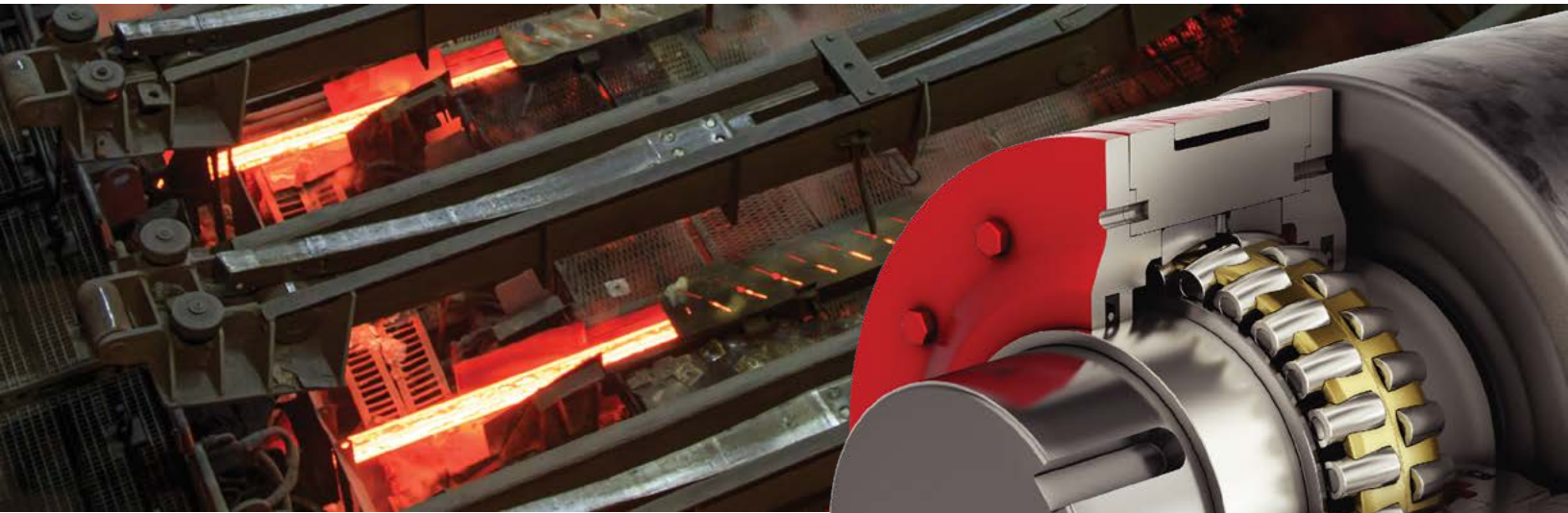




CASTING CALL FOR SUPER WEAR RESISTANCE

SWR™ SPHERICAL ROLLER BEARINGS

THE PROBLEM

An international steel manufacturer sought the support of NSK experts to resolve the frequent bearing failures that they were experiencing on a continuous casting machine. The extremely heavy loads transmitted while forming shaped segments was resulting in severe bearing wear and rolling fatigue with 3 failure incidents to date.

THE SOLUTION

A proven countermeasure engineered specifically for continuous casting applications — NSK's Super Wear-Resistant (SWR) Spherical Roller Bearing — was recommended for a durability trial and achieved 60% longer bearing life with considerable savings in machine downtime, production loss and maintenance costs.

REDUCED PRODUCTION LOSS:

\$107,200

by reducing incidents of machine downtime

REDUCED MAINTENANCE:

\$42,900

with longer bearing life extending maintenance intervals

TOTAL COST SAVINGS:

\$150,100

with reduced production loss and maintenance costs



BREAKING THE BEARING FAILURE CYCLE WITH NSK EXPERTS

Rolling bearings that support continuous casting segments are exposed to unimaginably punishing stressors. Intense heat, massive loads, ultra-low speeds, water intrusion, scale, and mold powder contamination are constant challenges to operating life. Unplanned stoppage here is costly — in maintenance and replacement — and potentially impacts all downstream operations with lost production.

In this case, an application review and bearing condition report performed by NSK experts confirmed that the bearing selection proved to be inadequate for the challenge. The cumulative impact of immense loads and low-speed rotation were overwhelming, resulting in progressive and ultimately catastrophic raceway wear.

With the recommendation and installation of SWR Spherical Roller Bearings, NSK experts were able to break the failure cycle with an application-optimized solution and outcome: longer bearing life with significantly lower downtime consequences.

A SUPER WEAR-RESISTANT SOLUTION WITH NSK TECHNOLOGY

NSK SWR Spherical Roller Bearings for continuous casting are built to last, boasting advanced material and carbonitriding technologies to deliver superior resistance to wear and the onset of progressive bearing damage — promoting longer operating life and reducing unplanned maintenance downtime.



Superior wear resistance – 3 times that of conventional bearing steel



Improved flaking life property – 5 times that of conventional bearing steel



Higher toughness of material core – 5 times that of conventional bearing steel



Improved bearing durability extends segment roll operation, reducing maintenance costs and preventing unplanned downtime

YOUR PARTNER FOR MACHINE OPTIMIZATION

With our Asset Improvement Program and collaboration with NSK experts, customers embark on a critical path to achieving optimal performance and service life from their bearing assets. And to realizing lasting improvements to people, processes and machinery that equate to measurable gains in reliability and productivity.

