Wind loads on sail-type wind turbines

This study presents an integrated assessment of a WPG ship by combining towing-tank experiments, CFD simulations using ANSYS Fluent, and ...

Manual wind load calculations following ASCE 7 procedures involve numerous steps, lookups, and interpolations. Professional tools can automate this process while ensuring accuracy and code ...

These researches represent attempts to improve the performance of the wind energy conversion into electric energy, which lead to separate positive results but do not eliminate the main problems.

This standard (ST) provides design requirements and guidelines to be used for the determination of loads and site conditions for onshore and offshore wind turbines.

The resulting loads from the six floating wind turbine systems were divided by the corresponding absolute extremes from the land-based turbine"s analysis. The resulting dimensionless ratios quantify ...

Concurrent wind, wave and current loads acting on a single monopile-supported offshore wind turbine (OWT) were experimentally studied. The experiments were performed on a small-scale ...

In this study, several analyses have been carried out on a model of bulk carrier fitted with five rigid sails with a 180° rotating mechanism for maximum usage of wind power and a telescopic ...

power curve is simulated under ideal conditions. "Ideal" for a sailing turbine means that the rotor is always facing the wind while it gets dragged through the ocean. Naturally, a moving turbine would ...

These loads will come from the force of the wind exerted on the sails. It is best to size your running rigging for the worst imaginable situation: The sails sheeted in tight to a gust of wind on ...

Influence of sail angle (5°, 15°, 25° and 30°) on the performance of the horizontal

axis sail type wind turbines is investigated. Sail angle of 25° gives the maximum coefficient of power of 0.31 at ...

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