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Wed-Af-Po3.17-05 [33]: Mechanical Design and Analysis of Capture Superconducting Magnet for EMuS

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An Experimental Muon Source (EMuS) is proposed to construct at the facility of China Spallation Neutron Source (CSNS) by IHEP (Beijing, China), for the R&D of key technologies of the next-generation neutrino beam facility. The capture superconducting solenoid magnet is one of the key components of the EMuS. It consists of 4 coils which are an axially graded solenoids with a peak central field of 5-T at 3944 A of nominal current. The capture magnet has an iron yoke for flux return and field shield. This paper presents the mechanical design and analysis of the capture magnet.

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