ABB Ability™ Collaborative Operations for mining



Main benefits for the mining industry

- Quick response to customers requests
- Remote access to the customer sites by ABB experts
- Improved operational performance
- Increased asset availability, efficiency and productivity
- Higher profitability for mine owners

Collaborative services for mining



ABB Ability™ Remote assistance for grinding Call our system experts via ABB SupportLine to get rapid support. ABB engineers will guide you to solve the problem, or will troubleshoot directly using the remote secure connection.



ABB Ability™ Predictive Maintenance for mining Proactive asset management integrates and analyses condition data from all types of equipment used in mining to reduce maintenance costs and increase operational efficiency



ABB Ability™ Predictive Maintenance for grinding Easy access to GMD system parameters and visualization, taking a look into the past, considering real-time data in the present and assessing the future, remote expert recommendations to normalize operation and prevent possible downtime



ABB Ability™ Performance Optimization for mining Assess improvement potential based on current plant operation, stabilize and optimize performance with advanced process control, automate maintenance and performance reporting



ABB Ability™ Performance Optimization for hoists Hoist performance fingerprint (audit), customized, prioritized reporting, identify issues before they become problems, Insights to optimize operations



ABB Ability™ Performance Optimization for material handling Increase availability, efficiency and productivity of the entire bulk material haulage and processing chain using data



ABB Ability™ Performance Optimization for control systems Issues causing control system

performance deterioration are often difficult to diagnose because of their random nature. If left unaddressed, these issues may lead lo system failure and unscheduled downtime.

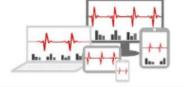


ABB Ability™ Performance Optimization for control loops Automation in PID loops typically has a half-life of six



ABB Ability™ Cyber Security Services A connected world increases the probability of cyber attacks. Smart, defense-in-

months, meaning that half of de all loops undergo some Id degradation in performance Re within their first year of cy deployment.

depth solutions allow to Identify, Protect, Detect, Respond and Recover from cyber threats.

The future of mining – Bringing equipment, systems and people together

Collaborative Operations expands the global network of ABB industry experts, digital technologies and knowledge base to improve the efficiency, safety and profitability of our customers. It leverages ABB's expertise in mining industry and delivers the true benefits of today's digital technologies.

The new Collaborative Operations Center in Vasteras, Sweden paves the way for ABB to develop its digital technologies for the future of mining – ABB Ability[™] Mine Optimize. Collaborative Operations utilizes the ABB Ability[™] platform and cloud infrastructure to securely integrate and aggregate data from multiple sites. ABB Ability[™] Performance Optimization for hoists is such a smart, automatic monitoring service that tracks the status of a mine hoist 24/7. It connects customers' hoisting systems with ABB experts and analyzes the hoist's condition and performance from the center. The service links hardware monitoring with secure remote access options and ABB's expert software from the center.