

News

Liebherr blade bearings for tomorrow's service operations

Nussbaumen (Switzerland), November 4, 2021 - Liebherr opens up new possibilities for wind turbine operators and service providers with optimised blade bearings in 3-row roller bearing design. Thanks to said bearings, the service life of wind turbines is extended even under high loads.

A new chapter in service operations: Liebherr is now also offering the state-of-the-art 3-row roller bearing design as a blade bearing. It is proven in series production and is an alternative lifetime upgrade for the maintenance and operation (O&M) of older wind turbine models. This improved solution from Liebherr-Components replaces the traditional 2-row ball slewing rings commonly available on the market and brings with it significant advantages. When used as a blade bearing, the 3-row roller bearings show great potential in terms of dimensioning, load absorption, as well as a significantly longer service life. Liebherr blade bearings demonstrate these benefits on a daily basis in numerous projects of major wind turbine manufacturers and operators worldwide. For a major repowering project of a global multi-brand service provider in the USA, Liebherr supplies more than 650 products, including 3-row roller slewing rings as blade bearings, as well as pitch and yaw gearboxes.

Liebherr's technical expertise in the Components product segment is based on over 26 years of experience in the manufacturing of slewing bearings for the wind industry and far beyond for other industries. To date, Liebherr has delivered more than 9,000 series-produced roller bearings to market leading, large and niche wind turbine manufacturers. This number continues to grow steadily. When developing bearings for the service market, Liebherr does not only focus on the given market requirements and those of wind turbine manufacturers, but also on the needs of the O&M market. In doing so, the Liebherr team analyses damage patterns in the field and optimises products to avoid them. The trick is to apply already proven, yet modern technology to existing adjacent structures-to create a more resistant, durable product that fits into the same installation space. The 3-row roller blade bearing perfectly matches these criteria: With constant dimensions and easy interchangeability, the enhanced bearing carries higher loads and reduces known damage patterns, such as edge wear. With their stronger load capacity, long maintenance intervals and significantly extended service life of up to 50%, they ensure permanent availability and thus reduced operating and investment costs over the entire service life of wind turbines. This prevents further cost-intensive blade bearing exchanges, as well as long downtimes and the resulting yield losses. "However, it

is not only the wind turbine owners, operators and service providers, who can benefit from this, but also the environment," explains Zina Charis Gebauer, Business Development Manager Wind Aftermarket at Liebherr-Components AG. "Fewer replacement components reduce the consumption of resources and the CO2 production incurred not only in the manufacturing process, but also within the entire value chain, such as the raw material supply and global logistics," Gebauer concludes.

Image



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Large repowering projects rely on the improved Liebherr solution.

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