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Wind-resistant mobile energy storage container for aquaculture





Overview

Can a floating wind turbine be combined with a steel aquaculture cage?

Zhang et al. (2022a) proposed a new concept of combining offshore floating wind turbine with a steel aquaculture cage (FOWT-AC), and a fully-coupled model of aero-hydro-elastic-servo-mooring was established by using FAST and AQWA software, whereas the performance of the system was verified.

How is wind power generated in aquaculture vessel under irregular waves?

Wind power generation of aquaculture vessel under irregular waves and turbulent wind. It is observed in Fig. 32 that under the irregular waves considered, the response of the surge motion is almost the same, while the heave and pitch responses increase with the increase of the wave period.

How to analyze the dynamic response of aquaculture vessel with hybrid wind-wave power generation?

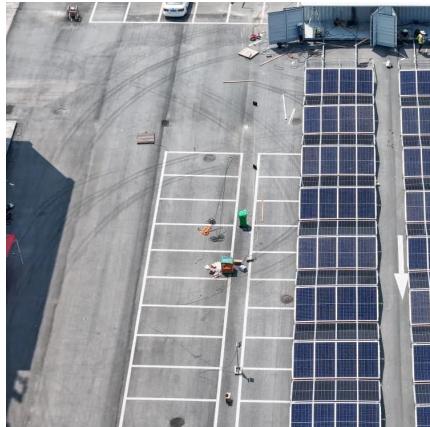
Environment condition In order to analyze the fully-coupled dynamic response of the aquaculture vessel with hybrid wind-wave power generation, time domain analysis is conducted under the environmental conditions of regular waves and steady wind, then irregular waves and turbulent wind.

How can a semi-submersible marine aquaculture platform solve energy supply shortage?

In order to solve the problems of energy supply shortage and the poor resistance of traditional aquaculture cages against wind and wave action, the Guangzhou Energy Research Institute developed Penghu (Jing, 2019), a semi-submersible marine aquaculture platform integrating wave power generation, aquaculture, tourism and communication.



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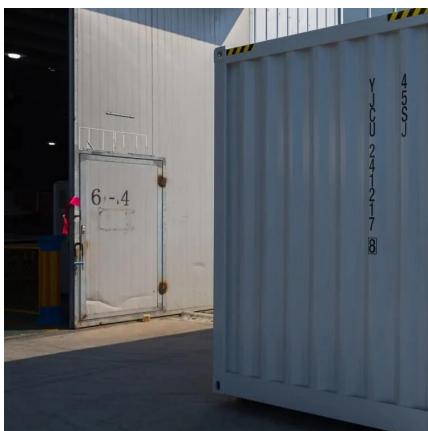


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Nonlinear dynamic responses of a novel floating semi-submersible wind ...

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