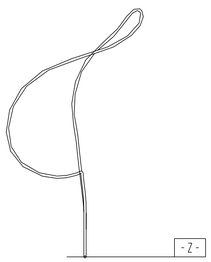
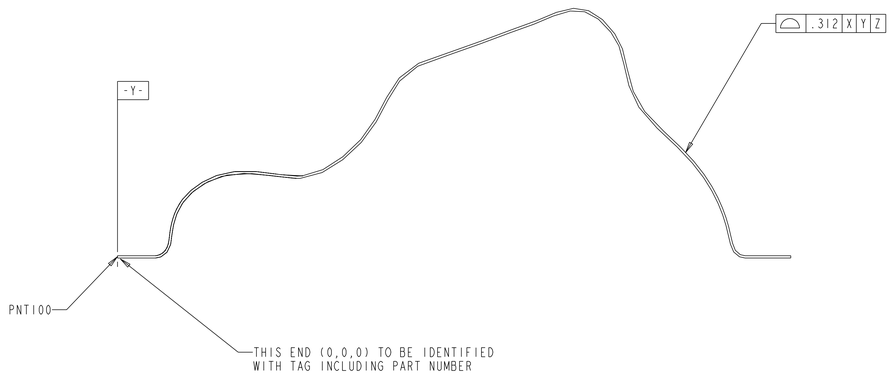
NEXT ASS'Y: | FINAL ASS'Y:

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	5.195	-0.000	0.000
PNT102	6.249	0.356	0.000
PNT103	6.946	1.232	-0.000
PNT104	7.187	2.166	0.000
PNT105	7.308	3.299	0.000
PNT106	7.476	4.275	0.000
PNT107	7.765	5.377	0.000
PNT108	8.140	6.346	-0.000
PNT109	8.696	7.339	0.000
PNT110	9.257	8.078	-0.049
PNT111	9.981	8.822	-0.133
PNT112	10.693	9.410	-0.201
PNT113	11.357	9.872	-0.256
PNT114	12.053	10.285	-0.307
PNT115	12.620	10.572	-0.343
PNT116	13.421	10.906	-0.378
PNT117	14.192	11.155	-0.394
PNT118	15.037	11.353	-0.402
PNT119	16.011	11.496	-0.413
PNT120	16.934	11.559	-0.448
PNT121	17.972	11.556	-0.540
PNT122	18.829	11.506	-0.673
PNT123	19.616	11.432	-0.849
PNT124	20.442	11.333	-1.100
PNT125	21.139	11.240	-1.367
PNT126	21.868	11.140	-1.709
PNT127	22.717	11.028	-2.193
PNT128	23.569	10.935	-2.785
PNT129	24.199	10.891	-3.293
PNT130	24.842	10.882	-3.877
PNT131	25.496	10.925	-4.531
PNT132	26.047	11.013	-5.119
PNT133	26.622	11.162	-5.753
PNT134	27.230	11.378	-6.417
PNT135	27.923	11.685	-7.133
PNT136	28.676	12.072	-7.835
PNT137	29.450	12.525	-8.472
PNT138	30.356	13.140	-9.122
PNT139	31.217	13.820	-9.645
PNT140	32.025	14.546	-10.046
PNT141	32.813	15.340	-10.344
PNT142	33.646	16.281	-10.544
PNT143	34.326	17.143	-10.605
PNT144	35.016	18.142	-10.550
PNT145	35.619	19.182	-10.373
PNT146	36.104	20.134	-10.114
PNT147	36.564	21.064	-9.749
PNT148	36.999	21.896	-9.298
PNT149	37.538	22.828	-8.618
PNT150	38.015	23.553	-7.942
PNT151	38.538	24.240	-7.171
PNT152	39.094	24.852	-6.360
PNT153	39.600	25.313	-5.653
PNT154	40.174	25.738	-4.895
PNT155	40.890	26.153	-4.004
PNT156	41.499	26.432	-3.283
PNT157	42.199	26.704	-2.479
PNT158	43.059	27.005	-1.508
PNT159	43.776	27.246	-0.708
PNT160	44.306	27.423	-0.121
PNT161	44.840	27.603	0.462
PNT162	45.532	27.838	1.202
PNT163	46.166	28.058	1.857
PNT164	46.722	28.251	2.410
PNT165	47.246	28.435	2.908
PNT166	47.983	28.695	3.560
PNT167	48.934	29.039	4.306
PNT168	49.837	29.370	4.912
PNT169	50.778	29.716	5.446
PNT170	51.596	30.017	5.845
PNT171	52.536	30.365	6.239
PNT172	53.490	30.723	6.587
PNT173	54.453	31.081	6.909
PNT174	55.372	31.416	7.192
PNT175	56.301	31.749	7.440
PNT176	57.348	32.132	7.659
PNT177	58.507	32.594	7.802
PNT178	59.332	32.949	7.817
PNT179	60.267	33.341	7.737
PNT180	61.276	33.665	7.553
PNT181	62.303	33.817	7.273
PNT182	63.314	33.767	6.910
PNT183	64.168	33.545	6.541
PNT184	65.056	33.119	6.107
PNT185	65.774	32.627	5.710
PNT186	66.499	31.981	5.245
PNT187	67.173	31.240	4.708
PNT188	67.832	30.376	3.967
PNT189	68.364	29.528	3.025
PNT190	68.672	28.877	2.223
PNT191	68.909	28.192	1.427
PNT192	69.145	27.262	0.527
PNT193	69.381	26.151	-0.248
PNT194	69.626	25.032	-0.762
PNT195	69.932	23.812	-1.150
PNT196	70.363	22.481	-1.471
PNT197	71.051	21.037	-1.678
PNT198	71.889	19.801	-1.660
PNT199	73.193	18.335	-1.449
PNT200	74.523	17.063	-1.209
PNT201	75.833	15.845	-1.055
PNT202	77.366	14.339	-0.908
PNT203	78.654	12.932	-0.745
PNT204	79.981	11.247	-0.547
PNT205	80.870	9.907	-0.390
PNT206	81.714	8.402	-0.207
PNT207	82.230	7.330	-0.074
PNT208	82.695	6.181	-0.000
PNT209	83.056	5.109	0.000
PNT210	83.377	4.025	0.000
PNT211	83.672	2.880	0.000
PNT212	83.938	1.675	0.000
PNT213	84.292	0.811	0.000
PNT214	84.983	0.188	0.000
PNT215	85.758	0.000	0.000
PNT216	92.000	0.000	0.000





RELEASED FOR FABRICATION / INSTALLATION

PPPL Drafting: ? Jerry Siegel 2005.06.24 13:43:54 -05'00'

APPROX TUBE LENGTH = 138.9 IN

-1 COOLANT TUBE 12-1

SCALE .125

3							
	AR	X		-1	COOLANT TUBE 12-1	316L SS 5/16"-.032 WALL	SEE NOTE 4	1
SE123-120 -1			CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO
			NEXT ASSEMBLY	PARTS LIST				

SE123-121 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	:	:
	:	:
	:	:

UT-BATTELLE

Oak Ridge National Laboratory
managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725
UT-BATTELLE, LLC. Oak Ridge, Tennessee

PROJECT NAME: NATIONAL COMPACT STELLARATOR EXPERIMENT

VACUUM VESSEL HEATING/COOLING COOLANT TUBE 12-1 DETAIL

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

RELEASE LEVEL: Fabrication — SE123-121 — REV 1

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