

عنوان مقاله:

A New Traveling Wave Fault Location Algorithm in Series Compensated Transmission Line

محل انتشار:

بیست و یکمین کنفرانس مهندسی برق ایران (سال: 1392)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Moien Abedini - *University of Tehran*

Abbas Hasani - *University of Tehran*

Amir Hosein Hajbabaie - *Sharif University*

Vahid Khaligh

خلاصه مقاله:

Series capacitors (SCs) are installed on long transmission lines to reduce the inductive reactance of lines. This makes it appear electrically shorter and increases the power transfer capability. Series capacitors and their associated over-voltage protection devices (typically Metal Oxide Varistors (MOVs), and/or air gaps) create several problems for protection relays and fault locators including voltage and/or current inversion, sub-harmonic oscillations, transients caused by their-gap flashover and sudden changes in the operating reach. In this paper, an accurate fault location algorithm for series compensated power transmission lines is presented. With using voltage and current traveling waves and placement of a fault locator in the middle of transmission line near the SCs, location of faults is calculated with high accuracy also proposed algorithm needs no communication link and uses only local signals and because of using of traveling wave polarity have no problem for detecting of reflected waves and therefore it solves problems caused by one end traveling wave based fault location methods. A simple power system containing a compensated transmission line is simulated on PSCAD/EMTDC software and fault location algorithm is implemented on MATLAB environment using wavelet transformer.

کلمات کلیدی:

compensated Transmission Line, Traveling Wave, Fault Location, Wavelet Transform

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/208889>

