
Contribution ID: **76** Type: **Poster**

# Performance test of CICC joint for ITER correction coil

*Monday, 5 June 2017 13:40 (2 hours)*

Abstract: In the frame of CICC testing for correction coils (CC) of ITER, the soldered joint design was developed and tested up to 12kA in a loop comprising the secondary winding of a superconducting transformer. The transformer which consists of two concentric layer-wound superconducting solenoids with the primary inside secondary coil was designed and manufactured. The primary coil was wound by 0.87mm diameter multifilamentary NbTi wires and secondary coil was wound by ITER CC conductor. The quench protection system was also introduced. The joint was test in liquid helium (LHe) temperature. The hall sensor was installed on the CC conductor to measure the current of secondary loop. Test results are present and showed that the joint resistance remained about 2nΩ in the current range from 8kA to 12kA, which was satisfied the requirement of ITER CC's design.
Index Terms: superconducting transformer, CICC, NbTi, joint resistance

## Eligible for student paper award?

No

**Authors:** Dr MA, Yuanyuan; Prof. LIU, Huajun

**Presenter:** Dr MA, Yuanyuan

**Session Classification:** M.POS: Poster Session M

**Track Classification:** Magnets