



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

Contribution ID: 1259

Type: **Poster Presentation**

Wed-Mo-Po3.09-01 [63]: Fabrication and performance test of fault current limiting elements made of non-stabilizer coated conductors

Wednesday 25 September 2019 09:30 (1h 45m)

For the application of superconducting wires to fault current limiting devices, it is required that they have a high rated voltage when a fault occurs. Stabilizer-free coated conductors, particularly, shows a good performance for the high rated voltage, which is beyond 0.6 V/cm. In this study, using the stabilizer-free coated conductors, we made fault current limiting devices and examined their characteristics. Fault current limiting devices were fabricated with a shape of the cylinder of a mono-filar coil winding. Stabilizer-free coated conductors were wound along the mono-filar coil line and the terminal parts between the wire and metal were soldered using In solder. Two kinds of devices were fabricated by a different method in the terminal joint, one was made by a soldering and the other was made by a soldering-free joint. Critical currents and resistance at the joint parts were measured. In addition, long-time current flowing tests were also carried out for the characterization of the fault current limiting devices.

Author: DU, Ho Ik (Chonbuk National University)

Co-authors: Prof. YANG, Sung Chae (Chonbuk National University); JEONG, Hyun Gi (Chonbuk National University)

Presenter: DU, Ho Ik (Chonbuk National University)

Session Classification: Wed-Mo-Po3.09 - Current Limiters II