

Title: Wind turbines automatically seek wind

Generated on: 2026-05-20 14:17:22

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Wind turbines work on a simple principle: instead of using electricity to make wind--like a fan-- wind turbines use wind to make electricity. Wind turns the propeller-like blades of a turbine around a rotor, ...

To maximize energy capture, wind turbines are strategically placed in areas with consistent and strong wind flows, such as coastal regions, open plains, and hilltops. The turbines are designed to ...

The wind turbine is automatically oriented to take maximum advantage of the kinetic energy of the wind, from the data registered by the vane and anemometer that are installed at the top.

However, in the case of wind turbines, the force of the wind's interaction with the rotor at the top of the tower creates a strong tendency to tip the wind turbine over.

Here are just five striking ways that automation is creating positive change in the performance of offshore and onshore wind. 1. Increasing power output with wake steering. Wake ...

In order to know the range of speeds and the direction of the wind in a certain area, Vestas takes millions of observations of the atmosphere every day across the world, this helps us decide the ...

The central control system of a wind turbine continuously monitors the wind speed and dynamically adjusts the angle of attack of the rotor blades via the pitch system.

Vertical-axis wind turbines (VAWTs) automatically accept wind from any direction, making them ideal for urban, rooftop, or turbulent wind conditions. Their simplicity and reliability come at the ...

When wind blows past a plane's wings, it moves them upward with a force we call lift; when it blows past a turbine's blades, it spins them around instead. The wind loses some of its ...

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