Minutes of the Fermilab 40 mm Long Magnet Electrical Interconnect Meeting.

TS-SSC 90-055
W. Koska
Sept. 4, 1990

Meeting Date: August 30, 1990
Attendees: J. Diamarco, N. Hassan, W. Koska,P. Mazur, D. Orris

Prior to discussing the 40 mm interconnect, D. Orris pointed out that an upper bound for the number of voltage taps on 50 mm magnets needs to be set so that work can begin on designing a new connector scheme for them.

Three types of electrical interconnects were discussed at this meeting. Those for the strain gages, the voltage taps and the heaters (strip and spot).

N. Hassan stated that two electrical interconnect "kits" have been received from BNL, and are in his possession. These should contain most of the necessary hardware for wiring up the long magnets.

Heater connections are through a circuit board mounted to the magnet.

It was decided that D. Orris will provide strain gage connectors to the production people for installation on the production floor.

Action Item: A set of electrical diagrams for the strain gage interconnect need to be drawn up, for use by the production and test people. These can be based on the drawings which MTF currently receives with each magnet from BNL with slight modifications. These drawings can be obtained from D. Orris.

The resistor boards and connectors for the voltage taps need to be installed during assembly of the magnet. D. Orris will configure and deliver to the production floor the connectors. He will also be available to offer advice during installation.

The voltage tap connectors should be bolted to a bracket which is fastened to the magnet to prevent breakage of the wires. MTF can specify how this is to be done.

Action Item: A set of diagrams for the voltage tap connections need to be generated. These could be based on BNL drawings.

A procedure for transferring pertinent data on strain gages, etc needs to be set up so that MTF can set up their data acquisition data bases prior to receiving a magnet.

P. Mazur stated that all electrical work that can be done prior to shipping the magnets to MTF should be done on the production floor so that MTF can concentrate on testing the magnets. Due to tight schedules, MTF technicians and engineers will be available on a consulting basis only for electrical interconnect work done outside MTF.

A discussion as to who is in charge of the electrical interconnect task took place. N. Hassan is currently supervising all interconnect work, however, since he is a mechanical engineer, it was agreed that it would be useful to have an electrical engineer or senior electrical tech in charge of the electrical interconnect work. W. Koska will discuss this with G. Pewitt.

Miscellaneous notes: All DC03xx magnets will be outfitted with expansion joints, since there is the possibility that they will be used in a string test.

P. Mazur emphasized that the fluxes used in all soldering operations be specified since many common types contain chlorine and will corrode stainless steel.