

APPLICATION

Hoist Rope

Gold Mine Reduces Metal Loss on Hoist Rope

CUSTOMER TESTIMONIAL

Underground Gold Mine

CHALLENGE

Metal Loss & Wire Rope Lifespan

SOLUTION

Almamoly® HD Grease (1488)

RESULTS

- Extended rope life by 30%
- Extended changeout interval by six months
- Significantly reduced metal loss
- Increased peace of mind

Customer Profile

The customer operates an underground gold mine in Canada and has been an LE customer since 2021.

Application

In Canada, most mine hoist ropes are discarded from metal loss, which is normally worse at the crossover sections. This is why extreme pressure additives are most critical when selecting a wire rope lubricant as it is required to protect the outer wires from wear. A secondary pain point for mine hoist ropes is product fling-off.

Challenge

Using a competitor's wire rope lubricant, the customer was getting acceptable rope life – approximately two years or 90,000 to 105,000 cycles – but experiencing some metal loss on their EM tests. They wanted to see if switching to a different lubricant would improve this performance; in particular, they were hoping to get better crossover wear protection, slow down the rate of metallic loss, and lengthen the changeout interval.

LE Solution

Curtis Lammi of Lubrication Engineers of Canada recommended Almamoly HD Grease (1488). The industry standard for hoist ropes is a calcium sulfonate EP1 grease with 5% moly; Almamoly 1488 meets that standard and has additional EP properties because of

Results

After 24 months of using Almamoly, the customer decided to push the ropes another 6 months.

With Almamoly, they were able to use the ropes for 30 months – approximately 130,000 cycles, a 30% increase – before changing it.

The previous set of ropes showed 5.6% and 6.3% metal loss on their EM tests before they were discarded at the 24-month mark. After 24 months with LE's lubricant, the EM test only showed 1.75% and 1.75% metal loss. After 30 months with Almamoly, the ropes showed 1.75% and 2.8% metal loss, which is still significantly lower than the previous set of ropes.

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Almasol®, LE's solid wear-reducing proprietary additive. Almasol is able to withstand extremely heavy loads, chemical attack and temperatures up to 1,900°F (1,038°C). It is attracted to metal surfaces, forming a microscopic layer but not building on itself or affecting clearances. Almasol minimizes metal-to-metal contact and the resulting friction, heat and wear.

The customer started using Almamoly 1488 in March 2021.



Results *(cont.)*

“These ropes cost approximately \$135,000, and the drum end cut procedure costs approximately \$40,000,” Lammi said. “Mines are looking to safely extend intervals between drum end cuts because the costs are increasing significantly to get it done. Based on the performance we’ve seen, we think Almamoly 1488 can help make this happen.”