UTA Cobra™ Solid Lubricant Bearings

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

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

For more information on UTA products and solutions, visit www.utausa.com
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**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.*