

State Grid Corporation of China launches Qifan-19, Redefining Maritime Power Transmission.

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EINPresswire.com/ -- Comparable to a light aircraft carrier! A new pillar for CN marine power transmission technology brand—Guojiao No.1 Brand. Qifan-19, China's largest submarine cable construction ship developed independently by State Grid Corporation of China for Guojiao No.1 Brand was launched on November 9.

Qifan-19 integrates multiple "most".

The ship has a cable-carrying capacity of 10,000 tons and a displacement of 24,000 tons, with the largest displacement among all the submarine cable construction ships in China, comparable to a light aircraft carrier. It can be loaded with 75-km three-core AC 220kV submarine cable, 130-km single-core DC 300kV submarine cable, or 2,000-km communication optical cable. With the capability to lay and overhaul submarine cables in deep and open seas, it effectively improves China's level of marine power transmission equipment and technology.

The buried depth of submarine cables of such ship is the deepest in the whole world. It is equipped with the most advanced domestic towed water-spray cable burying machine, the



maximum buried depth is 4.5m, which can better protect submarine cables from anchorage loss. At present, the buried depth of submarine cables in other countries is usually 2 to 3 meters.

Such ship has the most powerful positioning capability in the world and the highest accuracy of submarine cable laying in China. For submarine cable burying in the past, the cable guide cage is used to lay submarine cables underwater. When the depth of water exceeds 40m, due to the heavy dead load of submarine cables, the cable guide cage may cause wear to submarine cables. The first catenary cable laying system in China independently developed by State Grid Corporation of China employs the world's most advanced dynamic positioning technology, which can resist the attack of Class-9 wind and the impact of 4-throttle sea water, ensuring the laying of cables with constant tension and speed. The laying accuracy can be up to 0.5m.



Besides, such ship employs electric propulsion technology in China for the first time. It is equipped with a special power distribution station which is used to transform the electric energy generated by the diesel generator into DC electric energy, and optimize the deployment and allocation of electric power resources. As a result, the fuel efficiency of diesel generator is improved by 25% and the carbon emission is reduced by 20%. Meanwhile, the longitudinal laying method is used in China for the first time, expanding the operating range by 40%. The ship is provided with a landing platform for helicopters, which provides operating conditions for the laying of submarine cables in the distant seas.

At present, China's offshore wind energy development gradually focuses on deep and open seas, and the electric energy generated by offshore wind plant is delivered to the land via submarine cables. The cable-carrying capacity of the submarine cable construction ships used in the past cannot meet the requirements for long-distance power transmission in deep and open seas.

Qifan-19 will add a new pillar for Guojiao No.1 Brand. It will meet the requirements for the laying of power cables and communication cables in deep and open seas in China and Southeast Asia, boost the building of a marine power, expand the laying range of submarine cables from China to coastal countries along the Belt and Road, and promote the transformation of global energy to green and low-carbon energy. □Chen Lisha□Du Yang, Fu Yuqing□

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