

Less downtime, less wasted energy, less risk: SKF Cooper split bearings in ball mills



These were SKF Cooper O1BCP 28 inch EXILOG (extra long inner race with outer grooved race) with SKF Cooper GR (fixed) bearing at the drive end. The EXILOG readily handles the shaft expansion (around 10mm) caused by the heat of the mill (80 °C).



The problem

A cement plant in southern France experienced costly ball mill downtime due to oil-lubricated trunnion bearings that needed frequent inspection and maintenance. Start-up was lengthy and complex because the correct lubricating oil film thickness had to be generated before rotating the mill. A significant surge in energy consumption was also involved. Both difficulties were accentuated by the nature of the ball mill's workload, which involves many short runs. Management was concerned about the risk of catastrophic damage should the oil film fail at any time.

The solution

The sleeve bearings and their lubrication systems were removed and replaced with roller bearings.

Benefits

- By eliminating the need for a separate lubrication system
 - Start-up became simpler and more rapid
 - Energy consumption was improved and surges avoided
 - Risk of catastrophic 'dry running' was removed
- SKF Cooper's self-aligning housing keeps bearing seals concentric to the shaft
 - Ensuring the synthetic grease lubricant used is retained inside the bearing
 - Preventing fine limestone dust from penetrating the bearing
- Because their inner race clamps directly to the shaft, the rollers within the SKF Cooper bearings have no direct contact with the shaft and cannot damage it.



SKF Cooper split roller bearings: an ideal replacement for 'maintenance-heavy' sleeves

Always ready for instant start-up, the robust construction and self-aligning housing of SKF Cooper bearings help protect them from deterioration under the toughest industrial conditions. Like sleeve bearings, they are split-to-the-shaft and are easy to access, disassemble and replace for inspection or maintenance, even in 'trapped' locations. Industries that benefit include energy, chemicals, mining, marine and food and beverages.

For more information, visit our website www.cooperbearings.com

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