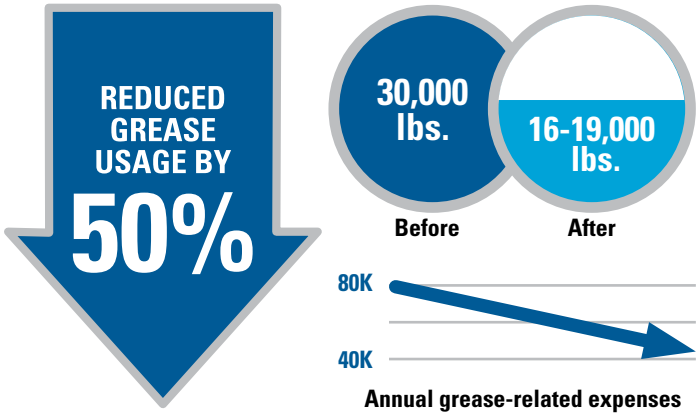
TIMKEN



CLEANER, LONGER-LASTING, COST-EFFICIENT: TIMKEN® SEALED ROLL NECK BEARINGS

CHALLENGE

In a hot strip mill environment, a customer's bearings on the mill stands are expected to perform under extreme conditions, including high speeds, heavy loads, and harsh contaminants. Previously used open roll neck bearings leaked grease during operation, leading to a contaminated and hazardous work environment. Additionally, water ingress through these unsealed bearings caused internal etching and premature wear, significantly reducing bearing lifespan. The customer faced frequent, costly maintenance due to grease loss and contamination. The combination of excessive grease consumption, the need for frequent regreasing, and the impact on bearing life prompted the customer to turn to Timken for a reliable, efficient solution to improve performance and lower maintenance costs.



TIMKEN SOLUTION

Responding to the customer's challenges with grease leakage and water ingress, Timken provided its expertise by recommending sealed roll neck bearings featuring an advanced double-lip seal design. The seals, made from fluoroelastomer, offer excellent resistance to rolling fluids and extreme temperature ranges (-25°C to 200°C), critical for the harsh mill conditions. The superior double-lip seal design prevents contaminants and water from entering the bearing while retaining grease for optimal lubrication. Additionally, the seals allow for easy installation and removal, reducing maintenance time and labor costs. This tailored solution significantly improved workplace cleanliness, eliminated water ingress, prevented etching, and extended bearing lifespan, meeting the customer's need for enhanced performance and reliability.

RESULTS THAT MATTER

With Timken's sealed roll neck bearings, the customer experienced a substantial improvement in operational efficiency and cost savings. Grease consumption was reduced by nearly 50%, dropping from 30,000 pounds to just 16,000–19,000 pounds per year, resulting in a reduction of grease-related expenses from $80,400 to just $42,880–$50,920 annually. The improved sealing design extended maintenance cycles, prevented water ingress and eliminated bearing etching. Overall, the customer benefited from less downtime, reduced maintenance costs, and improved productivity. The mill now operates cleaner and more reliably, with fewer bearing replacements and less frequent lubrication, driving significant long-term savings.

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related industrial motion rebuild and repair services.

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