

## Q & A With Luis Guimaraes



**Luis Guimarães** is General Manager, Marketing, **Americas for Shell Lubricants**.

**Luis Guimarães** is General Manager, Marketing, **Americas for Shell Lubricants**. In his current role, Luis is responsible for the development and implementation of marketing strategy for consumer, transport, and industrial lubricants in the U.S. and Canada. Luis, who started his current assignment in Houston in January, 2008, began his career at Shell as an account manager for the company's lubricants business in Brazil. Since then, Luis has held a variety of responsibilities within Shell's Brazilian downstream business, including development of retail business, development and implementation of lubricants marketing strategy, and development of Shell Lubricants distributors. Prior to his current role, he served in London as Shell's global strategy manager for automotive, transport, and motorcycle lubricants. Luis also has held roles as partner and executive director of Webb Negocios On Line, where he was responsible for marketing, sales, procurement, operations, and strategic corporate alliances.

**Q: What types of general technological advances in industrial lubricants should plant managers be aware of?**

**Guimarães:** Companies are continually striving to get peak capacity out of equipment and increase production output. As equipment manufacturers improve their designs, it is important for lubricant suppliers to ensure that new lubricant technologies are available to meet the needs of not only the latest technology but the older designs as well. Specifications from industry bodies and equipment manufacturers are updated on a frequent basis- so we need to ensure our products continue to meet those changing requirements and stay true to claim.

When we look at hydraulic systems and gearboxes as an example, the size of these units has reduced significantly over the years, which places significantly more stress on the lubricant. With increased demand on equipment availability, operating pressures are increasing, again placing further demands on the lubricants.

Legislation can also change rapidly and may require operators to review their lubrication practices. Reducing environmental impact and ensuring compliance with food safety requirements are examples of areas where keeping up with new legislation is important.

Using lubricants that are based on older technology in new equipment may not provide the protection required for long component life or even equipment output. Not identifying the ideal product for machinery may compromise efficiency and equipment life, while increasing maintenance costs and downtime.

### **Q: How can these products help sustain and extend equipment life?**

**Guimaraes:** Any changes in equipment speeds, loads, or temperatures can cause a change in the type of lubricant that is required for the system. A lubricant developed with more recent technology may be recommended to handle the stresses of the system. ?

Newer products often provide sustainable benefits over previous generation products in the areas of extended oil life, reduced wear, improved bearing protection, reduced deposit-forming tendencies or tolerance to contamination. The benefit often also extends the life of the components (bearings, gears, filters, pumps) and helps reduce equipment downtime.

For example, Shell has recently introduced a synthetic-based compressor oil for rotary flooded screw compressors, Shell Corena AS, which may allow the oil life to be extended by up to 12,000 hrs, including in heavy-duty compressors operating in severe environments with high discharge temperatures and pressures, especially when used in combination with oil analysis.

### **Q: How can manufacturers expect to be affected by the increasing price of petroleum oil?**

**Guimaraes:** Crude oil has seen sharp increases in both demand and price in recent years. Prices of raw material, energy costs, and other MRO supplies in general have increased as well. Lubrication is an area where companies should seek to maintain their investment rather than look for lower-quality alternatives. Investment in quality lubrication can help keep other maintenance costs under control. Looking at the total cost of ownership rather than pure lubricants cost will help organizations choose the right lubricants for their business.

### **Q: What should manufacturers be aware of in terms of synthetic options? What types of advantages (and limitations) do these synthetics offer?**

**Guimaraes:** It is true to say that not all applications and equipment require use of a synthetic lubricant. We work with customers to identify critical equipment and applications that may most benefit from use of synthetic oils. Customers should realize also that not all synthetics perform the same way- there are many different options available, and the choice of additive technology used in formulating these fluids has a major impact on how they perform in service.

The main benefits of synthetic lubricants are improved viscosity-temperature characteristics for improved performance at operating temperature and greater resistance to oxidation or thermal degradation for cleaner systems.

In applications where the operating temperatures may be high, synthetic oils and greases offer a number of benefits. Synthetics provide an effective fluid film formation over the application temperature range. They also offer better oxidation stability to resist the formation of sludge and deposits, which in turn may extend not only oil life but component lifetime, and may help reduce downtime.

Synthetic biodegradable hydraulic oils offer oil life and performance benefits. Additionally, they can offer reduced environmental impact, possessing high levels of biodegradability and low ecotoxicity. Such products can find application in hydro-electric power stations, wastewater treatment plants, materials-handling environments such as ship loading, mining, off-road construction, and applications where the potential for environmental impact exists.

Synthetic food grade products offer the end-user a balance of high performance from use of a synthetic lubricant but also peace of mind, as they are suitable for use where there is potential for incidental contact with food or beverages.

Some synthetic fluids are designed to offer reduced flammability characteristics compared to mineral oils, and hydraulic fluids of the polyol ester (less flammable) or PAG type (fire resistant) help provide operators improved safety.

Synthetics have many of the same limitations that petroleum-based lubricants have where contamination is concerned. No matter what type of lubricant is being applied, keeping the lubricant clean and dry can be the best action for long fluid life. Prior to using certain synthetic fluids, such as ester- and, in particular, PAG-type fluids, compatibility with existing oil and system components (elastomers, paints, filter media) should be established to ensure no adverse effects occur during the change-over.

### **Q: In what ways can manufacturers partner with lubricant suppliers to more cost-effectively manage their maintenance programs?**

**Guimaraes:** The capability of lubricant suppliers to find solutions and cost savings opportunities varies. A good lubricant supplier should be able to perform a complete assessment of a plant's applications, processes, and procedures to highlight areas of improvement that can lead to a reduction on the overall cost of operation. Good suppliers then work with the company to implement the recommendations and monitor the improvement.

At Shell, we work closely with our customers to develop insight into their businesses. Some customers have very intense requirements and require a complete package including onsite maintenance, technical service, new technologies, research and development, and other services. Companies with multiple facilities often have very specific needs and depend upon reliable, 24-hour service. As downtime can potentially lead to lost revenue, it is important for plant professionals to identify the lubricants that meet the demands of their machinery and help keep them running efficiently.

Though not all plants require such extensive service, regardless of facility size, plant professionals should take advantage of the services lubricants companies can provide. As facilities are pressured to perform more efficiently with fewer resources, it is beneficial to work with a lubricants company that can help customers make the most informed lubricant decisions. By reviewing plant equipment applications and operating conditions, suppliers can develop customized lubrication programs that help facilities operate more efficiently.

A lubricants company can provide diverse resources that are not always at hand for most maintenance professionals. For instance, fiber optic video inspection can often save plants time and money by inspecting internal components without dismantling the equipment itself. Some suppliers can also do in-depth fluid and equipment analysis to help alert them to conditions that could lead to premature equipment failure.

### **Q: What misconceptions do your industrial customers often have about the role of lubricants in their equipment, and how do you address them?**

**Guimaraes:** Many industrial customers consider all lubricants the same or consider them a commodity product. However, there can be significant performance differences, even among lubricants that all meet a minimum performance specification. Further, it is important to highlight the consequences in the event that equipment fails. Not only is it important to highlight the cost of replacement costs and labor to replace failed components, but more so the impact on the bottom line due to loss of production in the event that equipment is not available. These costs are often more significant compared to the lubricant cost.

For instance, there are roughly 26,000 applications for lubricants in the United States, and each application requires specific performance from its lubricant. Base oil (mineral versus synthetic), viscosity, additive package, oxidation resistance, and thermal stability are just a few of the characteristics that must be considered when choosing a lubricant. But it is important to select the correct product for the application using expertise and knowledge of the potential problems that can occur and advising the customer on the most cost-effective solution.

Many customers also fail to see the benefits in using synthetic products, which can offer significant benefits in temperature reduction, energy efficiency (in selected applications), and extended service life. Again, it is important to show how the use of synthetics can help to reduce equipment-operating costs over the complete

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lifecycle.

Ultimately, selecting the right lubricants and applying them correctly can have a big impact on a plant's productivity and total operating cost. Lubricant companies can work with plants to help identify the ideal product for each application. Additionally, lubricant companies are capable of delivering value-added services that support maintenance and reliability professionals in their efforts to deliver superior results.

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