

More than just bearings.

OFTEN IT'S NOT JUST THE PARTS, BUT THE KNOW-HOW, EXPERIENCE AND SUPPORT WHICH GOES WITH THEM THAT MAKE A REAL DIFFERENCE TO CUSTOMER SERVICE. THAT WAS THE CASE WHEN NSK CAME TO THE RESCUE OF A PETROCHEMICAL REFINERY WITH A BEARING PROBLEM.

The petrochemical refinery was experiencing recurrent failures of a cylindrical roller bearing in a critical centrifugal pump. The criticality of the pump meant that every bearing failure resulted in costly downtime. After several replacement bearings had failed, the refinery decided to seek help, and turned to NSK to resolve the issue.

Proven improvements

NSK operates its Asset Improvement Programme (AIP) to help customers unlock additional profitability, through improved machine reliability and increased working knowledge.

AIP has achieved many impressive results, by combining customers' own knowledge of their working environment, culture, processes and problems, with the engineering expertise and innovation of NSK. The key to its success is the close working relationship NSK develops with the customer's employees, establishing a dialogue which efficiently and effectively helps identify the issues and problems that affect them, helps with the understanding of these issues and problems, and quantifies their financial impact on the business.

In this particular case over a one year period a total of €27,800 was lost due to bearing replacement, fitting time and production downtime cost.

Rather than simply providing another replacement bearing, NSK sent engineers into the refinery to investigate further.

They found that there was a transition from a belt drive to a direct drive on the pump, and that this was resulting in a drastic reduction in the radial load on the bearing. The reduction led to rollers slipping on the inner raceway, which caused the bearing failures.

Money-saving solution

The NSK engineers' solution was to replace the cylindrical roller bearing with an NSK HR deep-groove ball bearing.

The advantage of this bearing in this particular application was that its minimum radial load was lower than that of the cylindrical roller bearing, and the load capacities were sufficient to match the application requirements.

With the new NSK bearing in place, the pump has since run smoothly and reliably, without a single breakdown. The corrective measure has led to a longer bearing life, reduced maintenance and repair, and – crucially – the elimination of downtime. The new bearing actually costs less than the original but more importantly due to no failures in service within the first year has managed to save the customer more than €27,800 per annum. That's more than just small change, thanks to NSK providing more than just bearings.



MOTION & CONTROL™
NSK

