

Liebherr presents electric version of FAT 325 travel drive

- Travel drive with electric motor for crawler vehicles with 30 to 40 tonnes operating weight
- Design according to protection IP67 for toughest environmental conditions

Munich (Germany), 11. April 2016– At the Bauma 2016, Liebherr is presenting a new version of the FAT 325 travel drive powered by an electric motor from the PGK series. The electric travel drive was designed for devices with an operating weight of roughly 30 to 40 tonnes and is ideal for crawler vehicles with a diesel-electric drivetrain. Liebherr is thus following the electrification trend of off-highway devices, which aims at improving overall efficiency levels.

Used in harsh environments

With the new FAT 325, Liebherr-Components Biberach GmbH is complementing its previously hydraulic travel drives from Liebherr with an electric version. This development does not only meet the increasing demand for electrically driven crawler vehicles but also satisfies the demand for environmental-friendly technologies, since electric travel drives do not require hydraulic pipes. The coaxial travel drive for machines with roughly 30 to 40 tonnes operating weight and speeds up to 5 km/h is designed as a basic model. The travel drive has a maximum output torque of 50,000 Nm at the weight of around 330 kg and transmission ranging from 1:60 to 1:130. The electric motor has a rated power of 13.5 kW at 167 Hz. With protection IP67 and permanent sealing systems, the entire drive is not only optimally protected against use in typical environmental conditions such as dirt and water. It can also be easily washed using a steam jet without further protective measures.

High torque and power density

The special winding layout of the motor with permanent magnet technology ensures a high torque with a compact design. This allows precise positioning of the drivetrain between the chains of the crawler vehicle. The windings of the electric motor, which have been manufactured according to IEC standard 60034, are designed with class H insulation and can therefore be used up to an operating temperature of 180°C.

Notable features of the gearboxes are use of a minimum number of optimised parts and a well-planned, clever design that ensures uniform load distribution in the various gear stages and therefore high power and torque density. The main bearing is designed as an integral unit. This results in a long service life due to a reduced number of individual parts.

System integration

The development and manufacture of gearboxes and electric motors at the same location makes a decisive contribution to the high system integration of the new FAT 325. The gearbox and engine are optimally coordinated and distinguished by their maintenance-friendly design. Liebherr travel drives and electric motors are designed and engineered using the latest development and computing methods and in accordance with valid standards. The development is based on decades of application experience and expertise.

Captions

liebherr-fat325-travel-drive-electric-version.jpg

The new Liebherr travel drive FAT 325 with electric motor is characterised by high power density.

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