Underground mining services

HoistScan™

ABB's remote service for mine hoists

HoistScan[™] is a remote service for ABB mine hoist systems which combines hardware and remote monitoring with expert software allowing the analysis of abnormal conditions. HoistScan[™] enables the retrieval of information from the drive system, motor, hydraulics and brakes helping to diagnose, identify a root cause problem and resolve performance issues.



Mine hoist in Mosaic mine

HoistScan™ allows site engineers to collaborate with ABB experts on a continuous basis to achieve optimal mine hoist availability and improved performance. HoistScan™ monitoring tools along with available engineering and maintenance tools can be used to quickly identify sources of disturbances. An important aspect of mine hoist system monitoring is the observation of changes over extended periods of time, which allows ABB to suggest preventive actions to keep the mine hoists at peak performance. The HoistScan™ remote service includes three components: remote connectivity, the DataLogger monitoring hardware and ABB's technical experts available 24/7. It offers the following levels of remote services:

Remote troubleshooting

On-demand, 24x7 technical support and visibility allowing ABB specialists to connect to the system and investigate mine hoist operation issues as they arise, diagnose, and support the implementation of corrective actions.

Remote periodic maintenance

Scheduled quarterly analysis of archived data against established performance benchmarks and identification of potential performance improvement opportunities. Some corrective actions can be implemented utilizing the remote session. Associated reports are provided to summarize intervention and recommendations.

Continous monitoring

Continous asset monitoring with real-time alarms. Asset conditions exceeding pre-established thresholds trigger immediate response through the escalation process. ABB proactively investigates the source of the alarm conditions and provides recommendations to restore process performance.

Features

- Access to high level ABB expertise
- Automated diagnostic tools
- Enhanced commissioning, start-up and warranty support
- Data logging and event driven data capture
- Remote access to on-site system engineering and maintenance tools
- Mine hoist specific process modelling to detect abnormal operations

Benefits

- Faster detection of abnormal conditions which may impact health and safety
- Reduced maintenance costs due to improved visibility of the operating conditions of the hoist
- Reduced time to recover from system downtime
- Improved mine hoist efficiency
- Faster response time
- Resolution of fault conditions through the remote link will result in reduced costs



Helping you to improve productivity and make better decisions.

ABB site audit

ABB's mine hoist system monitoring takes a "holistic" approach to determine the best solution for each site. ABB engineers complete a comprehensive site audit to prepare for installation of HoistScan™. They will coordinate with site engineers to evaluate every element from the point of view of its influence on the operation of the entire system and its consequence on the mine hoists.

Architecture

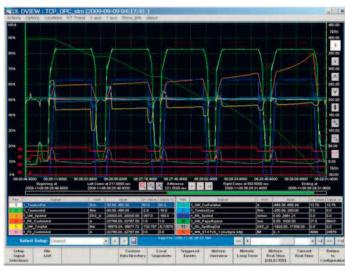
Remote service with HoistScan™ relies on fast data acquisition tools designed to address the specific monitoring needs of the complex mine hoist systems, including drives, hydraulics and brakes. This solution includes data processing capabilities to detect disturbances and help in the identification of the associated root cause(s).

The main data acquisition port for process signals collects the data over the industry standard communication protocols, processes them and writes into various forms of historical data files. The integrated (and running independently) high speed data acquisition subsystems for analog signals expand the equipment monitoring to microsecond levels.

Summary

With an installed base of more than 100 billion USD of automation products and systems worldwide, ABB is constantly working on ways to improve how these products are supported.

Remote service developments are a direct result of clients' changing needs. The HoistScan™ remote service provides real-time access to high-level technical resources, reducing the cost to our customers due to emergency field service deployment, system down time, and less than optimal system performance. The end result ensures that the best knowledge is in the right place, at the right time, to support the installed assets and ensure mine hoist performance improvements.



Monitoring mine hoist systems with ABB's HoistScan™

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