



Fermilab

TS-SSC 91-027

2/5/91

To: John Carson
From: Jim Strait
Subject: Collaring Shims for DC0305

The Kapton collaring shims for DC0305 with the replacement inner coil[1] should be 17 mils in the inner coil and 10 mils in the outer coil. These thicknesses include the adhesive and represent the thickness that would be measured with a flat anvil micrometer. The thickness, with and without adhesive, of each of the layers used to make the shim packages should be measured and recorded in the traveller. The Kapton should be placed on the outer surface of the ground wrap insulation and should be extended as far as possible into the region of the G-10 end keys. The ends of the different Kapton layers used to make the pole shim should be staggered by about 1/8 inch.

The inner coils in (the "new") DC0305 are, on the average, 0.8 mils larger and 0.6 mils smaller (at 10 kpsi) than those in DC0303 and DC0304 respectively. The outer coils are 1.4 and 0.6 mils larger than those in the same two magnets. The replacement inner coil is 1.5 mils larger than its predecessor. The shims specified here are the same as those in DC0304[2] and in the original assembly of DC0305[3]; they are the same on the inner and 3 mils thinner on the outer coil than those in DC0303[4]. The prestresses after collar keying[5] in DC0303 and DC0304 were both within an acceptable range and the sum of coil plus shim thicknesses in DC0305 is intermediate between these two magnets.

Footnotes

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| [1] Upper Inner | 17M-1011R | Upper Outer | 17M-2014R |
| Lower Inner | 17M-1006R | Lower Outer | 17M-2015 |
- [2] J. Strait, Collaring Shims for DC0304 with New Coils, TS-SSC 90-106, 12/17/90.
- [3] J. Strait, DC0305 Collaring Shims, TS-SSC 91-005, 1/16/91.
- [4] J. Strait, DC0303 Collaring Shims, TS-SSC 90-074, 10/16/90.
- [5] J. Strait, Keying of DC0303: Strain Gage Data, TS-SSC 90-079, 10/5/90.
J. Strait, DC0304 Collar Keying Strain Gauge Data, TS-SSC 91-004, 1/14/91.
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