

Water-soluble performance exceeds neat oil and improves HSE

Situation

A top Midwest US bearing manufacturer faced coolant turnover and HSE issues from misting and surface accumulation with straight oil in their central system. They sought a water-soluble fluid matching or surpassing straight oil's performance in surface finish, pitch diameter, and grinding speeds.

Solution

Castrol® Hysol® SL 36 XBB matched the surface finish quality of neat oil while maintaining grinding speeds at an 8% concentration, surpassing competitors unable to achieve similar results even at 30%. Castrol recommended monitoring with SmartControl to detect low pH conditions caused by tramp oil, ensuring real-time resolution without production interruptions.

Outcome

After demonstrating its effectiveness, two central systems switched to water-soluble Hysol SL 36 XBB, cutting coolant usage by 30%. This change notably reduced oil mist and HSE risks while meeting grinding performance targets. SmartControl's real-time monitoring swiftly identified and resolved issues, ensuring uninterrupted production flow.



Savings

- Reduction in coolant usage of 30% (cost savings \$108,122 annual)
- Improved plant HSE with reduction of misting, slips
- Relieved safety concerns using boron- and biocide-free coolant
- Improved fluid maintenance and faster problem resolution with SmartControl real-time monitoring