

Liebherr certifies squirrel cage motors for maritime use

- Liebherr carries out successful first classification approval of squirrel cage motors for use in azimuth drives in ships
- New field of application for Liebherr electrical machines

Nussbaumen (Switzerland), 12 July 2018 - Liebherr reinforces its position in the maritime sector and further expands its portfolio with the successful first classification approval of the compact electric squirrel cage motors for ship propulsion systems.

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Classification approval for electric machines is an essential prerequisite for the implementation of a new product in the maritime environment. Therefore, Liebherr has certified the electric motors of the KGF series in cooperation with the Russian classification company RMRS (Russian Maritime Register of Shipping). Compliance with the rules and technical guidelines of the classification company ensure the safety and suitability of ships and their components. Ships containing components without a classification certificate are not permitted in most territorial waters.

Electric machines and their application area

Liebherr's certified electric motors are three-phase squirrel cage motors with a very compact design and without housing. The machines of the KGF series correspond to the maritime series of four-pole squirrel cage motors and have an output of 40 kW, a frame design of 180 mm, as well as a torque of 322 Nm.

The electric motors find application in the pod drive of a customer ship that navigates in Russian waters. Pod drives control ships electrically and thus replace conventional hydraulic steering. The electric motor is assembled in the propeller nacelle perpendicular to a gearbox, which then can rotate the slewing bearings. Thus, the pod takes over both

the drive and control of the ship. With this structural design, the drive is more efficient and requires less maintenance compared to a hydraulic solution.

Challenges of classification approval

The approval was conducted on the modern test field of the new Liebherr factory in Biberach (Germany). The requirements for approval differ depending on the characteristics of the vessel and the purpose it has been developed for. For example, the guidelines for icebreakers differ from those for cruise ships. Also the guidelines for each component are separately specified.

The approval thus included not only the motor itself, but also its functions as a unit. All safety-relevant parts of the motor must be traceable. Particular focus lied, therefore, on the shaft, which is a power transmission component of the motor and is particularly exposed to heavy loads during operation.

The successful certification of Liebherr electric motors for maritime use is an important step in the growth strategy of the Components Division. Therefore, these squirrel cage motors can be used without any restrictions in ships.

Captions

liebherr-electric-motor-kgf899.jpg

Liebherr squirrel cage motors of KGK series for use in azimuth drives in ships

liebherr-certificate-electric-motors-for-maritime-application.jpg

Liebherr carries out successful first classification approval of electric motors for maritime applications.

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