

NTN ULTAGE® Spherical Roller Bearings Increase Tonnage on Continuous Caster

A major US-based hot strip mill was experiencing abnormally short bearing life on their continuous slab caster. Repetitive segment roll failures caused costly downtime at a rate of over *\$10,000 per hour* and affected downstream operations.

NTN's engineering and sales support team ran a comprehensive diagnosis of the mill's segment rolls and discovered that the competitor's bearings were only lasting an average of *100,000 tons* due to improper bearing design and fitment that could not withstand the high temperatures and contamination of continuous casting.

The NTN Solution

NTN's team concluded that the plant needed to change the bearing fits and radial internal clearance. ULTAGE spherical roller bearings were prescribed with a C4 radial internal clearance and with improved fitting tolerance. ULTAGE spherical roller bearings are designed to withstand the heat and contamination associated with continuous casters, promoting a long service life and reducing the need for replacement. Couple these factors with one of the highest load capacity ratings in the industry and you have a bearing solution designed to last, no matter the environment.

The Result

The NTN solution lasted *two times* longer! Our spherical roller bearings successfully ran for *200,000 tons* of metal production compared to the competitor's bearing that averaged *100,000 tons*.

The increased bearing life, reduced maintenance and decreased cost resulted in over \$500,000 in savings over six months. The mill personnel were so satisfied by the improved performance on the two caster segments that they installed NTN ULTAGE bearings on all the remaining segments.



VALUE ADDED BREAKDOWN

INCREASED BEARING LIFE

\$62,991

MAINTENANCE REDUCTION

\$240,000

REDUCED ACQUISITION COST

\$65,328

UPTIME IMPROVEMENT

\$150,000

DOCUMENTED COST SAVINGS

\$518,319

Cost000474



ULTAGE®

Faster. Cooler.
Stronger. Better.

THE INDUSTRY'S HIGHEST LOAD CAPACITY

- The bearings have a significantly increased roller diameter and maximum number of rollers, thus achieving both a static load increase of 35% and up to 5X longer service life

THE INDUSTRY'S HIGHEST ALLOWABLE SPEED

- The new pressed steel cage results in allowable bearing speeds up to 20% greater than NTN's previous design

DIMENSIONAL STABILITY UP TO 392°F (200°C)

- The bearings are made with a special heat-treated material that guarantees the dimensional stability in high-temperature applications



ULTAGE SPHERICAL ROLLER BEARINGS

- Reduce frictional torque by 30% compared to standard NTN spherical roller bearing
- Available in open and sealed varieties, as well as split design for segment drive rolls
- Heavy duty cages available in either pressed steel or machined brass
- Up to $\pm 2^\circ$ misalignment capability



Let us take the heat off you.

We're here to help you achieve your productivity and performance goals. For more information, contact your NTN Sales Representative or **call 1-888-412-4122**. For technical questions, **email techsupport@ntn.ca**.

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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's technical team and always customised to your needs



Maintenance Training School

An intensive three day course on the design, application and maintenance of anti-friction bearings with hands-on workshops



eKnowledge

WEB-BASED TRAINING PROGRAM

Six online product training modules covering different bearing types and nomenclature (www.ntnamericas.com/eknowledge)



NTN Bearing Finder

Customizable search tool featuring exhaustive data sets, comprehensive part interchanges and interactive CAD drawings (www.bearingfinder.ntnamericas.com)

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