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Sat-Mo-Or1-04: Recovery of terminations in ITER CS Module 3

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The ITER Central Solenoid (CS) is under fabrication by the US ITER organization and its subcontractors. US ITER will supply seven modules to ITER IO, six of which will be assembled in a stack that forms the ITER Central Solenoid. All CS modules (CSM) were or will be tested at 40 kA in the Final Test facility at General Atomics.

CSM 3 testing campaign took place in 2021, and a breakdown occurred that damaged the terminations of the module.

To recover, new terminations needed to be designed, qualified and built to make the CSM3 fit for service. This effort had several challenges that were not addressed in the previous projects with large Nb3Sn magnets with cable-in-conduit conductors.

This paper describes a design, fabrication and qualification of the terminations, and the successful test results of the CSM3 with the recovered terminations.

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