

UTA Cobra™ Solid Lubricant Bearings

INDUSTRIAL

UTA Cobra™ Solid Lubricant Bearings Eliminate Grease Lubrication in Heat-Treating Furnaces



Get More Out of Your Industrial Machinery Investment

High temperatures can compromise the effectiveness of many different lubricating systems and even the best designed bearings can suffer from wear and short operating lifetimes as a result of ineffective lubrication at temperature extremes.

In production equipment where bearings are involved in ovenized or heat-applying processes, effective lubrication can be essential to the consistency of the production process, ultimately effecting productivity and profitability.

The Challenge

An OEM manufacturer was facing frequent bearing failures in approximately 200 roller hearth heat-treat furnaces within the company. Due to the elevated temperatures of this application, the operating lifetime of these bearings was only 6 to 8 months. The bearings normally used in these furnaces, Sealmaster SFT-23 flange bearings, feature rugged cast-iron construction but were suffering from inconsistent and ineffective lubrication at the high furnace temperatures.

Operation managers encountered approximately 168 hours of downtime for bearing change-outs at a cost of \$506/hr. Additionally, intensive maintenance would often lead to shaft and housing damage during mounting and disassembly operations. The frequent rebuilds were also limiting the performance of the oil-air lubrication system. Looking to stop this recurring cycle, reduce unplanned downtime, and related costs the company consulted with UTA.

The Solution: **High-Temperature Cobra Solid Lubricant™ Bearings**

The bearings in the oven were filled with CSL450, an efficient and cost-effective alternative to the use of grease in high temperature environments. UTA Cobra Solid Lubricant™ bearings do not require re-lubrication, eliminating the cost and maintenance time of conventional greasing systems.



Benefits

- **Increased System Reliability**
 - Extended service life
 - Less unplanned downtime
- **Reduced Maintenance**
 - Virtually maintenance-free
 - No need for re-lubrication
- **Reduced Environmental Impact**
 - No grease consumption
 - No lubricant leakage
 - Reduced need for cooling
- **Improved Safety**
 - Reduced risk of grease fires
 - Elimination of slippery work surfaces
- **Reduced Total Operating Costs**
 - Reduced risk of bar surface damage
 - Reduced lubricant & energy costs
 - Reduced cost for water treatment process

Typical Applications

- **Roller Hearth Furnaces**
- **Continuous Casters**
- **Cooling Beds**
- **Table Rolls**
- **Torch Cars**
- **Crane Wheels**



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Increase The Return On Your Maintenance Investment with UTA



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ECO FRIENDLY

The Solution: High-Temperature Cobra Solid Lubricant™ Bearings (continued)

UTA presented the OEM manufacturer with a high-temperature Cobra Solid Lubricant™ bearings solution for use in over 200 roller heat-treating furnaces. The bearings in the oven were filled with CSL450, an efficient and cost-effective alternative to the use of grease in high-temperature environments.

UTA Cobra Solid Lubricant™ bearings boosted loop guide roll service life dramatically. Rolls that were previously failing monthly are now lasting for over two years.

By moving away from grease lubrication - and the associated operating costs - UTA Cobra Solid Lubricant™ bearings helped extend service life and eliminate unplanned downtime of the heat-treat furnaces.



Return On Investment (ROI) Summary*

With new CLS450 filled bearings, bearing life increased from 8 to 51 months. The initial cost for implementation was \$22,537. The cost savings per occurrence is \$84,939.

The total cost savings to date = \$550,000.

** These numbers are based on customer's estimates. Your particular cost savings may vary.*

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