Excellent Torch Test Results with Molub-Alloy 860 Grease

STEEL MANUFACTURING
SEAMLESS TUBE MILL
Castrol Molub-Alloy® 860/460-1 ES Grease
ANNUAL SAVINGS: $32,070

THE SITUATION

A major steel tube manufacturer experienced two grease fires per shift on average.

The customer performed their own Torch Test to compare the fire resistance property of a competitor's "fire-proof" grease to the Castrol recommended Molub-Alloy 860/460-1 ES grease.

Test description: Globs of each grease approximately 2" diameter were placed on two pieces of 1/4" by 3" flat bars. An acetylene torch (with and without a compressed oxygen mix) was placed 1" from the grease for approximately 20-30 seconds.

The torch with the compressed oxygen mix was around 700°F and without the compressed oxygen was around 570°F.

BEFORE

- Customer experienced two fires per shift with the previous grease
- Grease was spilling out of the bearings and building up on the floor creating a safety hazard.
- Grease usage was two (2) bins every three to four months.

AFTER

- Customer currently experiences only 1 fire every 1-2 months.
- No grease spilling out of the bearings and no build up on the floor – better housekeeping and safety.
- Current grease usage is one (1) bin every three to four months.

THE SOLUTION

When torch was pulled away from the grease samples, the following was observed:

- Competitor's fire-proof grease not only caught fire but separated and dropped fire balls.
- The Castrol grease was not on fire. The same procedure was repeated several times and the grease did not catch fire.
- Castrol Molub-Alloy 860/460-1 ES grease is used to lubricate driven rolls that transfer the hot tubes to the cut-off saw. There are pillow block bearings on each side of the roll and a total of around 100 roll assemblies.

- Castrol Molub-Alloy 860 grease has dramatically reduced the number of fires
- Grease fire related downtime was minimized
- Grease usage was significantly reduced
- Safety and housekeeping were dramatically improved

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RECOMMENDATIONS

- Castrol Molub-Alloy 860 ES grease was specifically developed for steel mill applications where loads are very high, temperature is severely elevated, and process water is present.
- The "Torch Test" performed by the customer indicated excellent fire resistance of the Castrol grease. Safety was dramatically improved and related downtime was greatly reduced.
- High mechanical (shear) stability of the Castrol grease stopped grease leakage from the bearings and build-up on the floor, improving housekeeping and safety.

CUSTOMER QUOTE:
"We were really impressed with the fire resistance of the Castrol grease."

CONCLUSION

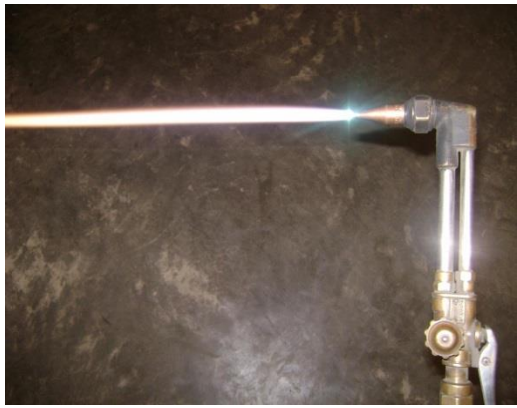
After conversion to Castrol Molub-Alloy 860/460-1 ES grease:

- Number of fires per year was reduced from over 2000 fires (2 fires per shift) to less than 10 (only 1 fire every 1-2 months).
- Annual grease consumption was reduced two (2) times from 15,092 lbs. to 7,546 lbs.

Estimated annual cost savings of $32,070 is from lower grease consumption alone.

Notes – This estimate does not include:

- Increased production time due to reduced downtime from grease fires.
- Fewer replacement parts including stainless steel hoses and distribution blocks that were damaged or ruined from the fires.



OTHER POTENTIAL APPLICATIONS

Castrol Molub-Alloy 860/460-1 ES grease can be used in any high temperature application where grease fire hazards exist such as Sinter machines at mining processing plants.

Customer contact info is available for reference upon request.