

NTN Significantly Improves Production Output at Copper Tube Manufacturer by Redesigning Pilger Mill

A major manufacturer of copper tubing for refrigeration in industrial markets across North America was experiencing failures on the infeed carriage drive gearbox in their pilger miller. The frequent failures were causing over 400 hours of downtime per year at a rate of \$100 per hour. This also shortened maintenance cycles and reduced production speeds, causing a production bottleneck that was felt throughout the mill.

NTN's engineering and sales support team ran a comprehensive diagnosis of the application and identified that the infeed carriage was thrust loading into the gearbox, causing failures every three to four months and dramatically reducing the mill's profits.

The NTN Solution

NTN's team recommended replacing the fixed side bearing of the infeed carriage screws from a spherical roller bearing to a tapered roller bearing mounted in a face-to-face arrangement. This solution is better suited to take thrust loads without transmitting them to the gearbox. An additional recommendation was also made to create four individual screws and two independent roll carriages to decrease the retraction time, minimize any "free" rocking and improve the continuous feeding of the tube.

The Result

The NTN solution allowed the mill to retract smoothly and reduce lag time in product transfer for continuous feeding of tube product, eliminating lost production time. The increased uptime and improved bearing life have resulted in over \$80,000 in savings the first year after implementation.



VALUE ADDED BREAKDOWN

INCREASED BEARING LIFE

\$40,600

UPTIME IMPROVEMENT

\$40,000

DOCUMENTED COST SAVINGS

\$80,600

Cost001831

NTN Technical Support Overview

Founded in 1918, NTN has a century of experience when it comes to make a wide range of high-quality bearings. In addition, NTN has a wealth of knowledge and expertise when it comes to understanding bearing products and how to best utilize them. It is because of this experience, knowledge and expertise that NTN is able to deploy a team of industry experts capable of providing services that our customers and end-users need to keep their operations running at optimal levels.



Over 85 NTN experts across the United States and Canada



Over 11,000 customers and end-users trained on NTN products



Over \$68 million in verified cost savings since 2015



Beyond Bearings

Training. Installation Support. Trouble-shooting. And more.

When you choose NTN, your team is equipped with all the necessary tools and resources to get the job done right. From installation to problem-solving, we'll be there with the hands-on support you need to take on your toughest challenges. This includes extra services such as:



Technical Training Unit

On-site, mobile training unit offering specialized, hands-on instruction from NTN engineers



Product Training School

Three days of in-depth instruction from NTN engineers at headquarters



eKnowledge

WEB-BASED TRAINING PROGRAM

Six online product training modules covering different bearing types and nomenclature



NTN Bearing Finder

Customizable search tool featuring exhaustive data sets, comprehensive part interchanges and interactive CAD drawings

MOTION
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