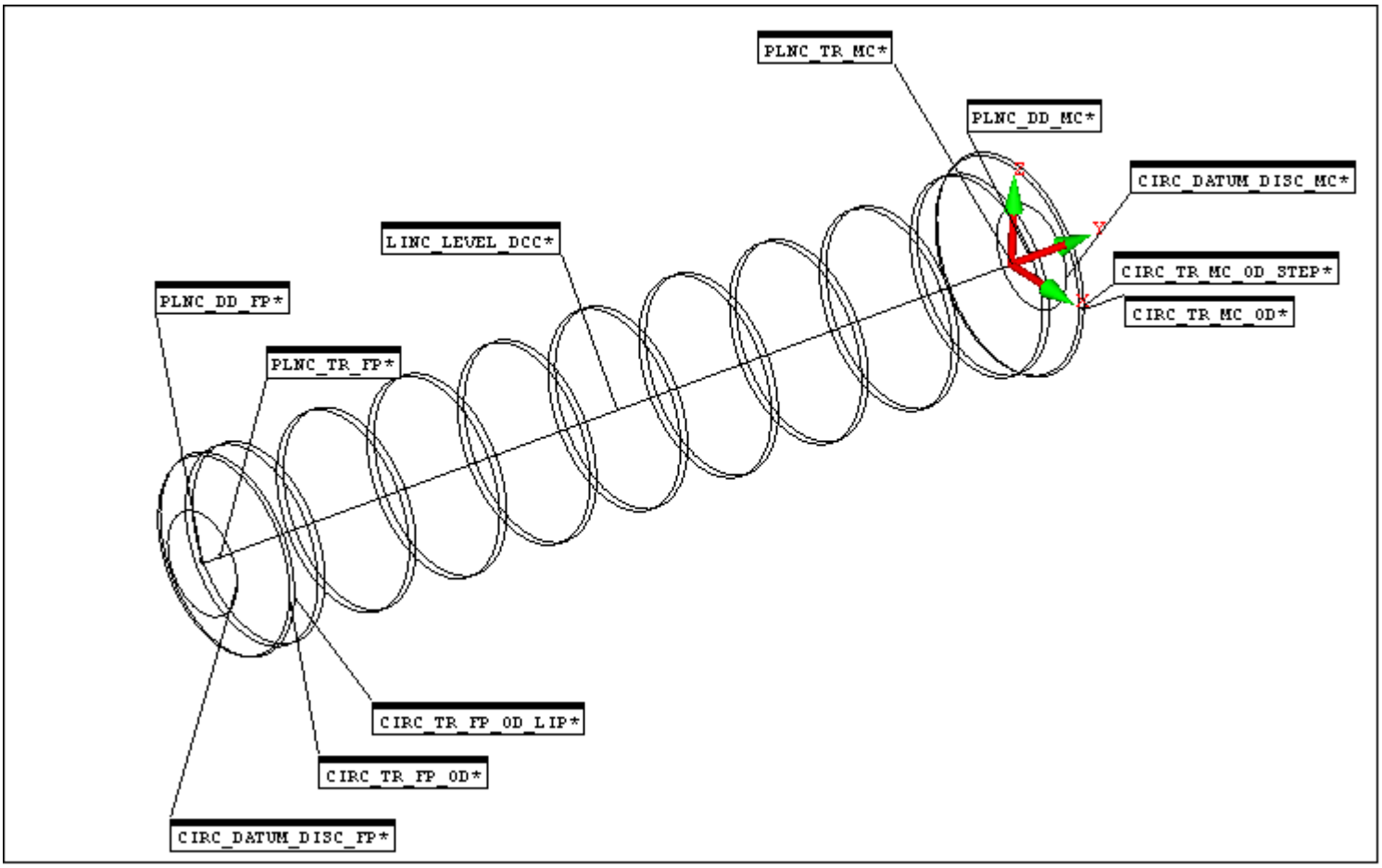
MM	DIM LOC_23= LOCATION OF CIRCLE CIR_END_FLANGE_MC					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.026	-0.026	0.200	0.200	0.000
Y	0.000	115.469	115.469	2000.000	2000.000	0.000
Z	0.000	-0.483	-0.483	0.200	0.200	0.283
D	140.000	140.049	0.049	0.300	0.300	0.000
RN	0.000	0.025	0.025	0.200	0.000	0.000

MM	DIM LOC_24= LOCATION OF CIRCLE CIR_END_FLANGE_FP					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	0.000	-0.297	-0.297	0.200	0.200	0.097
Y	0.000	-1152.650	-1152.650	2000.000	2000.000	0.000
Z	0.000	0.008	0.008	0.200	0.200	0.000
D	140.000	140.017	0.017	0.300	0.300	0.000
RN	0.000	0.008	0.008	0.200	0.000	0.000

PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM
""



PART NUMBER=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DATE=6/9/2009 TIME=1:46:14 PM
""



END OF MEASUREMENT FOR
PN=PN440004-n-Trans-Rings-180-TB9AES004-v1-IR DWG= SN
=
TOTAL # OF MEAS =0 # OUT OF TOL =0 # OF HOURS =00:00:00