

APPLICATION
Kiln Car Bearings

Brick Company Keeps Kiln Cars on Track with LE's High-Temp Grease

CUSTOMER TESTIMONIAL
Boral Brick

CHALLENGE

Failure of kiln car bearings caused by high temperatures hardening the grease

SOLUTION

Almasol® High Temp Lubricant (1250)

RESULTS

- Eliminated bearing failures
- Doubled lubrication intervals
- Reduced downtime
- Reduced lube costs and re-lubrication labor by half

Customer Profile

Located in Augusta, Ga., Boral Brick is one of the largest brick companies in the United States. It produces more than 150 different brick options, with a variety of rough and smooth textures, and colors that range from nearly white to deep burgundy brown.

Application

The Boral Brick plant operates 128 kiln cars that carry ingredients through a kiln in order to harden and produce brick. Fully loaded, the kiln cars weigh approximately 12 tons.



Challenge

The bearings in the kiln cars failed because the "high-temperature" commercial grease being used broke down and hardened in the bearings under the high-temperature conditions. The kiln reaches temperatures over 2,000°F (1,093°C), while the area under the kiln car – where the bearings are located – reaches up to 500°F (260°C). This caused the need for frequent lubrication, which included

Results

Grady and Alan agreed to give Almasol 1250 a trial to see if it would hold up in the extremely high temperatures. The goal was to extend the lube interval from one month to two months. Every two weeks during the trial, the test cars rotated through the plant and the bearings were checked to see if the grease was still pliable and buttery. After two months of checking, Almasol 1250 had proven itself. The trial was a success.

Safely extending the lube interval from one month to two months using Almasol 1250 has cut lube costs in half and saved Boral \$7,680 per year in labor. The kiln cars roll easily through the kiln, and lube techs no longer have to knock out and replace clogged zerk fittings, or chisel old grease out of bearings. No more bearings have been lost due to lubrication, and

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the tasks of hammering out hardened zerk fittings and chiseling old grease out of the bearings. To relube all of the cars, it took the lube technician 10 hours per day for eight days each month. At \$16 per hour, the labor dedicated to re-lubrication was costing approximately \$1,280 per month or \$15,360 per year.

Even with the frequent relubrication, they were experiencing an average of two kiln car bearing failures per month, causing even more downtime. An average of 80 hours per year were spent by mechanics and lube technicians rebuilding or replacing damaged bearings and wheels.

Grady McClellan, plant manager, and Alan Autrand, maintenance manager, asked LE's local lubrication consultant Mark Jones for help in solving their kiln car bearing failures.

LE Solution

Mark recommended Almasol® High Temp Lubricant (1250), which is designed for applications requiring high-temperature grease, such as kiln car bearings, oven conveyors, asphalt plants and soot blowers.

Almasol 1250 is designed to withstand high temperatures and to resist oxidation and vaporization. It contains Almasol®, LE's proprietary solid wear-reducing additive that is able to withstand extremely heavy loads, chemical attack and temperatures up to 1,900°F (1,038°C).

Results (cont.)

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In addition to solving their immediate kiln car problem, Mark introduced LE's World Class Lubrication Reliability Program, (WCLRP) to Grady and Alan. They realized that by implementing WCLRP they could save money, reduce downtime and increase production. In a six-month period, with Mark's help, they:

- Implemented an oil analysis program
- Started building a lube room
- Implemented color coding
- Installed single point lubricators and an automatic lube system
- Started using adaptor kits and filtration for contamination control
- Adopted lubrication reliability training for their employees

Thank you to Grady McClellan, plant manager; Alan Autrand, maintenance manager; and Mark Jones, LE lubrication consultant (pictured), for providing the information used in this report.

