

# Twice the life

## from upgraded SKF Explorer

WHAT WILL THE ENHANCEMENT TO SKF EXPLORER CLASS SELF-ALIGNING ROLLER BEARINGS, ALREADY THE BENCHMARK PRODUCTS IN THEIR FIELD, MEAN FOR ERIKS' CUSTOMERS?



Alan Whetstone  
Managing Director,  
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The **SKF Explorer** range of self-aligning roller bearings – consisting of spherical roller bearings, spherical roller thrust bearings and CARB toroidal roller bearings – has long been firmly established as the benchmark for endurance and performance. Its status was confirmed in 2006 when SKF Explorer class load ratings were approved by Det Norske Veritas and Germanischer Lloyd; no competitor product is so far approved by either of those organisations as a high performance class spherical roller bearing. Now, SKF Explorer self-aligning roller bearings have been further enhanced to set new standards for performance, reliability and operating life.

SKF Explorer self-aligning roller bearings have been enhanced in the key area of manufacture of the bearing steel. This advance improves the bearings' ability to resist the heavy levels of contamination, and poor lubrication, found in the quarries and mines many of the applications where they're used. In such challenging environments, the SKF Explorer will now last twice as long.

For ERIKS, the upgraded SKF Explorer range represents the re-launch of a product line that is already better than its

competitors and which is now expanded across a greater number of individual products. All standard spherical roller bearings, spherical roller thrust bearings and CARB bearings will benefit from the upgraded manufacturing process in bearing steel. In addition, the ranges of standard spherical roller bearings and spherical roller thrust bearings have been extended. The SKF Explorer upgrade therefore offers the opportunity to specify increased bearing life and enhanced reliability, especially under poor challenging conditions.

SKF achieved the upgrade by enhancing the manufacture of Bainite bearing steel. The exceptional strength of Bainite hardening has been exploited by SKF as a means of manufacturing bearing rings since the 1950s and, over time, adjustments in the transformation stage of the Bainite hardening process have added toughness, high dimensional stability, good wear resistance, positive surface compressive residual stresses and long fatigue life. Although maintaining a low temperature during a significantly prolonged Bainite transformation was once thought necessary to achieve optimum results, SKF is now acting on the knowledge that, once the Bainite transformation has developed

to a certain degree at an extremely low temperature, it will continue to develop the desired properties in the same manner even if the temperature is increased in order to add further properties.

The upgraded SKF Explorer self-aligning roller bearings already benefit from from other advances in design. For example, ongoing improvements in high precision manufacturing techniques have enabled components to be produced to increasingly precise dimensions, resulting in higher contact interface tolerances that enable bearings to run more smoothly and internal roller and raceway geometries with optimised bearing osculation. The floating guide ring in the upgraded SKF Explorer bearings maintains the correct roller position under load, which in turn ensures a stable temperature within the bearing, also reducing both friction and wear and delivering a measurably better product that will be of great benefit to end users.

"The SKF Explorer upgrade means we can deliver ever greater reliability and service life under poor conditions," said Alan Whetstone, Managing Director, ERIKS. "It's estimated that, in 75% of applications, self-aligning bearings are operating in contaminated conditions so this represents a great opportunity for SKF and ERIKS to provide components that offer significantly longer service and improved performance under such conditions. We always endeavour to help our customers optimise their operations through applying our blend of engineering experience and technical know-how and the upgraded SKF Explorer bearings offer an effective way to deliver maximum productivity, the highest levels of reliability and enhanced profitability."

Offering enhanced performance under demanding conditions and available in an extended product range, the upgraded SKF Explorer self-aligning roller bearings are ideal for applications in mining and quarrying, materials handling, marine, offshore and manufacturing. In addition, the greater load carrying capacity of SKF Explorer offers customers the option to use smaller bearings in some applications - potentially cutting costs - and to improve reliability and increase uptime in many applications.

**"I'm really pleased that SKF is continuing to innovate but even more satisfied that, unlike competitor products, SKF Explorer is validated by third parties Det Norske Veritas and Germanischer Lloyd. SKF Explorer represents a sequence of production improvements across an extended period and our customers are seeing continued evolution and performance. Above all, SKF Explorer satisfies the need for components that offer increased lifespan and, ultimately, lower running costs. SKF has the expertise to address that need - and ERIKS does, too."**

Michael Crean,  
Area Director West Europe,  
SKF

