How leading mining companies are getting smarter with condition monitoring

Using proactive asset management to improve operations and profitability

Unplanned maintenance erodes profitability

- More than 60% of the leading 20 miners (early adopters) have already started their journey with site-wide CM systems

Proactive maintenance averts losses

- 2 to 3 times increase in mining yield, 12% increase in annual maintenance expenditure

- 4 weeks advance time on equipment usage and further enhances reliability

- 20% average savings on annual maintenance expenditure

Triggers to adopt condition monitoring (CM) systems

- Reduced unplanned downtime and unplanned maintenance

- Improved productivity

- Lead for maintenance

Critical mining applications for condition monitoring

- Fans: In joints while in operation.
- Slurry Pumps: Lubrication failure and excessive vibration.
- Ball/SAG Mills: Occurrence of bearing failure.
- Screens: Due to high vibration...subjected to excessive stress, a major reason for fan failures.
- Turbines: Thermal stresses result from oil...leads to structural damage and spring failures. Proper vibration analysis performed, and vibrations constrained under set limits can reduce this problem.
- Conveyers: Due to high vibration...of equipment malfunctions at mining sites. More than 60% of the leading 20 miners (early adopters) have already started their journey with site-wide CM systems.

Bently Nevada’s portfolio and expertise helps achieve productivity goals

- Incorporation of AI/ML

- Site-wide condition monitoring is the future of effective maintenance

Benefits of using AI/ML-embedded CM Systems

- Reduces the need for data processing, increases ROI with increased mining yield and optimized production

- Current implementation of AI/ML

- Incorporation of AI/ML

- Early Stage Implementation

- Considering Implementation

- Evaluating

- Currently implemented