Hydrotex
Your Lubrication Solution Partners®

Blower Oil Reduces Energy Usage and Costs

In 2009 and 2010 Hydrotex® worked with a large milling operation to develop Energy Saving Hydrosynthetic® Blower Oil. It provides reduced energy costs, extends lubricant lifecycles and reduces waste in pneumatic conveying rotary lobe blower applications. A major concern was the performance and downtime of the positive displacement blowers used to transport product throughout the mill. Blower downtime is very costly and repairs are expensive.

Using the Hydrotex Lubrication Management Process, energy studies were completed on 32 blowers in the mill with results averaging decreases of $700 per unit in annual energy costs. The mill's Corporate Engineering Department reviewed the study and determined this single mill had reduced the annual energy consumption by 137,000 kWh or 6%. The savings is enough to provide energy to 10.7 average American homes per year.

Historically, the mill changed blower oil based on an average 90-day maintenance schedule. With the introduction of the Hydrotex blower oil and an Oil Analysis Program the majority of applications extended drain cycles to once per year; the average unit operating temperature was reduced by 22%. In addition, the mill reduced blower waste oil by 72 gallons annually.

Since implementing the Hydrotex Lubrication Management Process plant-wide, the mill has achieved a 70% reduction in annual lubrication consumption, improved productivity and decreased maintenance and downtime. All lubrication practices were implemented using existing maintenance time allocations and manpower. The cost savings has more than offset the total annual cost of lubrication for the mill.

The mill was presented with a corporate sustainability award based on these changes and the implementation of the Hydrotex Lubrication Management Process.

By extending this program to the other milling facilities, the milling operation estimates a realized energy reduction of 2,568,750 kWh per year or the equivalent energy to power 201 average American homes. The savings from increased energy efficiency and improved operating rates for over 400 blowers in the milling operation is approximately $420,000 annually. Additionally 1,650 gallons of waste oil are eliminated each year.

Working in collaboration, the milling operation and Hydrotex developed a successful and sustainable Lubrication Management Process that is now implemented across all milling locations.

Typical Positive Displacement Blower

Blower Room

Approximately 2,568,750 kWh of conserved electricity, resulting in an Indirect Carbon Footprint Reduction of 4,067,524 pounds of CO_2. The amount of electricity saved is enough to power the needs of 201 homes for the average American family for one year.[1] Additionally 1,650 gallons of waste oil was eliminated each year.

The US Department of Energy under Resource Conservation Hierarchy lists the most preferable option as, the prevention of waste; a considered action step is source reduction thru extended drain intervals.

The Impact Analysis total does not include savings from component failure avoidance, labor, and fluid disposal & filter costs normally incurred for fluid drains, which were realized but excluded from this analysis. Costs associated with filtering prior incoming fluid were also excluded.

[1]Savings are based on EPA's Greenhouse Gas Equivalencies Calculator, for details visit: http://www.epa.gov/cleanenergy/energy-resources/calculator.html Actual realized CO2 reduction may differ based on fuel mix used by the generating facility.

For Additional Information, please visit: www.hydrotexlube.com, contact your local Hydrotex Lubrication Consultant or call 800.527.9439.