

DETECTION OF PARTIAL DISCHARGES AT FIELD IN SF₆ INSULATED EQUIPMENTS

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This paper presents the results of research aiming to develop partial discharge detection techniques in high voltage equipment, at substation environment. Measurements of high frequency components of leakage current, at equipments' grounding conductor, were performed. This procedure was performed with the equipment energized and without disconnecting it from the system. The partial discharge generated current pulse is picked up by a high frequency CT, and is detected by an oscilloscope. The partial discharge identification was made considering previously obtained laboratory results, where partial discharges were characterized by means of its time domain signatures. This paper focuses measurements in SF₆ circuit breakers.

Encouraging results were obtained, showing the feasibility of detecting partial discharges in energized equipment in the laboratory and in the field, in a substation environment, using this method.

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