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[Invited] The commissioning of a hybrid magnet at CHMFL

Monday, August 28, 2017 11:00 AM (30 minutes)

A superconducting magnet with large inner diameter of 920 mm was developed for an outsert of a hybrid magnet at the High Magnetic Field Laboratory of Chinese Academy of Sciences (CHMFL). The superconducting magnet was successful tested and produced 10 T on November 5, 2017, and the hybrid magnet combined with the superconducting magnet and also an insert resistive magnet was also successful tested and produced 40 T on November 13, 2017. The superconducting magnet consists of 3 nested coils and made of 4 kinds of Nb3Sn cable-in-conduit conductor. It is cooled by forced flow helium at 4.5 K. During the commissioning of the outert superconducting magnet, a series of performance tests have been carried out, including the AC losses test, the current dumping test and so on. This paper reviews the important specifications and design features for the outsert superconducting magnet, and also discusses the test results of the first commissioning.

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