

Investigation on the Commercialization Issues of Resistive Type Superconducting Fault Current limiters for Electric Networks

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Among the various types of fault current limiters, resistive superconducting fault current limiters are the most preferable choice for high voltage and high current electric power systems due to the excellent current limiting characteristics of superconductors. However, the real field application of resistive superconducting fault current limiter have been delayed by some technical issues. In order to promote the development and application of the superconducting fault current limiters, it is necessary to understand the electric power utilities' requirements and suitable test method and some specifications should be suggested. This paper focuses on the matters of commercialization issues that were essential requirements for commercialization of superconducting fault current limiters. The performance and characteristics of resistive superconducting fault current limiters are reviewed and other standards including circuit breakers, transformers, reactors, power fuse, and fused circuit breakers were compared to setup novel test requirements of superconducting fault current limiters. Furthermore, the practical issues for resistive superconducting fault current limiters were discussed and the solutions for these matters were suggested.

Keywords : superconducting fault current limiters, resistive type, electric networks.