ABB Ability™ Performance Optimization for hoists

Lift your productivity to a higher level

ABB Ability™ Performance Optimization for hoists improves uptime, availability, performance and productivity of mine hoists by providing actionable information on Key Performance Indicators (KPIs). Data is automatically collected, monitored and analyzed to generate actionable insights that can increase production performance by 5% to 15%, identify safety hazards, and provide optimized maintenance scheduling.

Performance Optimization for hoists follows a proven three-step methodology: identify, categorize and prioritize opportunities to improve mine hoist performance. Performance data is collected and analyzed using advanced analytical tools provided by an ABB Ability™ edge platform. Data visualization then allows site engineers to identify any discrepancies and take remedial actions. Remote access to ABB experts is available which allows for faster identification and resolution of problems.

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<th>Features</th>
<th>Benefits</th>
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<td>Automatic, non-invasive data gathering</td>
<td>Increased availability and utilization</td>
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<td>On-site or remote access to data analytics</td>
<td>Improved performance through data-driven decisions</td>
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<td>Continuous monitoring by ABB experts</td>
<td>Timely identification of performance irregularities</td>
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<td>Configurable alerts provided when KPIs are</td>
<td>Accelerated problem identification and resolution</td>
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<td>outside site-specific thresholds</td>
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Key Performance Indicators (KPIs)

Improve hoist performance using actionable information on key parameters

Performance Optimization for hoists identifies, categorizes and prioritizes Key Performance Indicators (KPIs) for the following areas:

1. **Hoist normal operation**: To ensure optimal production, deviations of KPIs, such as hoist capacity flow (tons/hour), motor speed and current are tracked and analyzed. If the deviations exceed site-specific thresholds, alarms are triggered that notify site personnel and ABB experts, who are monitoring the system remotely.

2. **Safety brake system**: To ensure controlled retardation, brake capacity and function are monitored and emergency stops are analyzed.

3. **Hoist supervision**: To ensure timely actions, hoist supervision system is monitored for any deviations and alarms are triggered if deviations exceed limits.
Data Analytics
Monitor, analyze and improve hoist performance

1. Simplified view of data and analysis
   - Data visualization allows site and ABB service experts to view data associated with Hoist normal operation, Safety brake system or Hoist supervision.
   - Data analytics identify, categorize and prioritize KPIs based on severity and criticality.

2. Critical notification when it matters most
   To help prioritize issues that require immediate action, site-specific limits are applied to the targeted KPIs. If KPIs exceed limits, an instant alert is triggered that allows ABB experts to quickly assess problems.

3. Expert analysis to detect and resolve potential problems early
   To ensure optimal hoist performance, ABB provides monitoring and performance analyses. ABB experts evaluate the amount and degree of deviation, determine the statistical accuracy of the KPIs and find trends that predict possible irregularities. This results in continuous improvement actions that address potential problems early and increase asset utilization.
ABB Ability™ Collaborative Operations
Increase efficiencies of hoist systems across multiple locations

Collaborative Operations

Performance Optimization for hoists uses powerful analytics to extract valuable information from asset and process data at a customer site. The value of data analytics is fully realized when an expert determines the subsequent course of action. The capability to simultaneously look at performance data at multiple sites, plays a critical role in identifying improvement opportunities for the enterprise. Aggregating data from multiple sites and collaborating with experts in real-time, improves productivity and efficiency for mine hoists. ABB is helping mining companies across the world improve their productivity through ABB Ability™ Collaborative Operations.

ABB Ability™

Collaborative Operations is built on the ABB Ability™ platform; our unified, cross-industry, digital capability that extends from device to edge to cloud. This platform securely collects data from devices at sites, applies advanced analytics and generates actionable insights for customer operations at the site level. Furthermore, the platform aggregates data from multiple sites into the cloud so that asset and performance issues can be identified, categorized and prioritized for proactive improvement actions.