

Dielectric testing of vacuum circuit breakers for high-voltage applications above distribution voltage level

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Vacuum circuit breakers (VCB) are well established in the distribution voltage level (up to 52 kV) of the electrical power supply system. In order to establish this technology at higher voltages, which may be desirable in order to reduce the use of sulfur-hexafluoride, the usual insulating and arc quenching medium in high-voltage circuit breakers, the dielectric withstand reliability –especially when switching capacitive loads –must be increased. In this contribution, we show our approach to investigate the field emission current as well as the micro discharges of commercial VCB for test voltages up to 200 kV.

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