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Generator wind temperature rise

Overview

Can a permanent magnet wind turbine cause excessive temperature rise?

In order to solve the problem of excessive temperature rise caused by 2.5 WM permanent magnet wind turbine in operation, this paper designs a heat dissipation system. The combination structure of the heat exchanger and the heat sink was determined, as well as the heat dissipation method of the internal and external cycle isolation heat exchange.

Does ambient temperature affect the cooling of a permanent magnet wind turbine?

Taking a 2.5 MW PMSG permanent magnet wind turbine as an example, four kinds of ambient temperature were selected to be tested when the generator was full of power. It is revealed that the ambient temperature has a great influence on the cooling of the generator.

How Xinjiang wind turbine cooling system works?

The cooling system is connected to the generator outlet through rubber pipes. Fig. 10. Cooling system test prototype. 2.5 MW PMSG permanent magnet wind turbine is the main wind power generation equipment in Xinjiang. The high temperature rise of the generator is closely related to the ambient temperature, unit running time and power generation.

Does wind power increase temperature in Xinjiang?

In view of the abnormal temperature rise caused by the long-running operation of generators, combined with the wind power environment in Xinjiang, China, a new cooling system design is proposed on the basis of the current air and liquid cooling research.

How does the number of cooling pipes affect a generator?

The change of the number of cooling pipes can directly affect the heat exchange area of the internal and external environment, and also affect the

heat transfer, heat convection and thermal radiation on the surface inside and outside the pipe. Which has a significant impact on the cooling effect of the generator.

Does ambient temperature affect the cooling of a generator?

It is revealed that the ambient temperature has a great influence on the cooling of the generator. It is verified that the cooling system has a good effect on the cooling of the generator. Ningqiang Shi: We have discussed and written in depth the content and structure of the manuscript.

Generator wind temperature rise

An Electro-Thermal Analysis of a Variable-Speed ...

A survey on wind power plants showed the major root causes for generator downtime are windings, brushes and other electrical components. The generator and electrical system cause 23.2% of WT downtime, in ...

Establishing the Importance of Operating Temperature ...

details the optimisation of axial-radial ventilation spacers as a means to reduce the operating temperature rise within the generator, achieving a 3.9 °C temperature drop due to improved ventilation.

Methods to improve wind turbine generator bearing ...

A wind turbine generator reliability study is performed and explained in this paper. The study was performed due to the findings by Shipurkar et al. (2015), Alewine et al. (2012), and Liu et al. (2018) that bearing failure to ...

Temperature-Rise test of Large Capacity Generator ...

The temperature rise test is an important test of the generator circuit breaker to verify the current carrying capacity. In this case maximum test

current is as high as 35kA, in order to simulate the real operating environment. ...

Research on the temperature-rise test of large capacity generator

In the implementation of the temperature rise test process, fully studies the use of the generator circuit breaker operating conditions, through the following two ways to gradually carry on the ...

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