

عنوان مقاله:

Improvement of DFIG Wind Turbine Power Performance During Grid Voltage Sag

محل انتشار:

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خلاصه مقاله:

In this paper a new protection technique is presented for use in doubly fed induction generators of wind turbines. The method enhances the overall system performance by protecting the generator against grid voltage sag. For this purpose, an inverter and three single phase transformers are placed in series with the generator. The series inverter enters the circuit upon fault events. Fuzzy and posicast controllers are used in the structure of the proposed method to keep the stator and rotor currents within an acceptable limit and therefore prevent generator-network disconnecting due to overloads. Using computer simulations the performance of the proposed approach is evaluated. Simulation results confirm the effectiveness of the proposed method in DFIG over current protection at sag conditions. It is shown that the system is capable of keeping the generator output voltage at 0.95-1.05 p.u. during fault events

کلمات کلیدی:

Doubly Fed Induction Generator, Voltage Sag, Fuzzy Controller, Posicast Controller

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