USP&E CASE STUDY
WEST AFRICA | POWER PLANT

Optimising a Caterpillar MaK 16/32 HFO Generator is a critical step to ensuring reliability and performance in mining power plants. USP&E implemented targeted solutions, including turbocharger upgrades and workforce training, to address frequent breakdowns and improve operational efficiency. This case study demonstrates USP&E's expertise in delivering tailored energy solutions for demanding industrial environments.

BACKGROUND

Operational Challenges Leading to Caterpillar MaK 16/32 HFO Generator Optimisation

A mining company's power plant experienced frequent breakdowns of CM32 engines and ongoing issues with turbocharger inefficiencies.

CHALLENGES

Key Issues Impacting Caterpillar MaK 16/32 Generator Performance

The plant faced operational inefficiencies, including inconsistent spare parts availability, variable fuel and lube oil quality, and underperforming turbochargers. These issues resulted in high exhaust gas temperatures, clogged nozzles, unburnt fuel, and frequent engine downtime, causing damage and hindering overall plant performance.

SOLUTION

Optimising CM32 Engines and Turbocharger Systems

USP&E analysed plant operations to address breakdowns, guided by historical data. Improvements included optimising CM32 engines, turbocharger upgrades, spare parts management, and workforce training to ensure sustainable performance.

OUTCOME/TESTIMONIAL

Improved Reliability and Stable Electricity Supply

The improvements reduced downtime, resolved turbocharger issues, streamlined repairs, and enhanced plant reliability, ensuring stable electricity supply to the mine.

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