REPORT ON THE DISCUSSIONS OF THE FNAL MAGNET ACCEPTANCE COMMITTEE W/RESPECT TO LQXC07

The Fermilab magnet acceptance committee reviewed the data with respect to LQXC07. A summary of the comparison between the results and the criteria are presented in the summary table.

The magnet acceptance committee concludes the magnet is ready to ship.

LQXC07 (MQXA17) ACCEPTANCE CRITERIA SUMMARY

criteria	Description	status	resp. party	reported by
2.1.3	THERMOMETER AND WARM UP HEATER INSTALLATION	OK	rb	rb
2.1.4	BUS WORK CHECKOUT	OK	rb	rb
2.1.5	ROOM TEMPERATURE HIPOT	OK	Ml/ah	ah
2.1.6	ROOM TEMPERATURE ELECTRICAL CHECKOUT	OK	ml	ah
2.1.7	PRESSURE TEST DOCUMENTATION	done	tn/tp	tp
2.1.8	LEAK CHECK DOCUMENTATION	done	tn/tp	tp
2.1.9	CRYOSTAT SAFETY DOCUMENTATION	done	tn/tp	tp
2.1.10	PIPE ASSEMBLY DOCUMENTATION	done	tn/tp	tn
2.1.11	WARM CRYOSTAT TO MAGNETIC AXIS REFERENCE	done	ps	ps

COMMENTS:

LQXC07 includes quadrupole MQXA17 with correctors

- HCMCBXA001-ST000030 (insert HCMCSTX001-CE000010)
- HCMCSOX001-AN000006
- HCMQSX_001-AN000007

The ID card for LQXC07 has been completed and is being transmitted separately.

REPORTERS:

ps	Phil Schlabach
ah	Andy Hocker
rb	Rodger Bossert
ml	Mike Lamm
tn	Tom Nicol
tp	Tom Page

CRITERIA:

2.1.1 THERMOMETER AND WARM UP HEATER INSTALLATION
Requirement: Thermometers and heaters installed properly
(Module assembly traveler)

2.1.2 BUS WORK CHECKOUT
Requirements: Bus work properly insulated, strain relieved
(Module assembly traveler)

2.1.3 ROOM TEMPERATURE HIPOT
Requirements: For completed LQXA: (1) with coil shorted to ground, hipot heater to ground 3kV, (2) with heater shorted to ground, hipot coil to ground 3 kV. Leakage current less than 3μA and no breakover.
(Cold mass traveler/module assembly traveler)

2.1.4 ROOM TEMPERATURE ELECTRICAL CHECKOUT
Requirements: Instrumentation wires are properly labelled, correct wire gauge, correctly wired to instrumentation connector, proper continuity
(Module assembly traveler)

2.1.5 PRESSURE TEST DOCUMENTATION
Requirement: Test pressure of 1.25 times the design pressure. The design pressure is 20 bar so the test pressure is 25 bar or approximately (2.5 Mpa).
(Section 5034 of the Fermilab ES&H Manual [6] and UG-100 of the ASME Code)

2.1.6 LEAK CHECK DOCUMENTATION
Requirement: Follow requirements in Fermilab Specification ES-107240 [9]. Leak rate ≤ 2 10-9 atm cc/s.
(Cryostat assembly traveler)

2.1.7 CRYOSTAT SAFETY DOCUMENTATION
Requirement: Design according to ASME BPV Section VIII, Division I and must meet all applicable safety codes in the FNAL ES&H Manual and CERN/LHC – US/LHC MoU on Accelerator Mechanical Safety
(ASME BPV Section VIII and Section 5034 FNAL ES&H Manual)

2.1.8 PIPE ASSEMBLY DOCUMENTATION
Requirement: See LHC-LQX-ES-0007 and reference drawings
(Cryostat assembly traveler)

2.1.9 WARM CRYOSTAT TO MAGNETIC AXIS REFERENCE
Requirements: See LHC-LQX-ES-0007
(LQXA_C Test Run Plan)