

	<p>MQXFA09</p> <p>Coils Acceptance Review</p>	<p>US-HiLumi-doc-4091</p> <p>Other:</p> <p>Date: 6/03/2021</p> <p>Page 1 of 4</p>
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US HL-LHC Accelerator Upgrade Project

MQXFA09 Coils Acceptance Review

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1. Goal & scope

The HL-LHC AUP project is planning to start assembly of MQXFA09 magnet in June 2021. MQXFA09 is the second series low-beta quadrupole magnet (MQXFA) for the Inner Triplet of the High Luminosity LHC. If MQXFA09 meets MQXFA requirements [1] it will be used in a Q1/Q3 cryo-assembly to be installed in the HL-LHC.

For MQXFA09 assembly (including a spare coil) AUP is planning to use QXFA coils: 129, 130, 216, 217 and 117. Coil 117 was approved for use in MQXFA05 [2] and is assumed approved for use in MQXFA09.

Conductor and series coil specifications are presented in [3-7]. Discrepancy or Non-conformity Reports are generated whenever a component does not meet specifications.

The reviewers are requested to review discrepancies and non-conformities in strands, cables and coils, for the following coils: 129 (cable P43OL1132), 130 (cable P43OL1136), 216 (cable P43OL1128), and 217 (cable P43OL1129).

2. Charge questions

The committee is requested to answer the following questions:

1. Have Discrepancies and Non-conformities been adequately documented and processed?
2. If there are critical Discrepancies/Non-conformities, have they been adequately documented and processed?
3. Did the L3s properly identified critical Discrepancies/Non-conformities?
4. Is there any coil that you recommend not to use in MQXFA09?
5. Do you have any other comment or recommendation regarding these coils and their conductor for allowing MQXFA09 to meet MQXFA requirements [1]?



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3. Technical information

Committee

Steve Gourlay (chairperson), LBNL

Arup Ghosh, BNL retired

Juan Carlos Perez, CERN

Date and Time

June 16, 2021. Start time is 7/9/10/16 (LBNL/FNAL/BNL-FSU/CERN)

Location/Connection

Video-link by Zoom, info by email.

Link to agenda with talks and other documents

<https://indico.fnal.gov/event/49436/>

4. References

- 1) *MQXFA Functional Requirements Specification*, US-HiLumi-doc-36
- 2) *MQXFA05 Coils Acceptance Review Report*, US-HiLumi-doc-2742
- 3) *Specification for Quadrupole Magnet Conductor*, US-HiLumi-doc-40
- 4) *Cable Specification*, US-HiLumi-doc-74
- 5) *Quadrupole Magnet Cable Insulation*, US-HiLumi-doc-75
- 6) *QXFA Series Coil Production Specification*, US-HiLumi-doc-2986
- 7) *QXFA Series Coil Fabrication Electrical QC plan*, US-HiLumi-doc-521