

The influence of wind temperature on generator vibration

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The analysis focuses on the influence of ambient temperature, wind speed, mechanical losses, and various cooling methods on the temperature profile of the generator windings.

Abstract: A sample of healthy wind turbines from the same wind farm with identical sizes and designs was investigated to determine the average vibrational signatures of the drive train components ...

The power oscillation induced by the large-scale integration of wind power into the power grid has become one of the important issues affecting the safe and sta

Based on the comprehensive correlation analysis of tower vibration, the main variables affecting tower vibration below rated wind speed are drive ...

This variation arises from a multitude of factors, including the presence of rotating components such as rotor blades and the turbine nacelle, wind speed, blade pitch angle, wind ...

Since temperature variations can lead to rotor thermal instability which adversely affects the operation of the generating unit, a better understanding of this phenomenon is required.

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This paper aims to examine the sources of vibration in wind turbines, their effects on turbine performance and durability, and recent advancements in damping mechanisms designed to mitigate ...

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This paper explores the critical issue of vibrations in wind turbines, highlighting their sources, impacts, and the advancements in damping ...

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