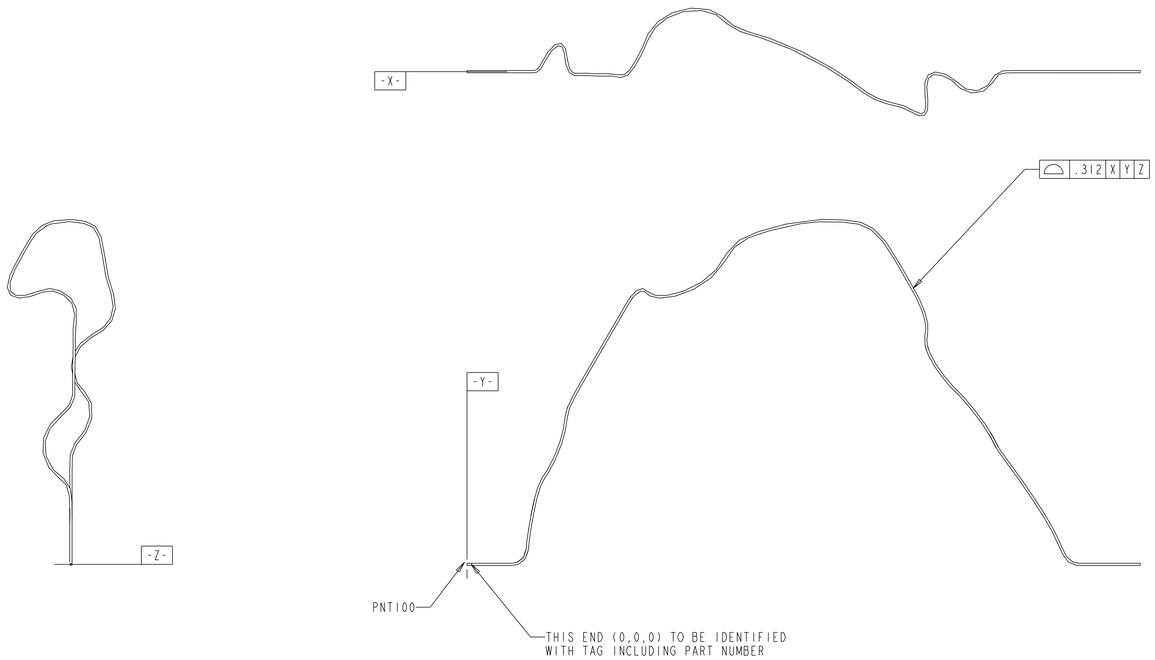
NEXT ASS'Y: | FINAL ASS'Y:

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.

Point Name	X	Y	Z
PNT100	0.000	0.000	0.000
PNT101	6.155	0.000	-0.000
PNT102	7.165	0.260	0.000
PNT103	7.918	0.981	0.000
PNT104	8.197	1.833	0.000
PNT105	8.331	3.120	-0.000
PNT106	8.469	4.146	0.000
PNT107	8.608	5.041	0.000
PNT108	8.807	6.188	0.000
PNT109	9.001	7.205	0.000
PNT110	9.204	8.192	-0.003
PNT111	9.406	9.071	-0.038
PNT112	9.616	9.856	-0.141
PNT113	9.832	10.535	-0.329
PNT114	10.077	11.157	-0.638
PNT115	10.404	11.765	-1.212
PNT116	10.680	12.137	-1.787
PNT117	11.068	12.750	-2.448
PNT118	11.470	13.468	-2.985
PNT119	11.871	14.271	-3.386
PNT120	12.321	15.288	-3.664
PNT121	12.754	16.435	-3.716
PNT122	13.066	17.436	-3.537
PNT123	13.302	18.396	-3.143
PNT124	13.457	19.319	-2.485
PNT125	13.558	20.162	-1.595
PNT126	13.707	20.880	-0.822
PNT127	13.951	21.593	-0.193
PNT128	14.249	22.249	0.195
PNT129	14.734	23.167	0.419
PNT130	15.372	24.312	0.385
PNT131	16.059	25.523	0.340
PNT132	16.842	26.868	0.398
PNT133	17.588	28.142	0.430
PNT134	18.455	29.629	0.462
PNT135	19.194	30.907	0.474
PNT136	20.052	32.399	0.472
PNT137	20.797	33.666	0.599
PNT138	21.293	34.514	0.643
PNT139	21.809	35.420	0.442
PNT140	22.224	36.104	0.031
PNT141	22.668	36.711	-0.601
PNT142	23.157	37.191	-1.415
PNT143	23.539	37.426	-2.101
PNT144	24.060	37.530	-3.115
PNT145	24.553	37.255	-4.291
PNT146	24.983	36.850	-5.212
PNT147	25.704	36.606	-6.234
PNT148	26.683	36.535	-7.099
PNT149	28.098	36.720	-7.896
PNT150	29.599	37.165	-8.371
PNT151	30.941	37.749	-8.539
PNT152	32.218	38.484	-8.485
PNT153	33.382	39.352	-8.234
PNT154	34.335	40.376	-7.777
PNT155	34.981	41.384	-7.240
PNT156	35.651	42.450	-6.645
PNT157	36.347	43.332	-6.146
PNT158	37.195	44.101	-5.702
PNT159	38.135	44.661	-5.358
PNT160	39.018	45.015	-5.108
PNT161	40.149	45.378	-4.791
PNT162	41.120	45.681	-4.473
PNT163	42.161	45.983	-4.095
PNT164	43.202	46.244	-3.688
PNT165	44.388	46.496	-3.187
PNT166	45.494	46.687	-2.684
PNT167	46.811	46.849	-2.038
PNT168	48.180	46.962	-1.303
PNT169	49.313	47.000	-0.644
PNT170	50.360	46.985	0.001
PNT171	51.591	46.903	0.811
PNT172	52.658	46.773	1.564
PNT173	53.758	46.575	2.396
PNT174	54.552	46.301	2.969
PNT175	55.626	45.626	3.613
PNT176	56.586	44.626	3.996
PNT177	57.497	43.396	4.250
PNT178	58.503	41.821	4.495
PNT179	59.361	40.352	4.739
PNT180	60.186	38.877	5.049
PNT181	60.924	37.563	5.422
PNT182	61.694	36.152	5.842
PNT183	62.271	34.841	5.931
PNT184	62.571	33.919	5.704
PNT185	62.753	33.149	5.308
PNT186	62.851	32.427	4.713
PNT187	62.824	31.761	3.831
PNT188	62.706	31.191	2.823
PNT189	62.660	30.570	1.910
PNT190	62.768	29.861	1.219
PNT191	63.061	28.922	0.602
PNT192	63.597	27.825	0.260
PNT193	64.224	26.846	0.256
PNT194	64.860	25.942	0.349
PNT195	65.524	25.076	0.541
PNT196	66.205	24.319	0.967
PNT197	66.791	23.770	1.559
PNT198	67.390	23.162	2.073
PNT199	68.042	22.434	2.464
PNT200	68.598	21.776	2.674
PNT201	69.292	20.920	2.778
PNT202	69.804	20.265	2.745
PNT203	70.361	19.521	2.593
PNT204	70.939	18.699	2.280
PNT205	71.420	17.941	1.846
PNT206	71.805	17.224	1.272
PNT207	72.024	16.733	0.792
PNT208	72.483	15.920	0.318
PNT209	72.961	15.201	0.120
PNT210	73.638	14.259	0.021
PNT211	74.268	13.415	0.016
PNT212	75.025	12.389	0.022
PNT213	75.788	11.312	-0.000
PNT214	76.746	9.929	0.000
PNT215	77.887	8.202	0.000
PNT216	78.976	6.441	-0.000
PNT217	79.813	4.982	0.000
PNT218	80.715	3.264	0.000
PNT219	81.637	1.267	0.000
PNT220	82.144	0.561	0.000
PNT221	82.896	0.122	0.000
PNT222	83.634	0.000	0.000
PNT223	92.000	0.000	0.000



-1 COOLANT TUBE 8-1

SCALE .125

APPROX TUBE LENGTH = 160.9 IN

3							
	AR		-1	COOLANT TUBE 8-1	316L SS 5/16"-.032 WALL	SEE NOTE 4	1
SE123-100	-1	CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO
		NEXT ASSEMBLY	PARTS LIST				

SE123-101

RELEASED FOR FABRICATION / INSTALLATION

PPPL Drafting: Jerry Siegel 2005.06.24 13:37:01 -05'00'

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

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 QRFT		:
	:	:
	:	:

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PROJECT NAME: NATIONAL COMPACT STELLARATOR EXPERIMENT

VACUUM VESSEL HEATING/COOLING COOLANT TUBE 8-1 DETAIL

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

RELEASE LEVEL: Fabrication — SE123-101 — REV 1

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