ETERMAR SAVES A REPORTED US$289,400 A YEAR BY REDUCING GEAR WEAR WITH SHELL OMALA S4 WE

TOTAL REPORTED ANNUAL CUSTOMER SAVING
US$289,400

Portuguese construction and civil engineering company Empresa de Obras Terrestres e Marítimas, SA (Etermar) is highly experienced in the marine and fluvial hydraulic works sector. Boom cranes are vital to Etermar’s operations. During essential maintenance, it was noticed that the main gearboxes on the booms were suffering from excessive wear. The challenge was to find a product that would lubricate gearboxes with complex metallurgies and offer extended drain periods compared with the existing products.

After Etermar and Shell Lubricants inspected the gears, Shell Lubricants recommended replacing the existing lubricant with Shell Omala S4 WE. Shell Omala S4 WE is an advanced, synthetic, heavy-duty industrial-gear lubricant formulated using specially selected polyalkylene glycol-based fluids and additives. It offers outstanding lubrication performance under severe operating conditions, including improved energy efficiency in comparison with mineral-oil-based products, long service life and high resistance to micro-pitting.

Switching to Shell Omala S4 WE oil has reduced gear wear and extended the oil-drain interval, thereby reducing costs for parts and labour, and crane downtime. Etermar reports annual savings associated with using Shell Omala S4 WE oil of US$289,400.

COMPANY: Empresa de Obras Terrestres e Marítimas
COUNTRY: Portugal
APPLICATION: Gearbox
SAVING: US$289,400 total reported annual customer saving
KEY EDGE: Shell Omala S4 WE
Shell Omala S4 WE is an advanced, synthetic, heavy-duty industrial worm-drive gear oil formulated with specially selected polyalkylene-glycol base fluids and additives. It offers outstanding lubrication performance under severe operating conditions, including improved energy efficiency, long service life and high resistance to micropitting.

**Applications**
- Enclosed industrial worm gear systems. Shell Omala S4 WE is recommended for industrial worm-gear reduction systems operating under severe conditions, such as high load, very low or elevated temperatures, and wide temperature variations.
- Extended life systems. The product is particularly recommended for systems where maintenance is infrequent or systems are inaccessible, for example, yaw gears in wind turbine installations.
- Other applications. Shell Omala S4 WE oils are suitable for lubricating bearings and other components in circulating and splash-lubricated systems.

Shell Omala S4 WE is not recommended for lubricating components manufactured from aluminium or aluminium alloys.

For highly loaded spur and helical gears, the Shell Omala G series oils are recommended.

For automotive hypoid gears, the appropriate Shell Spirax oil should be used.

**Performance features and benefits**
- Long oil life – maintenance saving. Shell Omala S4 WE is formulated to provide excellent oxidation and thermal stability, which extend lubricant life and resist the formation of harmful oxidation products at high operating temperatures. This helps to maintain system cleanliness over extended oil-drain intervals. This performance is recognised by Flender: a formal approval for 20,000 hours’ (four years) use at 80°C (bulk oil temperature) has been granted. Shell Omala S4 WE offers the potential to extend service intervals significantly compared with conventional industrial gear oils.
- Excellent wear protection. Shell Omala S4 WE is formulated to have excellent load-carrying capacity, which provides long component life even under shock-load conditions. It also has a high resistance to micropitting. These features provide benefits over mineral oil-based products in terms of gear and bearing component life.

**Specifications and approvals**
Shell Omala S4 WE is fully approved by Flender and Bonfiglioli. It meets the requirements of: David Brown S1.53.105 G; ISO 12925-1 Type CKE; and ANSI/AGMA 9005-E02 (EP).

**Value**
Etermar has reported an annual saving of US$289,400 associated with changing to Shell Omala S4 WE oil.

*The savings indicated are specific to the calculation date and mentioned site. These calculations may vary from site to site, depending on the application, the operating conditions, the current products being used, the condition of the equipment and the maintenance practices.