Prenscia Solutions

Efficient Predictive Maintenance for Operations through Deeper Knowledge

Challenge

To investigate and reduce high maintenance costs at a mineral mine processing plant.

Solution

Using historical and current performance data, a detailed software model was set up to analyze existing processes, and investigate potential maintenance scenarios.

Results

Data-driven inspection schedules were created based on predictive maintenance forecasts to optimize the frequency of maintenance and associated costs.

Using existing and historical data, mining operations and associated plant processes can be modeled with advanced analysis software from Prenscia Solutions. Our extensive experience in both software systems and services enables us to review and implement more efficient processes and more accurately predict operational and maintenance requirements for our clients.

nCode ReliaSoft OMNICON

The Challenge

Our client, a mining company, was operating a plant to process minerals produced from their mine. The plant, while relatively new, experienced high maintenance costs and repeated, chronic problems.

It appeared that there was no justification for the current inspection intervals for vessels and pressurized equipment or proposed improvement and expansion projects. Overall, the client lacked a systematic approach to reliability and maintenance optimization.

The Solution

Asset Reliability Monitoring and Root Cause Analysis systems were implemented for the site as well as training on methods and software. The systems were connected to an existing comprehensive Computerized Maintenance Management System (CMMS). We then collaborated with the client to model the process, including the reliability and maintainability of equipment, based on historical data and observed failures.

This model allowed us to investigate scenarios to improve future production and maintenance.

The Results

The process models provided realistic inspection schedules for vessels and pressurized equipment, based on risk and deterioration.

This allowed for evaluation of potential investments and expansion projects based on Life Cycle Cost analysis. Predictive maintenance forecasts indicate when to continue operations, or undertake immediate inspection and maintenance.

About HBM Prenscia Solutions

HBM Prenscia Solutions ensures customer success through value-driven solutions for product and process development, and operational monitoring. We are a multi-disciplinary team with expertise in failure analysis; predictive analytics and modeling for reliability, durability, and deterioration; asset health and usage monitoring; prognostics; development and testing of embedded software and electronics to deliver robust solutions to our global clients. Our team of engineers, analysts, software developers, data scientists, and program managers, many holding United States Government security clearance, are readily available to provide technical expertise and deliver value-driven solutions. For more information, please visit www.hbmprenscia.com/solutions

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