

Recognition of Transformer High Frequency Partial Discharge Based on Time Domain Feature

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Abstract— Power transformer is an important equipment of power system. The inner high voltage will cause transformer insulation deterioration fault, which can cause large-scale power outage. Partial discharge (PD) is an important phenomenon of transformer insulation degradation, so the research, diagnosis and identification of transformer partial discharge is very necessary. In this paper, recognition of partial discharge based on a time domain feature extraction is proposed. We collected PD signals through a high-voltage partial discharge device, using high-frequency current sensors. The discharge types include four kinds of defects: oil gap defect, floating defect, tip defect and surface defect. Wavelet transform was used to remove noise interference, and convolutional Neural Network was utilized to extract and identify signal features.

(P19)Keyword—Partial discharge recognition, high frequency, time domain, CNN



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