

Customer Testimonial



Almasol® High Temperature Lubricant (1250-1251)

J.D. Heiskell & Company, Inc. – Tulare, Calif.

California Pellet Mills

- Reduced bearing replacement 90 percent
- Saved an estimated \$1,200,000 in parts since 1983
- Reduced grease consumption

Customer Profile

J.D. Heiskell & Company, Inc., located in Tulare, California since 1886, is a primary producer of premium rolled grain for cattle feed and customized pelletized feed for cattle, horses and dogs. Quality control is an important concern of the mill crew. Incoming materials are probed, sampled, tested, graded and sifted...none are unloaded unless they meet the rigid criteria of J.D. Heiskell & Company. In 1983, because of their insistence on quality, the now retired mill maintenance manager began using LE's unique and high performance lubricants.

Application

Two California pellet mills, a 200 hp and a 100 hp, and ten grain rolls are essential equipment at this facility. Nine grain rolls are 18" x 36" and one is 18" x 30". The pellet mills pelletize a variety of ingredients under steam and pressure. The grain rolls grind grain to a certain consistency for use as pellet material and cattle feed. The pellet mills produce approximately 860 tons per day, or about 25,800 tons per month. The eight grain rolls together produce approximately 36 tons of rolled grain per hour and operate 24 hours a day, seven days a week. Unscheduled downtime is unacceptable.

Challenge

While using a variety of commercial grade and specialty grade food machinery lubricants, frequent bearing replacement was necessary on the grain rolls when recorrugation (resurfacing of the rolls) was performed. The bearings were dry and blue in color, which was caused from excessive heat. The bearings on the



Two grain rolls – one 36" and one 30".

California pellet mills would often fail while in service, even though 18 to 20 pumps of grease were applied every two hours. John Black, the former mill maintenance manager, stated, "The grease normally would run out of these hot bearings in a consistency similar to a 10 weight motor oil."

Solution

In September 1983, Mark Nickel, LE lubrication consultant, recommended changing to Almasol® High Temperature Lubricant (1250-1251). This lubricant contains an inorganic base and Almasol®, LE's exclusive wear-reducing additive. Almasol (1250-1251) is recommended where a nonmelting grease is required.

Results

Since converting to Almasol High Temperature Lubricant, John Black estimated a minimum of 90% reduction in bearing replacement in these two applications.

Stated John Black, "For every 10 bearings we used to buy, we now buy one. Since we have changed to LE's Almasol 1250-1251, there have been no burned bearings at all and



no loss of production in either the grain rolls or the pellet mills. Our grease consumption has been greatly reduced. We previously used one 420-lb drum of the commercial grade lubricant per month in these bearings and we still had failures, downtime and the associated repair costs that go along with it. With Almasol 1250-1251, downtime required to relubricate bearings has been reduced by a like figure.”

As an example of how this reduction in consumption occurred, we refer to the 200 hp California pellet mill. The die rolls were greased every two hours with 18 pumps of the commercial grease. With LE’s Almasol 1250-1251, after a six month evaluation, John Black decided that four pumps every 5-1/2 to 6 hours was more than adequate.

The pellet mills are pelletizing very hard materials, which include almond hulls, corrosive urea and a variety of mineral feed supplements. Steam is used to heat the mash. The steam combined with the extreme pressure of forcing the mash through the dies elevates the bearing temperatures to well over 250°F (121°C).

In 1986, a total of only three bearings were replaced in the two California pellet mills, which were using LE’s Almasol High Temperature Lubricant. These bearing failures were not related to the lubricant, but were replaced due to defects in the bearings. Prior to using Almasol 1250-1251, over 30 bearings would be used, often the result of catastrophic failures while in service.

Bearings on the grain rolls are now reused when the rolls are recorruated. The bearings are completely washed and inspected at the time of recorruation and a written report is issued by the firm used to recorruate the rolls. Prior to converting to LE’s Almasol High Temperature Lubricant, this same company determined that replacement of these bearings was required after each recorruation since the bearings were too worn for reuse. These bearings are 3-1/2” inside diameter by 7-3/4” outside diameter by

4” wide, double tapered roller bearings and cost approximately \$350 each. As one can see, this outstanding performance represents a considerable cost savings. They are now able to run four recorruations before bearing replacement is required.



Since mid-1983 the savings are conservatively estimated to be \$1,200,000 in parts alone. Labor and downtime are estimated to be four to six times the parts cost. Bearing life has been increased at least four times, and in some cases over 10 times. As final evidence of LE’s value, J. D. Heiskell & Company has reduced grease consumption from what would amount to over 25 drums of the commercial grade product in one year to only three drums of LE’s Almasol High Temperature Lubricant.

Another plus to LE’s Almasol 1250-1251 is the fact that by staying in the bearings, this greatly reduces the lubricant getting in the finished pelletized product so J.D. Heiskell’s product quality is enhanced.

Thank you to J.D. Heiskell’s San Joaquin Valley maintenance department, and to Mark Nickel, LE lubrication consultant (pictured), for providing the information used in this report.



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Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.