



Perma Automatic Lubricators

Associated Electric Cooperative Inc. – Marston, Missouri

Tripper Room Dust Collector

- Reduced preventative maintenance from once per week to once per month
- Eliminated need for weekly three-hour lockout process to lubricate the chain drive in the baghouse
- Freed up time for more housekeeping in the bunker room

Customer Profile

Formed in 1961, Associated Electric Cooperative Inc. is owned by and provides wholesale power to six regional and 51 local electric cooperative systems in Missouri, northeast Oklahoma and southeast Iowa. Together, these 57 AECI entities serve more than 875,000 customers. The AECI plant in Marston, Mo., has been an LE customer since 2009.

Application

The tripper room dust collector contains the baghouse that collects coal dust emission from the primary coal crusher in the power plant.

The plant shuts down once per week to accommodate preventative maintenance (PM) on the coal system. Workers have approximately three hours to perform maintenance before the coal bunker runs empty. For the tripper room dust collector, they must lubricate the discharge screw hanger bearings, fans bearings, rotary valve bearings and the chain that drives the air pulse unit.

Challenge

The PM on the chain drive was of particular interest to AECI because it took two-and-a-half to three hours to lubricate this chain each week due to the dusty environment, confined space, and the time-consuming lockout-tagout procedure that had to be done before entering the dust collector.

Another challenge was getting the right amount of grease in the screw hanger bearings during the once-a-week PM. The bearings often ran dry between grease intervals.



Sometimes the PM was not completed because of time constraints, resulting in equipment not being properly lubricated.

LE Solution

The local LE lubrication consultant, recommended the installation of perma® Star Vario automatic lubricators filled with LE's Almaplex® Industrial Lubricant (1275) on all the grease points. These units were set to discharge at consistent



intervals over a six-month period. He also recommended the installation of Star Vario lubricators filled with Multilec® Industrial Oil (6803) and equipped with a mounting bracket and brush to lubricate the chain. These units were set to discharge regularly over a one-month period.

The perma Star Vario lubricator is available in three different sizes, and can be purchased direct from Lubrication Engineers filled with the LE lubricant of choice. With volumes of 60cc, 120cc or 250cc, it is the perfect lubricator for different discharge volume requirements and periods. The user can select the discharge period (1, 3, 6 or 12 months) and lubricant dosage required by the equipment, and easily set and re-set the lubricator onsite. The operating status is constantly displayed via the LED function lights.

Results

The PM for the dust collector has been extended from once per week to once per month. The lubricators are checked once a month to ensure they are functioning properly. The

automatic lubricators eliminated the need for the weekly three-hour lockout process to lubricate the chain drive in the baghouse. This freed up time for plant personnel to focus on other activities during the dust collector shutdown.

The perma lubricator installation also resulted in a better, more consistent lubrication regimen. Maintenance personnel are able to get more housekeeping done in the bunker room, instead of performing the weekly dust collector PM.

After a month of operation, maintenance personnel reported that the chain oiler was doing a great job in a very tough environment.

Other LE Products Used

- Tote-A-Lube® storage tanks
- Oil Safe® containers
- Des Case® filters, filter carts and rebuildable steel breathers

Thank you to Craig Phillips with AECL and to the local LE lubrication consultant, for providing the information used in this report.

Perma® is a registered trademark of Perma-Tec GMBH & Co. Almaplex® and Multilec® are registered trademarks of Lubrication Engineers, Inc. Tote-A-Lube is a registered trademark of Fluidall, LLC. Oil Safe® is a registered trademark of Fluid Defense, LLC. Des-Case® is a registered trademark of Des-Case Corporation.

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

SIC 4911
L170793 12-10