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Failure Analysis Using Rtds for a Power System Equipped with Thyristor-Controlled Series Capacitor in Korea

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Abstract : This paper deals with Real Time Digital Simulator (RTDS) analysis about effects of transmission lines failure in power system equipped with Thyristor Controlled Series Capacitance (TCSC) in Korea. The TCSC is firstly applied in Korea to compensate real power in case of 765 kV line faults. Therefore, It is important to analyze with TCSC replica using RTDS. In this test, all systems in Korea, other than those near TCSC, were abbreviated to Thevenin equivalent. The replica was tested in the case of a line failure near the TCSC, a generator failure, and a 765-kV line failure. The effects of conventional operated STATCOM, SVC and TCSC were also analyzed. The test results will be used for the actual TCSC operational impact analysis.

Keywords : failure analysis, power system, RTDS, TCSC
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