

Challenge

Background

At a steel mill, caster segment bolts were seizing due to extreme pressure, high temperatures, moisture, and underperforming anti-seize. As a result, bolts could not be removed with a wrench.

During caster maintenance—typically after processing 1.5 million tons (approximately every 3 – 4 months)—2 – 3 out of the 4 segment bolts had to be cut off with a torch for removal. Together, there were 16 segments with 64 bolts. Each segment bolt cost \$1,000.

The facility wanted to extend the service life of the expensive bolts and reduce the downtime during the maintenance cycles.



Steel casting at a steel mill where caster segment bolts undergo extreme environment.

Solution

Product

A Chesterton specialist diagnosed the issue and recommended **Chesterton® 783 ACR Corrosion-Resistant Anti-Seize Compound** for the segment bolts. This ceramic-based anti-seize, featuring **Chesterton's QBT™ Quiet Bearing Technology**, was chosen for its exceptional pressure resistance, water washout protection, and corrosion resistance. Its fine particle size helps ensure complete bolt coverage and protection. **783 ACR Anti-Seize** effectively separates metal surfaces on nuts and bolts, preventing cold welding and galling.

\$ = USD



Chesterton 783 ACR Anti-Seize with high pressure, corrosion, and water resistance.

Results

Savings of Time, Labor, and Money

Since implementing **783 ACR Anti-Seize**, the steel mill has not needed to use a torch to remove caster bolts from the segments. This significantly reduced maintenance costs and downtime previously required during every shutdown.

Cost breakdown:

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|---|--------------------------|
| Cost of a segment bolt | \$1,000.00 |
| Cost of changing 2 bolts per segment for 16 segments | \$32,000.00 |
| Labor 2,000.00 per day x 2 | \$4,000.00 |
| Cost spent on bolts and labor per year (4 times a year) | \$144,000.00/year |
| Chesterton 783 ACR Anti-Seize | \$1,224.00 |
| Total estimated savings | \$142,776.00/year |



Nut bolts coated with Chesterton 783 ACR Anti-Seize.