



# CASE STUDY

Leading Customer in Steel Industry

## Engineering Solutions that Cut Downtime and Costs in Wire Rod Mills

The customer was experiencing **continuous failure** of **6202 ball bearings** in the wire rod mill guide box application. This guide box is critical for directing and controlling the movement of hot metal through the rolling stands.

Frequent bearing failures led to cobbling of wire rods, impacting product quality. Bearings were failing extremely quickly, with a lifespan of only 8–16 hours.

Each guide box used two deep groove ball bearings (DGBBs), both of which were affected.

This led to **reduced operational efficiency** of the wire rod mill. Increased downtime and maintenance costs.

The **NBC Industrial Application Engineering team** visited the site and conducted a thorough analysis. Key actions included:

- Developed a high-speed, enhanced wear-resistant 6202 T2X bearing specifically for the guide box application
- Bearings equipped with a polyamide cage, preventing cobbling even in case of partial failure.
- Optimized installation and operating conditions for reliability.

## Customer Savings & Benefits

- Bearing life **increased 2–3X**, significantly reducing failures.
- Monthly bearing usage reduced by 1/3, lowering replacement costs.
- **Downtime reduced**, improving overall productivity.
- Product quality enhanced, with cobbling effectively eliminated.
- Direct cost savings due to reduced maintenance and operational interruptions.