

# Molub-Alloy OG 9002 Delivers Over a Decade of Successful Open Gear Lubrication

## CEMENT (USA)

### KILN OPEN GEARS

Castrol Molub-Alloy® OG 9002 Heavy\*

**Benefits: Long-term gear life**



#### THE SITUATION

A major cement producer was using a conventional, asphaltic compound for their kiln open gear lubrication. They were looking for a high performance option that would deliver lower usage and long-term life of the gears.

#### BEFORE

- Asphaltic open gear lube from Company M
- High usage
- Messy environment
- No confidence in ability to provide long life to gears

#### AFTER

- Molub-Alloy OG 9002 Heavy, high performance open gear lube
- **Reduced usage by 61%**
- Much lower mess
- Over 10 years of excellent open gear performance

#### THE SOLUTION

- Castrol Engineers chose Molub-Alloy OG 9002 Heavy due to its ability to properly lubricate the open gears in this challenging application.
- The slow speed, high load, and hot temperature require a high performance lubricant to deliver long gear life.
- Molub-Alloy OG 9002 Heavy has multiple levels of protection using the base fluid, EP additives, tackiness agents, and solid lubricants to provide maximum protection.
- After implementation, wear rates were very low with no gear failures due to wear or lubrication.

- **Great performance for over 10 years**
- **Over 61% reduction in usage**

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## RECOMMENDATIONS

Castrol Engineers worked with the plant to develop the optimum lube cycles for the Farval single-line series progressive lube systems (Kilns #1 & #2). Based on AGMA standards, the proper lube amounts, timer settings, and spray times were set to ensure ideal lubrication was achieved. Lube system inspection procedures and intervals were also established to guarantee long-term reliability.

*Data used to  
determine  
optimum lube  
system settings*

## CONCLUSION

Molub-Alloy OG 9002 Heavy was used for over 10 years (until plant decommissioning), providing outstanding gear performance, low wear rates, and much lower usage than the previous lubricant.

Kiln	Bull Gear OD	Face Width	Lubrication Amount (AGMA D-3)
Kiln #1	6.6 m	610 mm	~1.49 mL/min
Kiln #2	7.3 m	483 mm	~1.47 mL/min

# of cycles	Time	Output
5	10 min	1.64 mL/min
7	15 min	1.53 mL/min
10	20 min	1.64 mL/min

Recorded time for one rotation:	45 sec
Ideal spray time (1.5X rotation time):	67 sec



## OTHER POTENTIAL APPLICATIONS

Molub-Alloy OG 9002 Heavy is specifically designed for the challenging open gear applications found in cement, mining, steel, and other heavy industries. It will provide long-term gear life with low usage rates.

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