Quench Detection of a HTS Component for a Resistive SFCL Using AE Signals

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This paper deals with a quench detection technique of a high temperature superconducting material component like BSCCO tube, High Temperature Superconductor (HTS) pancake winding coil, and YBCO film for a resistive superconducting fault current limiter (SFCL) using AE signals. There are some methods such as voltage tap, fiber optic sensor and so forth for quench detection method of superconducting machines to prevent the system breakdown. We reported the experimental results of quench detection of a HTS component for SFCL under the artificial fault mode. Also, it can be distinguished the state of HTS component after the short circuit test.

keywords : AE sensor, quench detection, HTS component, SFCL