

자속커플링 SFCL의 사고전류 변화에 따른 전류제한특성 분석

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Characteristics according to increase of the fault current level of Flux-Coupling Type Superconducting Fault Current Limiter(SFCL)

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Abstract : The flux-coupling type superconducting fault current limiter(SFCL) is composed of a series transformer and superconducting unit of the YBCO thin films. The primary and secondary coils in the transformer were wound in series each other through an iron core and the YBCO thin film was connected with secondary coil in parallel. In a normal condition, the flux generated from a primary coil is cancelled out by its structure and the zero resistance of the YBCO thin films. When a fault occurs, the resistance of the YBCO thin films was generated and the fault current was limited by the SFCL. In this paper, we investigated the fault current limiting characteristics according to fault current level in the flux-coupling type SFCL. The experiment results that the fault current limiting characteristics was improved according to increase of the fault current level.

Key Words : The flux-coupling type superconducting fault current limiter, the YBCO thin films, flux, fault current level

감사의 글

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