



Mobilgrease XHP™ 461 and Mobil Planned Engineering Services Help Steel Rolling Mill Save US\$ 61,000 Annually

Work Roll Bearing, HangZhou Renben Bearing

Steel Rolling Mill

Jiangsu, P.R.China

ExxonMobil customer since 1998

Situation

The mill used a multi-purpose lithium-based EP grease for lubricating the work roller bearing in the 3500 medium plate rolling mill. Much of the grease was removed by frequent washing. In addition, the grease would often become emulsified due to water vapour in the bearings. All these problems were affecting the mill's efficiency.

Recommendation

The ExxonMobil Lube Engineer conducted an on-site inspection and Elastohydrodynamic (EHL) calculations and concluded that frequent bearing failures were the result of water washout and inadequate oil film thickness. In May 2010, Mobilgrease XHP 461 was recommended to replace the grease that was in use.

Result

Since the implementation of Mobilgrease XHP 461, no bearing failures have been reported. Grease emulsification has also been eliminated. In addition, grease consumption has decreased by 60% as the re-lubrication intervals have been extended. Mobilgrease XHP 461 improved the lubrication of the work roller bearing and resulted in a savings of US\$ 61,000 annually. The benefits resulted from:

- Decrease of grease consumption by 60%
- Elimination of bearing failures due to improved lubrication protection
- Superb adhesive and water-resistant characteristics of Mobilgrease XHP 461 provided adequate lubrication and protection even in the presence of water



3500 Medium Plate Rolling Mill

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This Proof of Performance is based on the experience of a single customer. Actual results can vary depending upon the type of equipment used and its maintenance, operating conditions and environment, and any prior lubricant used.