

Abstract

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Identification of transmission line faults using wavelet analysis

Transmission line fault identification requires fast and accurate analysis. The tripping action depends mainly on the voltage and current waveforms during the fault. Wavelet analysis which is a mathematical tool for signal analysis is used to detect the type of fault occurring on the transmission line. According to this analysis tripping decision is processed. The PSCAD which is an EMTP program with graphical support is used for the simulation of the power system under consideration. Discrete wavelet transform (DWT) is used for the analysis of the current waveform during the fault. Successful testing of the proposed technique proves its validity for near perfect detection of the fault type.