

CEMENT (USA)

GEARBOX LUBRICATION

Castrol Optigear® Synthetic 800/320*

COST SAVINGS: \$133,963

THE SITUATION

A large cement manufacturer was experiencing routine failures on their Raw and Finish Mill separator gearboxes (6 total). These drives are inside the mill building where temperatures are constantly high, especially in the summer months. The conventional mineral oil in use was not able to handle these conditions.

BEFORE

- Conventional ISO 320 mineral gear oil
- Failures on 3 to 6 gearboxes per year
- Oil changed monthly in an attempt to extend gear life

AFTER

- Castrol high performance, synthetic polyglycol gear oil
- Gearbox failures eliminated
- Oil usage reduced by 2X

THE SOLUTION

- Castrol assessed the conditions of these gearboxes and identified that the conventional gear oil was not suitable.
- A full synthetic gear oil was chosen to handle the high temperatures.
- The high viscosity index of the Optigear Synthetic 800/320 (VI=253) was well beyond the previous oil (VI=95). This equates to a much heavier oil film at elevated temperatures.
- Oil analysis was implemented in order to monitor the drives and extend oil life.

Optigear Synthetic 800/320 synthetic gear oil eliminates gearbox failures



RECOMMENDATIONS

Conventional mineral gear oils were designed only for gearboxes running under normal load and temperature conditions. In this case, the higher loads and temperatures could not be handled by the current oil, leading to frequent failures. Castrol engineers recognized the conditions and chose the proper lubricant for them.

CONCLUSION

Optigear Synthetic 800/320 provided better gear protection at the high temperatures of the mill building environment, eliminating failures.

The result was \$133,963 in total savings.



OTHER POTENTIAL APPLICATIONS

Castrol Optigear Synthetic 800 series are fully synthetic polyglycol gear oils. These oils provide an exceptionally low coefficient of friction and extremely high viscosity index for maximum protection under heavy loads and high temperatures.

Castrol, the Castrol logo and Optigear Synthetic are trademarks of Castrol Limited, used under license.

