**PRESS RELEASE**

Easing electricity costs through enhanced lubricants

***17 August, 2015:*** *In addition to keeping equipment in optimal shape, some modern-day lubricants also ensure lower energy consumption, faster clean-up, and less hazardous waste.*

When a piece of heavy industrial equipment fails, the cost is usually far greater than merely replacing damaged parts, states Filter Focus COO **Craig FitzGerald**. “The danger to workers and the downtime that the failure may bring can be crippling. Often, a machine breaks down from something as simple as a lack of lubrication, or use of a product not best suited to the equipment.”

Lubricants perform many essential functions within machinery, including cooling, transferring power, reducing friction, preventing wear and tear, and minimising deposits and contaminants. “With additive technology becoming more and more sophisticated, understanding the lubricant you’re investing in has become more important for operational staff and engineers,” he asserts.

While components break down and wear is inevitable with any machinery, using superior lubricants designed specifically for the equipment in use and the job at hand can prevent the wear of parts. According to FitzGerald, visual inspection of components coupled with planned maintenance and a log of when a machine’s parts were last lubricated is key to keeping costs down and efficiency up.

“As wear control specialists, Filter Focus’ involvement in implementing comprehensive lubrication and filtration programmes at sites in a number of industries has resulted in massive cost savings, as well as major reductions in energy and oil consumption, and less machine failures,” he says.

FitzGerald points out that contaminated lubricants dramatically reduce the life of lubrication system components. “What is little understood is that all lubricants are contaminated, it is just the levels of contamination that differ, and this is no different with brand new, unused oils. The role of lubricants in contamination management is critical, as abrasive dust and wear particles constantly build up in the machinery, regardless of the preventive measures taken. This highlights the need for effective lubricants and micro-fine bypass filtration as an essential part of the maintenance programme.”

Scoring and pitting of metal components in high-stress parts of industrial equipment increases the risk of operational failure and downtime, and FitzGerald indicates that a high performance lubricant can help ‘heal’ the gear surface.

“With open gears, for example, high film strength and film thickness of the lubricant redistributes the load over the surface area of gears. This redistribution of load ultimately evens out to a point of equilibrium and results in a healed gear appearance, where smaller pits often close up completely.”

Large open gear systems at mines, power and cement plants have been using antiquated lubricants, causing a loss in production and increase in energy consumption. This performance data has been regarded as normal and acceptable, hence the continued use of asphaltic grease. “High pollution as well as build-up of hardened lubricants in the roots of the gears made housekeeping an ongoing issue,” FitzGerald adds. “With advances in lubrication, wear protection of gears has risen as dust and slurry contamination can no longer penetrate the lubricant film thickness, cutting component replacement and downtime costs immensely.”

**Lower energy consumption**

FitzGerald mentions several cases where energy usage of large mill motors at industrial plants was measured prior to and again after conversion by Filter Focus. “The savings in electrical consumptions were significant. When you consider that the annual electricity bill for open gear applications is one of the largest operating costs for industrial plants, the temperature reductions we achieved during the conversion process – 15 °C lower – is incredible. Lower operating conditions point towards reduced friction and better usage of available electricity. Essentially, we provide the customer with the ability to do more with less, driving towards improved plant efficiencies.”

Faced with ever-increasing electricity costs, FitzGerald cites a case study where a mine’s mill drive motor historically operated at between 5,6 MW and 5,4 MW. “After conversion, results suggested a reduction to between 4,8 MW and 5 MW. This kind of saving (600 kWh) adds considerably to a company’s bottom line,” he continues.

The reduction in costs doesn’t end with energy, though. “When we converted a ball mill to an enhanced lubricant, we safely reduced lube consumption from 800 kg per month to only 80 kg per month. That’s a 90 percent reduction in usage and 8 640 kg less lubricant to dispose of every year. The saving on lubricants can be easily calculated in rands and cents, but the environmental responsibility in figures like these is immeasurable,” FitzGerald reveals.

A recent project has seen Filter Focus provide Sasol Synfuels with a production increase of 18 percent, while also reducing operating and lubrication costs. FitzGerald states that it is about time that customers start implementing proven technologies and eliminating wasteful outdated practices.

With the enhancements in lubricants performing a variety of functions per piece of equipment and project, FitzGerald stresses that it’s vital that customers know exactly what they’re buying and what each lubricant brings to their bottom line. “Most importantly, Filter Focus provides a faster, safer clean-up process, higher production, lower energy consumption, while producing less hazardous waste. These are vital aspects of environmental responsibility and compliance,” he concludes.

***Ends***

**Notes to the Editor**  
To download hi-res images for this release, please visit <http://media.ngage.co.za> and click the Filter Focus link to view the company’s press office.

**About Filter Focus**  
Filter Focus SA (Pty) Ltd was formed in January 2002 with the aim of establishing the concept of combination filtration and eliminating contamination related wear and failures in heavy industrial equipment.

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