

Margin Calculation of VSC HVDC Modules Based on MMC

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Keywords: *Reliability, HVDC Valve module redundancy, MMC (Modular Multilevel Converter)*

Abstract

An availability and a reliability prediction has been made for a high-voltage direct-current (HVDC) module of VSC (Voltage Source Converter) containing DC/DC converter, gate driver, capacitor and IGBT. This prediction was made using published failure rates for the electronic equipment. The purpose of this prediction is to determinate the additional module redundancy of VSC and the used method is “binomial failure method”.