TIMKEN

TIMKEN® MOUNTED SOLID-BLOCK SPHERICAL ROLLER BEARINGS HELP SAVE $580,000

CHALLENGE

A gold mine operations company in Honduras was ready to give up on one of its biggest machines – a mobile crusher. The mounted ball bearings in the crusher's conveyor system failed repeatedly, causing 90-minute shutdowns every 20 days and delaying processing raw material. Heavy loads and contamination proved too much for the flange block housings, which were rated to last 5,000 hours but typically failed before operating even 500 hours. The mine's bearing supplier – and a Timken competitor – were stymied. Mine leaders thought that their only answer was to invest in a new crusher that wouldn't require so much maintenance.

TIMKEN SOLUTION

The company consulted with Timken and we offered another option: Timken® mounted solid-block spherical roller bearings. Housings made of cast steel are rugged enough to meet the harsh conditions of a mobile crusher. They feature sealing options that keep debris out for longer bearing life than the competitor's housed units. It also has a unique design that handles shaft misalignment up to 1.5 degrees without a reduction in bearing or seal life expectancy. The solution includes precision shaft locking components to accommodate the application demands.

We shipped a standard or stock flange block bearing to the mine for testing. The housing was too large, so our application engineering team quickly responded with a new, customized flange block designed to fit the crusher. A few tweaks later, the company installed a replacement bearing that excelled in the tough mining environment.

RESULTS THAT MATTER

The custom solution delivered improved uptime and lowered maintenance costs for the mine. The triple-lip seal keeps contaminants out and has an expected design life of 100,000 hours. After replacing the one unit, the mine added Timken flanged units to a reinstalled conveyor that had been disabled due to ongoing maintenance issues. The mine again avoided needlessly purchasing costly new equipment.

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related industrial motion rebuild and repair services.