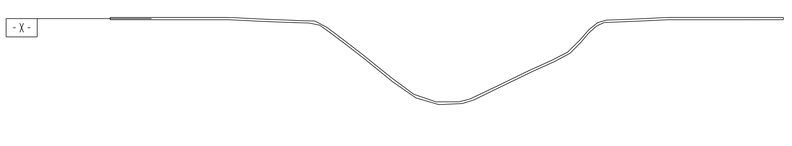
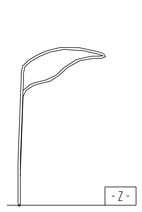
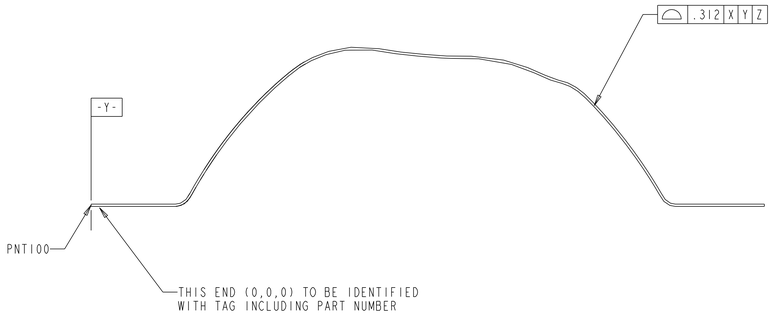
Point Name	X	Y	Z
PNT100	0.000	0.000	0.000
PNT101	11.535	0.000	0.000
PNT102	12.192	0.106	0.000
PNT103	12.870	0.479	-0.000
PNT104	13.364	1.075	-0.000
PNT105	13.860	1.962	-0.000
PNT106	14.313	2.745	0.000
PNT107	14.732	3.449	0.000
PNT108	15.175	4.171	0.000
PNT109	15.612	4.864	0.000
PNT110	16.011	5.480	0.000
PNT111	16.560	6.304	0.008
PNT112	16.989	6.931	0.033
PNT113	17.467	7.608	0.059
PNT114	17.954	8.279	0.085
PNT115	18.535	9.053	0.116
PNT116	19.042	9.708	0.141
PNT117	19.603	10.409	0.170
PNT118	20.219	11.155	0.200
PNT119	20.712	11.733	0.223
PNT120	21.536	12.664	0.261
PNT121	22.524	13.726	0.300
PNT122	23.590	14.810	0.336
PNT123	24.637	15.815	0.372
PNT124	25.609	16.696	0.414
PNT125	26.659	17.595	0.459
PNT126	27.731	18.466	0.455
PNT127	28.386	18.947	0.606
PNT128	29.072	19.383	0.985
PNT129	29.838	19.799	1.546
PNT130	30.764	20.231	2.254
PNT131	31.875	20.665	3.081
PNT132	32.890	20.975	3.854
PNT133	33.911	21.208	4.646
PNT134	34.993	21.375	5.490
PNT135	36.184	21.466	6.431
PNT136	37.308	21.456	7.348
PNT137	38.474	21.352	8.318
PNT138	39.540	21.196	9.184
PNT139	40.700	21.001	10.033
PNT140	41.888	20.824	10.715
PNT141	42.970	20.697	11.153
PNT142	44.099	20.586	11.456
PNT143	45.256	20.477	11.626
PNT144	46.494	20.370	11.652
PNT145	47.659	20.283	11.535
PNT146	48.802	20.225	11.271
PNT147	49.966	20.209	10.835
PNT148	50.968	20.212	10.369
PNT149	51.956	20.204	9.872
PNT150	53.186	20.150	9.244
PNT151	54.172	20.054	8.751
PNT152	55.343	19.877	8.185
PNT153	56.507	19.638	7.627
PNT154	57.601	19.355	7.107
PNT155	58.746	18.985	6.582
PNT156	59.878	18.548	6.081
PNT157	60.992	18.062	5.583
PNT158	61.966	17.621	5.096
PNT159	63.003	17.185	4.423
PNT160	63.823	16.938	3.622
PNT161	64.723	16.708	2.508
PNT162	65.625	16.316	1.539
PNT163	66.536	15.744	0.791
PNT164	67.236	15.183	0.438
PNT165	67.823	14.618	0.369
PNT166	68.404	14.026	0.348
PNT167	69.030	13.368	0.325
PNT168	69.729	12.607	0.297
PNT169	70.364	11.893	0.272
PNT170	70.997	11.157	0.246
PNT171	71.678	10.339	0.216
PNT172	72.414	9.424	0.184
PNT173	73.190	8.421	0.148
PNT174	73.873	7.505	0.116
PNT175	74.749	6.283	0.072
PNT176	75.529	5.147	0.032
PNT177	76.184	4.157	0.000
PNT178	76.715	3.320	0.000
PNT179	77.161	2.596	0.000
PNT180	77.671	1.746	0.000
PNT181	78.115	0.988	-0.000
PNT182	78.505	0.506	-0.000
PNT183	79.122	0.130	0.000
PNT184	79.832	0.000	-0.000
PNT185	92.000	0.000	0.000

NOTES

1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
2. DIMENSIONS ARE IN INCHES.
3. FABRICATION AND MATERIALS PER NCSX-CSPEC-123-01
4. PROFILE TOLERANCE OF TUBE SURFACE IS BILATERAL, I.E. 0.156" ANY DIRECTION OFF REFERENCE SURFACE.
5. ALL TUBE BEND RADII ARE 5/8" TO CENTERLINE OF TUBE.
6. DATUM POINTS ON CHART ARE THEORETICAL INTERCEPTS OF THE TUBE CENTERLINE. BEND RADII ARE OMMITTED. PROFILE TOLERENCE INCLUDES ALLOWANCES FOR THE RADII ERRORS.







RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting: ? Jerry Siegel 2005.06.24 13:14:52 -05'00'

-1 COOLANT TUBE 1-1
SCALE .125

APPROX TUBE LENGTH = 116.5 IN

3	AR	X		-1	COOLANT TUBE 1-1	316L SS 5/16"-.032 WALL	SEE NOTE 4	1
SE123-065	-1		CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO
			NEXT ASSEMBLY		PARTS LIST			

SE123-066 B

REV	DESCRIPTION	BY	DATE	CHK	DEPT	DATE	PE	REQ	DATE	ORNL	DOE	DATE
1	⚠ PER ECN NO. 5003	MJC	6/24/05	PLG								

REVISION OR ISSUE PURPOSE — REVISION APPROVAL

SCALE NOTED
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS :
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0°15'
BREAK SHARP EDGES .06 MAX
FINISH 125 UNLESS OTHERWISE SPECIFIED

DRAWING APPROVALS		DATE
DES	P GORANSON	4-22-05
DRW	G MCGINNIS	4-22-05
CHK	G.H. JONES	05-04-05
SECT	:	:
DEPT	:	:
PE	:	:
CR	:	:
PJ	:	:
REQ	:	:
PPPL DRFT	:	:
	:	:
	:	:

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UT-BATTELLE, LLC. Oak Ridge, Tennessee

PROJECT NAME
NATIONAL COMPACT STELLARATOR EXPERIMENT

VACUUM VESSEL HEATING/COOLING COOLANT TUBE 1-1 DETAIL

VERSION NO.	PLANT	BLDG	FL	SHT	OF	TYPE	CLASS
0	ORNL	5700	3	1	1	S	U

RELEASE LEVEL: Fabrication
SE123-066 REV 1

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