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# Impeller wind power generation system

Can 3D model of impeller for wind turbine improve CFD analysis?

It is a very important fundamental work that 3D-model of impeller for wind turbine can be achieved precisely, in order to enhance the credibility of CFD analysis in subsequent calculations. However, the current studies do not emphasize closely on the modeling with time-saving and high efficiency.

Can logical framework and pseudo-code be used to model wind turbine impeller?

Therefore, one high efficient approach for geometric modeling of wind turbine impeller is proposed by this study, and the validity of logical framework and pseudo-code of each part correspondingly is confirmed through several applications upon modeling of impeller, with time-efficient to shape in the process-designed.

How does a wind power generation system work?

Traditional wind power generation technology uses a rotor to transmit wind energy to a gearbox and then to a generator to generate electricity[.,]. The engine room is equipped with turbines, transmission systems, gear boxes and generators, which are very heavy, and the tower must have high strength.

What is hydraulic wind turbine?

Hydraulic wind turbine uses hydraulic transmission system to replace the large-volume and large-mass gearbox and post-processing equipment, such as converter and frequency converter. Power generation quality is further improved by flexible transmission, and there are also advantages in terms of construction cost.

Due to their shape and construction, ordinary three-blade propellers practically have an efficiency of wind energy utilisation of about 20%. Renewable power sources are ...

A technology of wind power generation system and multiple impellers, applied to wind power generation, control of wind power generators, wind power generators consistent with the wind ...

A new type of wind power generation system made of flexible blades is proposed. Combined with the experimental method and numerical simulation method, the impeller blades are analyzed ...

A technology of wind power generation system and helical impeller, which is applied to wind turbine components, wind energy power generation, wind turbines, etc., can ...

Therefore, one high efficient approach for geometric modeling of wind turbine impeller is proposed by this study, and the validity of logical framework and pseudo-code of ...

The utility model relates to a spiral impeller wind power generation system which is characterized in that the spiral impeller is assembled by a plurality of vertical impeller



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components along the ...

This paper analyzes the application of hydraulic wind power generation technology, clarifies its advantages compared with traditional wind power technology, and puts forward the ...

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