Insulation test of wind turbine generator

Do wind generators need rotor insulation testing?
However, testing rotor insulation is difficult and costly due to the limited accessibility of wind generators as they are installed at remote locations inside the nacelle. Therefore, remote and automated insulation testing can help improve the reliability and reduce maintenance cost of wind generators.

Why do wind turbine manufacturers need independent type testing?
So turbine manufacturers have to show their turbines work as required under all conditions. Independent type testing provides that reassurance and credibility- by proving your turbine meets all relevant international standards. DNV provides efficient and effective wind turbine type testing.

Can rotor winding insulation be tested for DFIGs?
In this paper,a new approach for testing the integrity of rotor winding insulation for DFIGs is proposed. The main idea is to use the rotor-side inverter to perform off-line insulation testing whenever the wind generator is stopped.

Can a rotor-side inverter test a wind generator off-line?
The main idea is to use the rotor-side inverter to perform off-line insulation testingwhenever the wind generator is stopped. New test methods for off-line 1) partial discharge (PD) detection based on impulse voltage excitation and 2) capacitance (C) and dissipation factor (DF) testing based on common mode voltage excitation are proposed.

Does rotor winding insulation fail in doublyfed induction generators?
Abstract: Failure in the rotor winding insulation of doublyfed induction generators (DFIG) is commondue to the harsh environment and operating stresses. However,testing rotor insulation is difficult and costly due to the limited accessibility of wind generators as they are installed at remote locations inside the nacelle.

Abstract: In this paper, a new procedure for the accelerated multi-factor aging test was firstly established for evaluating the insulation system of a wind turbine generator, in which, ...

Key Words: partial discharge, stator, insulation, motor, generator INTRODUCTION Over the past 15 years, many utilities have adopted partial discharge testing as a means of determining the ...

In this paper, a new procedure for the accelerated multi-factor aging test was firstly established for evaluating the insulation system of a wind turbine generator, in which, ...

These tests are very important for insulation testing which leads to the safety of our equipment and the system. ... & Wang, Y. (2014). Effects of accelerated repetitive impulse ...

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Download Citation | On Oct 1, 2019, Qingyuan Liu and others published Evaluation Method of Stator Insulation for Direct-drive Wind Turbine Generator Based on Accelerated Multi-factor ...

In this paper, a procedure based on the accelerated multi-factor aging test was firstly established for evaluating the insulation system of offshore WTG. The specimens for modeling the stator ...

It has become important to evaluate the stator insulation of wind turbine generator under repeat pulse voltages. Firstly, the lab test setup with the repeat-pulsed voltage up to ...

The stator insulation of wind turbine generator (WTG) would be subject to the repeated pulse voltage, thermal, mechanical and other environmental stresses. In this paper, the methods of ...

The authors will concentrate, as best as they can, only on the influence and diagnostics of PD in relation to the wind turbines/generators. 3 Partial discharges in wind generator insulation PD is ...

The purpose of this paper is to review work undertaken on partial discharges and their influence on the insulation of wind turbines. No matter whether partial discharges can be considered as the main cause of deterioration of the ...

The inter-turn insulation of stator winding for wind turbine generator (WTG) usually suffers the repetitive impulse over-voltages when the converter is connected to the winding terminals. The ...

Remote, automated monitoring of wind generators is crucial considering that wind turbines are prone to failure due to the harsh operating environment, and difficult to ...

o The effects of the marine environment, such as large temperature variations, high humidity, and heavy salt mist on the stator insulation system of offshore wind turbine ...

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