

DS0315 Final Collar Strain Gage Readings

TS-SSC 91-214
S. Delchamps
November 7, 1991

Before shipping DS0315 to SSCL (to T. Reed, for kapton creep studies), a final measurement of the collar strain gages was performed on November 5, 1991. The strain gage resistances and calculated pressures are given in the table below.

Three gages gave meaningless readings; fortunately, two are compensating gages:

Bad gages: #314 inner quadrant 3-4, compensating
#1057 outer quadrant 3, active
#316 outer quadrant 4, compensating

For comparison, the last room temperature readings from Lab 2 are shown (last column.) The Inner Quadrant 4 gage was lost during Lab 2 testing.

Gage Number	Type	Coil	Quadrant	R_final	P_final (kpsi)	P_Lab2 (kpsi)
1054	Active	Inner	1	351.353	8.3	9.7
1053	Active	Inner	2	351.106	8.3	9.8
317	Comp	Inner	1-2	350.269		
1056	Active	Inner	3	351.089	7.7	8.9
1055	Active	Inner	4	350.752	4.8	???
314	Comp	Inner	3-4	190.206		
1051	Active	Outer	1	351.437	8.5	9.4
1052	Active	Outer	2	351.176	8.3	8.7
318	Comp	Outer	1	350.244		
319	Comp	Outer	2	350.381	???	???
1057	Active	Outer	3	172.336	6.2	7.1
1058	Active	Outer	4	351.172		
316	Comp	Outer	3	42.834		
315	Comp	Outer	4	350.463		

Some decrease in the inner and outer coil stresses has clearly taken place since the magnet was warmed up. The Lab 2 data were taken on April 15, 1991. The final readings were taken on November 5, 1991, about 5 1/2 months later.

Distribuiton: W. Koska, F. Markley, J. Strait, M. Wake