Success Case

Steel Mill

Saved over US$800,000 through early fault detection

Semeq Predictive Maintenance Monitoring

📍 **Petersburg, VA**

This steel mill operates high-demand production lines that rely on the reliability of large electric motors, gearboxes, and rotating equipment. Failures in these assets can result in costly spare parts, major production losses, and extensive unplanned maintenance. SEMEQ was selected to deploy an online predictive system capable of identifying early failure modes and preventing critical downtime.

Problem

Before partnering with SEMEQ, the plant lacked real-time visibility into electrical and mechanical degradation. Faults in motors and gearboxes progressed unnoticed until they triggered production interruptions, especially during peak operational periods. The mill needed a way to detect issues early and prioritize maintenance before failures became severe.

Solution

SEMEQ deployed a multi-technology predictive monitoring system using Axon HD vibration sensors, continuous electrical analysis, and Elektron MCA 460V for deeper motor diagnostics. Real-time envelope and spectrum analytics identified faults such as looseness, rotor bar cracks, and insulation issues. Weekly data reviews supported prioritization, enabling early detection of problems later confirmed during maintenance.

Results

Avoided Costs→ $ 800K   Prevented →20 hours of downtime

"SEMEQ's early diagnostics protected our critical assets and prevented a major unplanned shutdown."

- Operations Director, Steel Mill