



Contribution ID: 1055 Contribution code: THU-PO3-512-11

Type: Poster

Fault Current Limiting Operations of Three-Phase Transformer Type SFCL using Secondary Windings with Closed Loop

Thursday 18 November 2021 10:00 (20 minutes)

Three-phase transformer type superconducting fault current limiter (SFCL) using secondary windings with closed loop, which consisted of three-phase transformer windings wound on three legs of E-I iron core and two/three superconducting modules (SCMs), were suggested and its fault current limiting operations according to ground-fault types were analyzed. To verify the effective operation of the three-phase transformer type SFCL using secondary windings with closed loop, the unsymmetrical ground and the symmetrical ground faults were applied into three-phase power simulated system with the suggested SFCL. For the comparison, the ground faults were generated into three-phase transformer type SFCL with two/three SCMs. Through analysis on the test results, the SFCL with two SCMs was confirmed to have no different fault current limiting operation from the SFCL with three SCMs. The structure of E-I iron core with three magnetically coupled legs and the constitution of three secondary windings with the closed loop were analyzed to be contributed to the same fault current limiting operation.

Primary author: LIM, Sung-Hun (Soongsil University)

Co-authors: Prof. KO, Seok-Cheol (Kongju National University); Prof. HAN, Tae-Hee (Jungwon University)

Presenters: LIM, Sung-Hun (Soongsil University); Prof. KO, Seok-Cheol (Kongju National University); Prof. HAN, Tae-Hee (Jungwon University)

Session Classification: THU-PO3-512 SFCL