MT 26
International Conference
on Magnet Technology
Vancouver, Canada | 2019

Contribution ID: **1263** Type: **Poster Presentation**

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

Wednesday 25 September 2019 14:00 (2 hours)

An Experimental Muon Sourse (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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Session Classification: Wed-Af-Po3.17 - Mechanical Behavior II