CHESTERTON
Global Solutions, Local Service.

# Matrix Split Seal Saves Oil and Stops Leakage in Steel Mill Gearboxes

*Steel Industry*
**Chesterton Matrix Rotary Seal**
*Case Study 047 Rotating Equipment*

## Challenge

**Issue**

- A steel mill had significantly worn out shafts with the gearboxes on the "repeater" of the wire mill. The wear was caused by running various rubber-style lip seals.
- Gearboxes were leaking oil consistently upon startup after a new competitor seal was installed. This progressively worsened causing significant oil/grease loss and major housekeeping issues.

## Solution

**Overview**

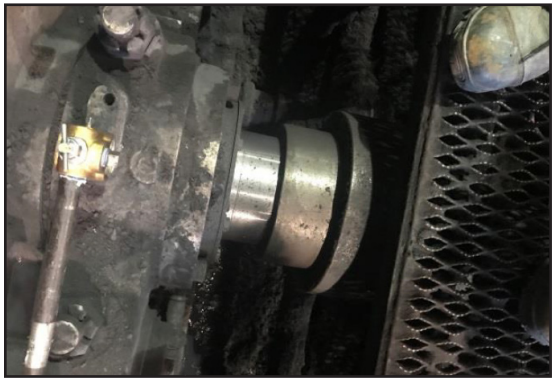
Replaced competitor's seal with the ***Chesterton Matrix Rotary Seal***, a split polymer seal that can be installed in minutes minimized critical downtime.

- A unitized design.
- Advanced polymer combined with impregnated synthetic fiber packing technology to maximize performance.
- Positively seals out bearing contamination while keeping lubrication in.
- Withstands large runout conditions and vibration.

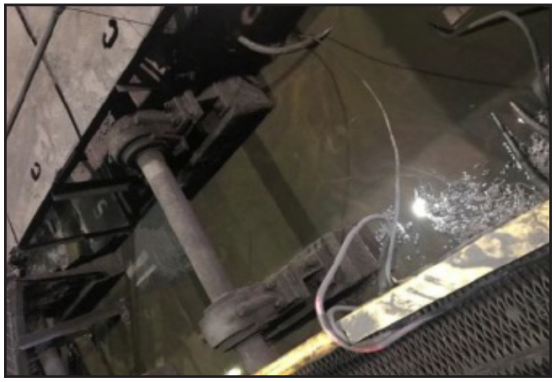
## Results

**Client Reported**

- The ***Chesterton Matrix Rotary Seals*** running leak-free since installation (over six months).
- Piping improvements and the ***Matrix Seals*** have resulted in a drastic oil consumption reduction from nine truck tankers to three each year.
- **An an ROI study revealed $177,500 in net oil savings in six months.**



*Rubber lip Seals were causing shaft wear.*



***Chesterton Matrix Rotary Seal** will adjust to the shaft axis to avoid wear.*

*Leak-free performance saved over $177K in oil in six months.*



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