Wind turbine stator short circuit

Inter-turn short-circuit fault of the stator winding is one of the most common faults of asynchronous generators and often found in doubly-fed wind turbines. The improper treatment ...

From the perspective of engineering practice, this paper proposes a modeling method for multi-branch turbine synchronous generator stator short-circuit fault considering the distribution characteristics of ...

In this paper, a cascading deep learning framework is proposed for the monitoring of generator winding conditions, specifically to promptly detect and identify inter-turn short circuit faults and estimate their ...

The stator current, fault torque, and field current under each short circuit scenario are examined. Also included are the forces experienced by the HTS field winding under short circuits.

A fault-tolerant tracking control law for a wind turbine DFIG system subject to unknown inputs caused by an inter-turn short circuit in the stator winding is presented.

Inter-Turn Short-Circuit (ITSC) of the stator winding is one of the most common faults in asynchronous generators. A significant feature of ITSC is the increase of the current in the faulty ...

This paper assesses the effect of an inter-turn short circuit fault in stator windings of a Permanent Magnet Synchronous generator (PMSG)-based variable speed wind energy conversion system ...

This paper presents an Inter-Turn Short-Circuit (ITSC) fault detection and isolation method based on the Proportional-Integral observer (PIO) design. ITSC fault is one of the most ...

The goal of this work is to develop a simplified yet effective model for analyzing stator winding short-circuits in DFIGs operating in wind turbines. The model uses line-to-line voltages as ...

IEEE Power and Energy Society Prepared by the Joint Working Group Assignment: To characterize and quantify short circuit current contributions to faults from wind plants for the purposes of protective ...

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