

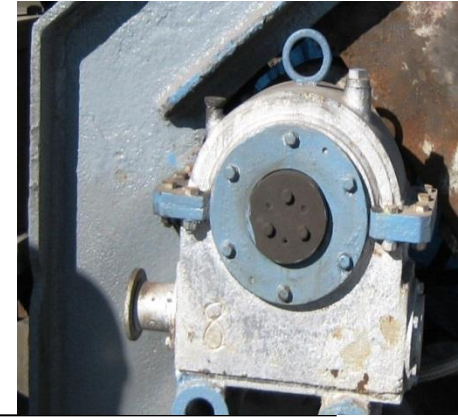
Molub-Alloy GM 969 Eliminates Leaky Gear Failures

METALS (USA)

Melt Shop and Caster Gearboxes

Castrol Molub-Alloy® GM 969 Leak Resistant Gear Oil*

ANNUAL SAVINGS: \$128,750



THE SITUATION

A Southeast steel producer was using a PAO-based gear oil in 5 worm gearboxes in the Melt Shop and Caster areas where vibration and shock loads were common.

The gearboxes had regular seal issues, causing oil leaks and regular gear failures. On average, they each failed once per year leading to high rebuild costs and downtime.

BEFORE

- PAO gear oil with frequent gear failures
- Annual gearbox cost - **\$25,000**
(5 drives/year @ \$5,000 each)
- Annual replacement labor - **\$2,600**
(40 hours @ \$65/hour)
- Annual lost production - **\$100,000**
(5 gearboxes x 2 hours x \$10,000/hr)

AFTER

- Molub-Alloy GM 969 Leak Resistant Gear Oil
- No gearbox failures for 18 months after conversion
- Reduced oil usage worth an additional savings of **\$1,150**

THE SOLUTION

- Investigation by Castrol engineers found that seals would begin leaking after 1-2 months in service due to high vibrations and misalignment.
- This led to oil leaks and gear failure due to lack of lubrication.
- Due to the mechanical challenges, Castrol chose Molub-Alloy GM 969 Leak Resistant Gear Oil to solve the problem. This oil has an additive that creates a mat-like matrix at the leak point to eliminate the flow of oil and ultimately prevent gearbox failure.
- After conversion of all the leaky drives, no failures occurred in the following 18 months.

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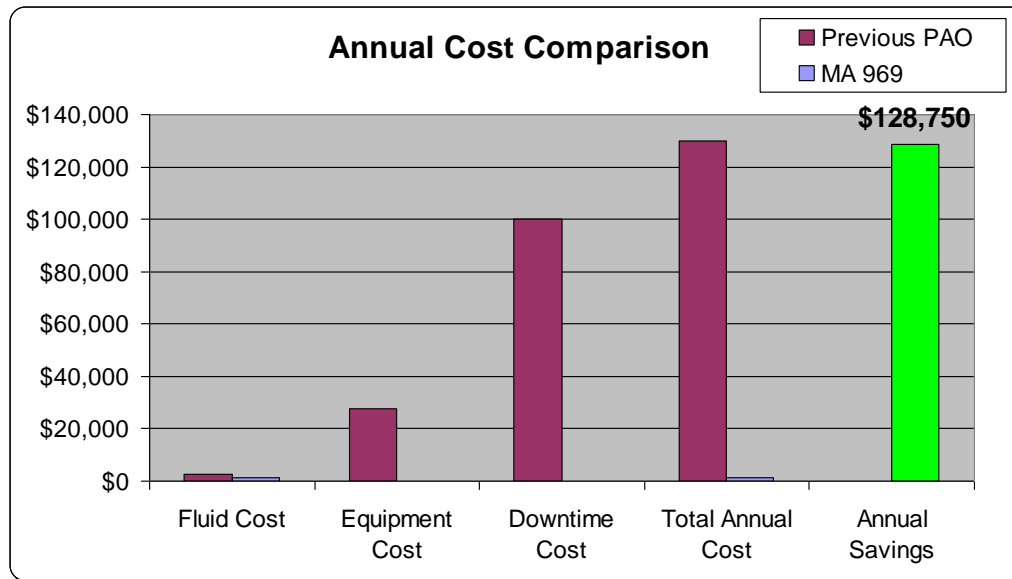
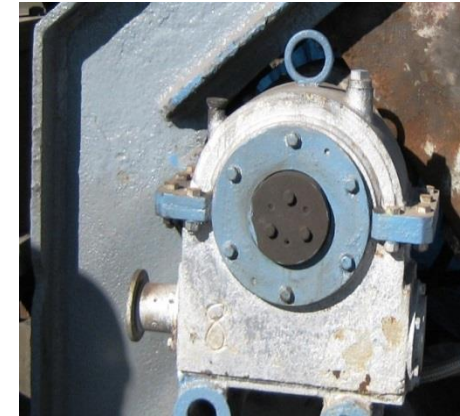
RECOMMENDATIONS

In the steel mill environment, gear drives are often subjected to heavy vibrations, shock loads, and misalignments that can affect the seals. When seal improvements or regular repairs are not practical, Molub-Alloy GM 969 can be a permanent solution to prevent loss of gear oil and subsequent failure due to lack of lubrication.

CONCLUSION

The use of Molub-Alloy GM 969 in leaky drives has completely eliminated lubrication related failures, saving the customer substantial costs for equipment, labor, and downtime.

The result is an annual savings of \$128,750.



OTHER POTENTIAL APPLICATIONS

Molub-Alloy GM 969 Leak Resistant Gear Oil is specially formulated to control leaks in gear cases when repairs cannot be immediately performed. It contains a synthetic thickener which creates a mat-like matrix at the leak point to greatly reduce the oil flow.

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