Smooth operators

Properly applied and maintained lubrication keeps equipment running for longer. Louise Davis explores how the latest lubricant products can reduce operational costs as well as friction

Equipment lubrication may not be the most glamorous facet of industrial operations, but its importance should not be underestimated. Oils, greases and lubricants play a critical role in keeping the expensive machines they are applied to running efficiently, for longer.

Ian Bowmer, lubricants manager at the UK distributor, Antala, describes lubrication as "the lifeblood" of all machinery and equipment. "Without the correct lubricant, most rotating or moving components would quickly and catastrophically break down, leading to significant costs for repair and replacement," Bowmer says.

But it is not a case of simply 'lubricating' or 'greasing'; Bowmer highlights the importance of using the appropriate lubricant for a specific application. "Many parameters must be met to ensure the proper lubricant is recommended – such as operating environment, humidity or water, temperature (low as well as high), load and wear on the application, cleanliness, and environmental concerns as well as the legislative requirements found in sectors such as food manufacturing or the water industry," he explains.

"Without the correct lubricant for the application you will find potential damage to surfaces – such as scoring and scuffing, smearing, peeling and, eventually, catastrophic failure. According to Aberdeen Strategy Research, the average cost of manufacturing downtime is US$260,000 per hour."

Bowmer advises that plant managers can help to avoid downtime by taking a proactive approach to lubrication – one that recognises its importance in the bigger picture. He comments: "It is vitally important that lubricants are seen as a component within the machine or assembly instead of a commodity.

"A lubricant does much more than simply lubricate. A good lubricant's role is also to reduce friction; prevent wear; protect against corrosion; control or reduce temperature; displace or repel water; prevent contamination; and provide a seal.

"So, plant management should see lubricants as an integral part of their design and maintenance programmes and be proactive with lubrication applications rather than reactive. Lubrication is a serious part of planned maintenance and reliability engineering."

PICK PERFECT

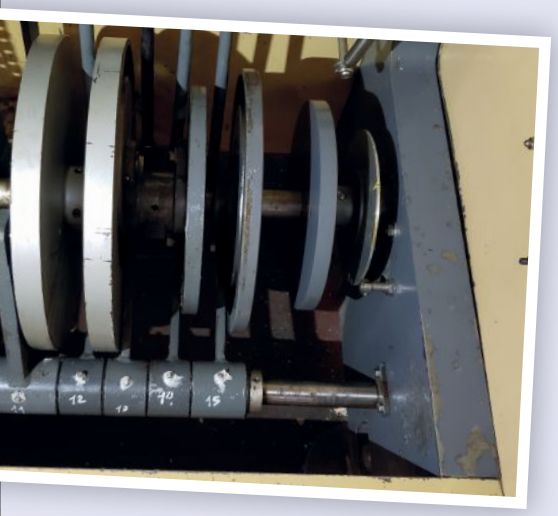
As much as plant managers need to take lubrication seriously, the solutions providers in this field also need to acknowledge and communicate that this is not a 'one product fits all' category.

Antala offers a range of brands from leading manufacturers, and Bowmer has observed a number of ways for product providers to stand out. "Differentiation can be down to several factors. The quality of the lubricant is obviously significant, but the technical support, stock holding, training, audit compliance, regulatory support, diversity of product offerings, and route to market are also important," he explains.

"For example, as part of Distributors Group Europe (DGE), we can offer the same brands – such as Molykote, Krytox and Jax – across the whole of Europe, so working with multi-nationals makes the supply chain considerably easier to manage. And as our brands are all manufacturers, we can also offer excellent technical support including laboratory testing of products and applications to ensure the right product is used in the right place at the right time.

"This is very evident with the Molykote and Krytox ranges, where applications can be highly technical and the use of laboratories at the manufacturing plants to run tests and trials is extremely beneficial to the end user."

Bowmer also points out that Antala's own team plays a valuable role in educating plants on how to use to the best product for their task via the



Left: ***Rotating or moving equipment demands a serious approach to lubrication application and maintenance***

Below: ***John Sander, vice president of R&D, Lubrication Engineers***

technical support and services it offers.

He notes with over 50 years of experience – it provides hundreds of years of collective experience in lubrication and engineering.

Bowmer adds: "During a time when many of our competitors are reducing their external technical teams, we are expanding ours to meet the expectations and demands of design, technical and maintenance engineers with face-to-face meetings on-site, where the technical issues and applications are easier to discuss and resolve. This is especially important when you consider our target markets of rail, defence, aerospace, transport and future mobility, food and beverage, automotive, medical, and renewable energy."

GREASING THE WHEELS

Another person who fully understands the benefits that expert guidance can deliver to lubricant users is John Sander, vice president of R&D at the US company, Lubrication Engineers.

"We have always hung our hat on formulating and producing the highest quality, highest performance lubricants," Sander begins. "Several years ago, we became more than a lubricant manufacturer when we began emphasising a full reliability programme.

"We began offering a 'full circle' of reliability with products and services – such as breathers, lubrication systems, filtration carts, storage containers and more – to help our customers keep their lubricants clean and dry, further extending their lifespan."

Sander says the company is increasingly differentiating itself. He explains: "There are good lubricant distributors out there, but many of them just take orders and deliver products. Not us: we are at the customers' facilities and communicating with them on a regular basis, helping with their individual challenges and taking their entire lubrication programmes to higher performance levels."

Lubrication Engineers has also intensified its focus on sustainability – which is not an area that industrial lubricants have historically been praised for. Sander says: "We have a few environmentally acceptable lubricants (EALs) in our line, but more than that, we have focused on sustainability for years. Our lubrication products are designed to improve both lubricant and equipment lifespan.

"Anytime that happens, it decreases the equipment owner's total cost of ownership through improved equipment uptime and longer oil drain intervals.

Longer lasting lubricant means less disposal and decreased consumption of natural resources needed to produce the product. We educate our customers on these benefits and encourage them to share our focus on sustainable solutions."

Sander's colleague, Patrick Loe, technical services manager, also acknowledges the valuable role that lubricant experts can play in assisting equipment owners. "We consider many factors when helping our customers, but a full picture of the operating environment and the company's objectives is vital to making the best lubricant recommendation for any application," Loe states.

"Using the proper lubricant can reduce unintended downtime, decrease necessary labour, lower the total cost of ownership, increase electrical and mechanical efficiency, lower overall lubricant expenditures, and even eliminate equipment failure," he explains.

Loe reveals he and his team have been able to deliver tangible cost savings by understanding the user's application and their pain-points: "By recommending a high-quality lubricant optimised for the application, the subsequent improvements this leads to can generate valuable cost savings, sometimes even in the millions of dollars per year."

THE BIGGER PICTURE

Loe believes that lubrication should be at the core of all maintenance and reliability efforts, but he says that some plants do not fully understand the value of lubricants – they are treated almost as an afterthought.

"However, more and more companies now understand that lubricants can be a driving factor in success and profitability. A lot of money can be saved by using high-quality lubricants and by conducting lubrication monitoring," he reports.

Echoing Bowmer from Antala's earlier comments, Loe advises: "Lubricants need to be looked at as assets, not commodities." To be serious when it comes to equipment reliability, he says a thoughtful approach to lubrication monitoring should be adopted.

"Proactive maintenance is always better than reactive maintenance. Implementing something as easy as routine oil analysis can allow a company to identify and plan when maintenance efforts need to be done rather than waiting until there is a major problem or failure. Ultimately, an oil change or oil conditioning will almost always be more cost effective than equipment replacement and the associated downtime," Loe observes.