Quench Behaviors of Superconducting YBCO Film for Fault Current Limiters Applying Protective Current Transformer

K.B. Park, B.W. Lee, J.S. Kang, I.S. Oh, O.B. Hyun*, H.R. Kim*

LG Industrial System Electrotechnolog y R&D Center

* *Korea Electric Power Research Institute*

Magnetic field application is one of perspective way of inducing simultaneous quenches for the series-connected resistive FCL components. Magnetic field was typically generated by the fault current through a coil, which is connected to the FCL components in series, leaving significant inductance in the circuit. In this article we investigated the possible application of the protective current transformer (CT), which is inductively coupled to the circuit, therefore, leaves no impedance to the circuit. The current by the CT was directly fed to the coil, generating magnetic field large enough to reduce Ic's of the components. This successfully induced simultaneous quenches of the series-connected resistive FCL components.

keywords : FCL, magnetic filed

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