

عنوان مقاله:

Comparing the Effect of Different Types of Superconducting Fault Current Limiters (SFCLs) on Variable Speed Wind Power Plants Performance with Double-Fed Induction Generators

محل انتشار:

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خلاصه مقاله:

Compared to other sources of electrical energy in the world, using wind energy to produce electricity has enjoyed an unprecedented acceleration in growth in recent years. The inclusion of distributed generation units into the distribution system contributes many advantages and disadvantages to the distribution system design and operation. One of such disadvantages is its impact on increasing the grid and equipment short circuit. Since the equipment in the system are employed based on the design of the previous years, the distributed generation sources inclusion in the system makes the system short circuit go beyond the existing equipment limit bringing about damages to the equipment. Considering the development made in the limiters technology, the application of fault current limiters (FCLs) as an appropriate method to limit the fault current and maintain the reliability of the system is being utilized. Therefore, the present study aimed at evaluating and simulating the superconducting fault current limiters impact on double-fed induction generator performance. The limiters being studied include resistive, induction and diode bridge limiters, and also the PSCAD / EMTDC software is used for simulation.

کلمات کلیدی:

(superconducting fault current limiters, variable speed wind turbine (VSWT), double-fed induction generator (DFIG

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