DCA316 Return End
Extra Kapton

TS-SSC 91-186
S. Delchamps
September 26, 1991

Magnet Name	Average Interior Diameter - nom. (mils)	Extra Layers of 5 mil kapton	Hy-draulic Pressure (psi)	Pi-tape De-flection (mils)
DCA313	-9±3	0	6029	3 ?
DCA314	-5±2	1	6300	4
DCA315	-5±1	1	7491	4
DCA316	-2±3			

The second column of the table shows the average interior diameter (with the nominal value subtracted) of the return end clamp insulators shimmed tightly inside the return end clamp cylinder, measured with a telescoping micrometer[1]. The average has been performed over measurements between quadrant pairs I-III and II-IV at axial positions 1/4", 1", and 2" from the collared coil end of the end clamp cylinder.

The installations of DCA314 and DCA315, with a single extra layer of 5 mil kapton placed on the inside surface of the G10 insulators, had good end clamp deflection as measured with pi-tape (3 - 5 mils is the desired range) near the collared coil end. DCA313 had ambiguous pi-tape deflection, but the somewhat lower hydraulic installat ion pressure indicates that the clamping load was not as great in this case.

The DCA316 insulator interior diameter appears to be about 5 mils greater than DCA314 and DCA315. Therefore, I recommend using **two 5 mil layers of kapton** on the interior surfaces of the DCA316 insulators to insure adequate clamping.

[1]Traveller 0102-ES-298290 Rev E., Step 1.11.