ACCEPTANCE SUMMARY FOR LHC MAGNETS BUILT AT BNL
Magnet D4L101

Date of this summary: September 13, 2005

This document contains a short summary of the acceptance status (in italics, just below), the minutes of the acceptance meeting, and actions taken after the acceptance meeting [in square brackets within the text of the minutes, or as footnotes].

Acceptance status:
The BNL Acceptance Committee met on September 13, 2005 and approved the magnet for shipment to CERN. Two DR's are not yet written.

MINUTES OF ACCEPTANCE MEETING
Date of acceptance meeting: September 13, 2005
Present at acceptance meeting: Durnan, Escallier, Jain, Muratore, Pilat, Plate, Porretto, Schmalzle, Wanderer

Quench Data: Muratore showed the quench performance of the magnet. In forced flow, the magnet exceeded the specified current (6.6 kA) after the first quench. The magnet was not quenched in liquid mode due to problems with the cryo plant. However, it was filled with liquid, and the liquid then allowed to boil off. During the filling and boiloff, the level probes were observed to operate correctly. Quench test results are available at www.bnl.gov/magnets/LHC_Acceptance

Field Quality: Jain showed the warm and cold data from the magnet. (His talk will be at the address given above.) He compared the magnet to data from all the D2 and D4 magnets. Harmonics are small, with the exception of the integral skew quad in the right aperture, which is 3.80 units, 2.0 sigma from the mean of the ensemble, 0.05 units. The corresponding cold measurements are 4.14 units (0.2 T) and 3.75 units (3.8 T). Pilat approved the field quality data.

Engineering: Escallier approved the electrical tests of the magnet. He noted that the room temperature measurements of the resistance of the coils are all slightly outside of specification but by the same amount. That is, they track one another well, indicating that the cause of the discrepancy is the coil temperature. A DR will be written to document this. Escallier and Schmalzle discussed the missing serial number in a level probe at the LE. Schmalzle noted that the level probe is used at BNL but not at CERN. Escallier noted that level probes are quite similar to one another and so a generic calibration curve (rather than one tied to the serial number) is used. A DR will be written to document this. In regard to the survey data, Schmalzle stated R. Ostojic's acceptance of DW M0324 constituted acceptance of the survey data as a whole, since the DW listed all the out-of-tolerances.

QA: On September 7, Hocker circulated a list of five items that needed to be completed before QA approval could be given. Three items were tasks that needed to be completed.

These tasks were completed before the acceptance meeting. The resolution of the other two items (CERN's acceptance of the survey data and a missing level probe serial number) is discussed above, under Engineering.

Safety: Durnan reported that the documentation for the magnet met the safety specifications.

Survey: As noted above, the DW for the out-of-tolerance pipe positions has been accepted by CERN.

These notes written by P. Wanderer