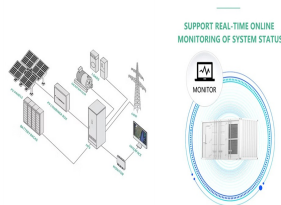
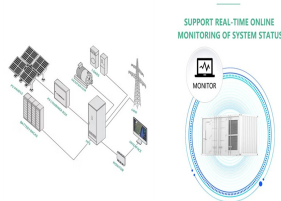


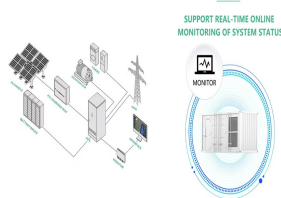
ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES



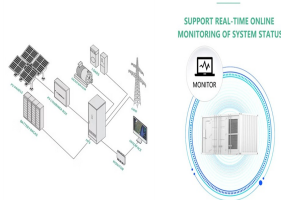
How has CSSC Haizhuang improved the nationalization rate of wind turbine? Developed the first domestic PLC main control software and hardware system for offshore wind turbine, resolved the bottlenecks of main control system of wind turbine. CSSC Haizhuang has developed 18MW offshore wind turbine with independent IP rights, which improved the nationalization rate of turbine.



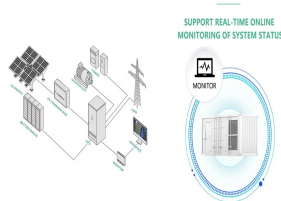
Where can I find more information about CSSC Haizhuang Windpower? For more information go to CSSC Haizhuang Windpower (cssc-hz.com). CSSC Haizhuang has developed the 8-10.XMW platform especially for high-wind-speed areas such as China's Gobi desert, and is an example of the company's focus on onshore wind energy development and the trend towards large-scale turbines.



Does CSSC Haizhuang have a h260-18.0 turbine? CSSC Haizhuang in its news release said the components of the H260-18.0 turbine???demonstrated that [the manufacturer]has mastered the core technologies of high-rating offshore wind turbines and key components,leading the global offshore wind power industry to reach a new milestone.???



What is CSSC Haizhuang's new turbine? CSSC Haizhuang unveiled the new turbine in a ceremony at the Dongying City industrial park in China???s Shandong province. The 18-MWunit will feature a 260-meter-diameter rotor that will power a modularized medium-speed geared drive train and permanent magnet generator,which were highlighted in a YouTube video published Jan. 6 (see below).

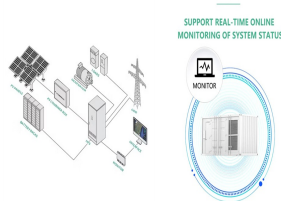


How has CSSC Haizhuang led offshore wind into a ???big??? era? Technology innovations CSSC Haizhuang developed and manufactured the H260-18MW offshore wind turbine based on the comprehensive industrial chain,with the medium-speed integrated scheme and breakthroughs on a number of key technologies. Which has successfully

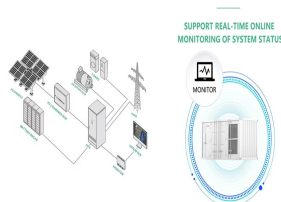
ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES

led offshore wind into a more ???big??? era with independent technology innovations.

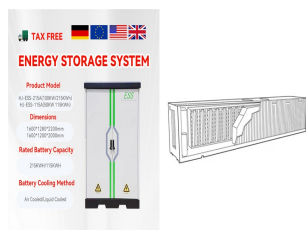
ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES



When will CSSC Haizhuang H260 18MW offshore wind turbine be available? In late 2022, CSSC Haizhuang unveiled the H260-18MW offshore wind turbine, setting a new industry standard with its 18MW rating and 260m rotor. Equipped with ultra-long, flexible blades and an advanced medium-speed drivetrain system, this turbine promises exceptional performance. The prototype should be ready for installation by the end of 2023.



Precision alignment of the generator to the gearbox in a wind turbine (the high speed shaft) is critical to proper operation. 60 percent of wind turbine downtime is related to drive train failure: gearbox, generator, main ???



CSSC Haizhuang H193-6.25MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 23 m/s; Generator. Type: DF; Voltage: 1140 V; Tower. ???



There's a big need for wind turbines tailored to low wind-speed and high wind-shear conditions in southeastern China: CSSC Haizhuang has introduced its "high-tower" solution. This involved hoisting a 165m pre-stressed concrete-steel lattice tower in Shandong province, showcasing the company's expertise in concrete-steel supporting structures.



In 2022, the company said it was developing a 16.7-MW offshore wind turbine, but the H260-18.0MW ??? which has a rotor diameter of 260 m ??? is even larger than that unit, and the 16.6-MW offshore wind turbine recently announced by fellow Chinese company MingYang Smart Energy. CSSC Haizhuang Wind Power said the turbine has a swept area of

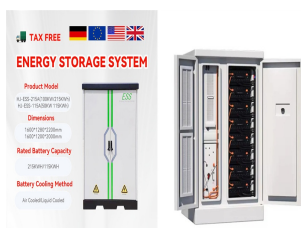
ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES



CSSC Haizhuang Wind Power () | 1,578 ???CSSC Group CSSC (China State Shipbuilding Corp) Group is a Chinese central-government-owned group, the biggest machinery group in China and a Fortune 500 member globally. CSSC is the first company in China having complete supply chain in wind power sector including components ???



CSSC Haizhuang - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Turbine: Rated power (kW) Diameter (m) Direct drive: Operational wind data (m/s) Class: Offshore model: Availability H140-3.2MW: 3200: 140:



The resource assessment of offshore wind farms needs to fully consider the influence of tropical cyclones, analyze wind speed, atmospheric stability and other factors according to date from the site wind tower, and use intelligent optimization algorithms to determine the optimal wind turbines layout scheme that meets the constraints and optimization goals of wind farm, reduce the ???



The offshore wind turbine has a capacity of 18MW and a rotor of 260 metres and a swept area of 53,000 square meters. CSSC Haizhuang stated in a release that at full wind speed, 44.8 kilowatt-hours of electricity can be ???



Mr. Qin Haiyan, vice president of the World Wind Energy Association and director of China General Certification Center, said in his speech that the H256-16MW unit (certified by CGC) from China Haizhuang is the ???

ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES



On May 29, 2021, CSIC Haizhuang Wind Power Co., Ltd. (hereinafter referred to as "Haizhuang") successfully put the first self controllable 6.2MW offshore wind turbine unite with localized main control system into ???



It is reported that the H210-10MW offshore wind turbine independently developed by Haizhuang will become the first speed-up offshore wind turbine with the largest wind turbine diameter and power production in China. It will show up in Dalian Zhuanghe in the near future. Source: CSSC Haizhuang. Edited and translated: Following The Wind



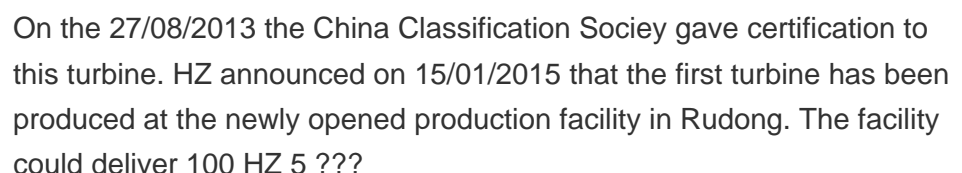
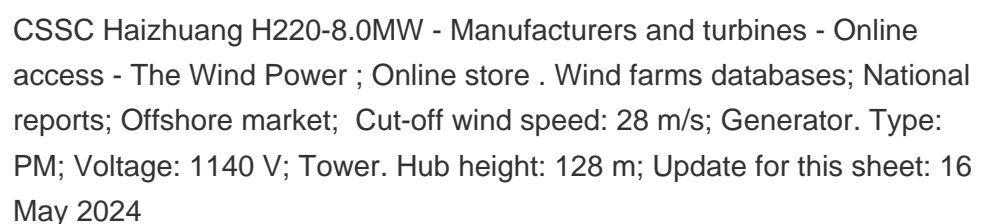
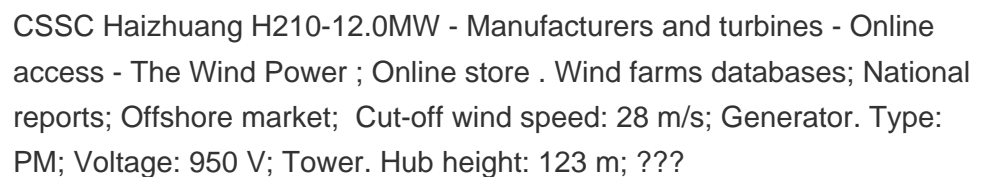
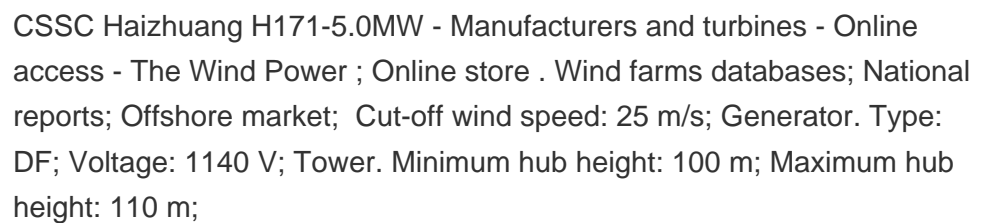
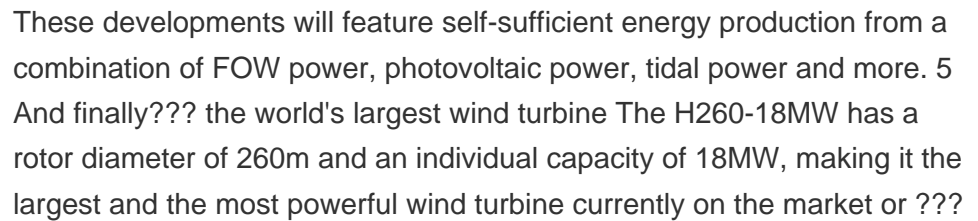
Read CSSC Haizhuang developing 18MW offshore wind turbine and other wind energy news & analysis on Windpower Monthly. Chinese industrial manufacturing giant CSSC Haizhuang is developing an 18MW offshore wind turbine with a 260-metre rotor diameter ??? possibly the largest rotor unveiled by a turbine maker to date. News and intelligence



4C Offshore | Specification of Offshore Wind Turbine H171-5.0MW, CSSC Haizhuang Wind Power, which includes Operating Data, Rotor, Power Statistics, Gearbox, Dimensions, and Nacelle.



CSSC Haizhuang H160-3.4MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 25 m/s; Generator. Type: DF; Voltage: 1140 V; Tower. Minimum hub height: 95 m; Maximum hub height: 140 m;



ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES



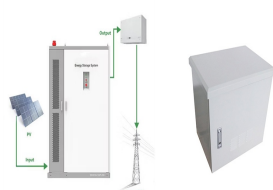
Wind turbine alignment is critical to maintaining wind turbines. In the past few years, the emergence of wind turbines has become a critical part of energy production. A wind turbine harnesses wind power to generate electricity. The most common application for a modern wind turbine is a horizontal axis wind turbine (HAWT). A wind turbines



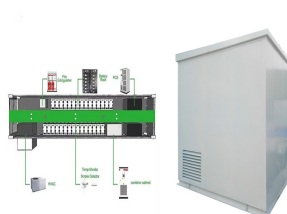
With us you will find facts and photos to 30 wind turbines produced by CSSC Haizhuang Windpower Co., Ltd.. These include H128-5.0 (5,00 MW), H140-3.2 (3,20 MW) and H146-3.2 (3,20 MW), among others. The wind turbine with the highest rated power is the CSSC H260-18 with 18,00 MW.



CSSC Haizhuang H155-5.0MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 25 m/s; Generator. Type: IND; Voltage: 1140 V; Tower. Minimum hub height: 95 m; Maximum hub height: 110 m;



CSSC Haizhuang H193-5.0MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 25 m/s; Generator. Type: DF; Voltage: 1140 V; Tower. Hub height: 115 m; Update for this sheet: 16 May 2024



CSSC Haizhuang H220-8.35MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 28 m/s; Generator. Type: PM; Voltage: 1140 V; Tower. Hub height: 128 m; Update for this sheet: 16 May 2024

ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES



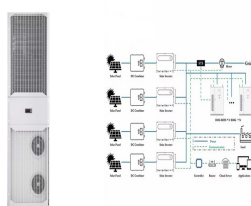
CSSC Haizhuang H260-18 MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 25 m/s; Generator. Type: PM; Voltage: 1380 V; Tower. Hub height: 150 m; Update for this sheet: 16 May 2024



CSSC Haizhuang H220-10.0MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 28 m/s; Generator. Type: PM; Voltage: 950 V; Tower. Hub height: 128 m; Update for this sheet: 16 May 2024



Wednesday 11 January 2023. Recently, the H260-18MW offshore wind turbine-independently developed by CSSC Haizhuang and dominated by China State Shipbuilding Corporation (CSSC)- unveiled in Shandong Province Dongying City Offshore Wind Power Industrial Park, with global records of the highest 18MW rating and the largest 260-meter rotor diameter so far.



CSSC Haizhuang Windpower has become an important force in the development of the wind power industry, it has been listed on the "Top 500 Global New Energy Enterprises" for many times, and has successively won the "Blue Sky Award for Top Ten Leading Technologies in the Global Clean Energy Field", "National Civilized Organization", "National Advanced ???



In the generator, CSIC Haizhuang Windpower Equipment Co., Ltd. sets to synchronous permanent. The manufacturer has used one generator for the H151-5.0. The voltage amounts to 690 V. There are no models for this wind turbine. Power data for the H151-5.0 of CSIC are not stored in the system. The CSIC H151-5.0 has been listed since 30.04.2019

ALIGNMENT OF GENERATORS OF HAIZHUANG WIND TURBINES



Recently, the H260-18MW offshore wind turbine-independently developed by CSSC Haizhuang and dominated by China State Shipbuilding (CSSC)-unveiled in Shandong Province Dongying City Offshore Wind Power ???



CSSC Haizhuang H151-5.0MW - Manufacturers and turbines - Online access - The Wind Power ; Online store . Wind farms databases; National reports; Offshore market; Cut-off wind speed: 25 m/s; Generator. Type: PM; Voltage: 690 V; Tower. Hub height: 97 m; Update for this sheet: 16 May 2024