

ABB Remote Service for Mine Hoists HoistScan

HoistScan is a remote service for ABB mine hoist systems which combines hardware, 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 of problem and resolve performance issues

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. The observation of these change trends 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 diagnostic solution and ABB's technical experts available 24/7.

Levels of Remote Service Support

HoistScan offers the following levels of Remote Service.

- **Remote Troubleshooting:** On-demand, 24x7 technical support and visibility allow 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 identify potential performance improvement opportunities. Some corrective actions can be implemented utilizing the remote session. Associated reports are provided to summarize intervention and recommendations.
- **Continuous Monitoring:** Continuous asset monitoring with real-time alarming. Asset conditions exceeding pre-established thresholds triggers immediate response through the escalation process. ABB proactively investigates the source of alarm conditions and provides recommendations to restore process performance.

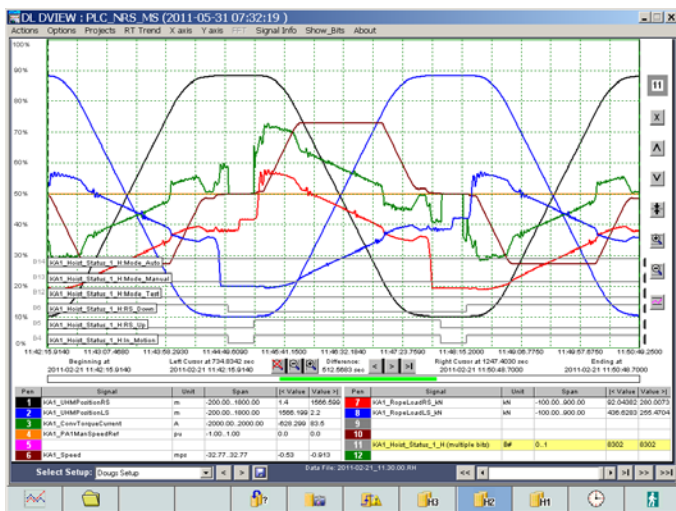


Features

- Data logging and event driven data capture
- Mine hoist specific process modeling to detect abnormal operations
- Automated diagnostic tools
- Access to high level ABB expertise
- Remote access to on-site system engineering and maintenance tools

Benefits

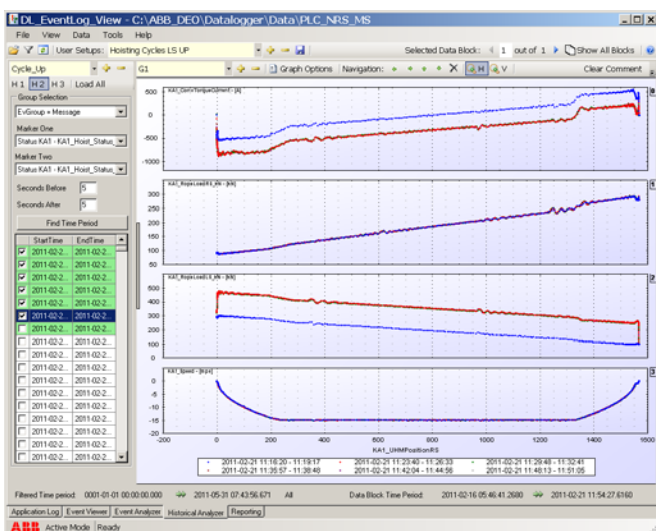
- Enhanced commissioning, startup and warranty support
- Faster detection of abnormal conditions which may impact health and safety
- Reduced maintenance costs due to improved visibility to operating conditions of the hoist
- Reduced time to recover from system downtime
- Improved mine hoist efficiency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



Monitoring mine hoist systems with ABB's HoistScan

Type	Group	Message
ON	EMS KA1 Grp1	KA1_Fault_Ems1_#113_CHECK_POINT_UHM_LEFT_DRUM
OFF	EMS KA1 Grp1	KA1_Fault_Ems1_#101_TRACK_LIMIT_RIGHT_DRUM P
OFF	EMS KA1 Grp2	KA1_Fault_Ems2_#202_WATCHDOG_KA1 P
E	EMS KA1 InTestMo...	TRACK LIMIT RIGHT DRUM
ON	EN	Description
OFF	EN	Event Code
OFF	EN	Code
OFF	EN	EventName
OFF	EN	EventGroup
OFF	EN	File name
ON	EN	File name
ON	EN	Help File
E	EN	Data Viewer Setup
ON	EN	Description:
ON	EN	Shift overtravel switch open - Headframe right drum compartment
ON	EN	The track limit switch is normally not reachable. If it has been operated without selection of the 'Track Limit Test', the switch is faulty, the hoist position is wrong, and/or the PLC parameters (i.e. top position, operating limit, overwind position, etc) are incorrectly set or relevant protections are disabled (bypassed).
ON	EN	Edit Description
ON	EN	Save
ON	EN	Close

ABB Hoist Scan : Knowledge repository for events



Load Cycle analysis of the Monitoring mine hoist systems with ABB's HoistScan

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.

For more information please contact:

ABB Inc.

10300 boulevard Henri-Bourassa
Montréal, QC, H4S 1N6
Canada

Tel: +1 800 HELP 365
(1 800 435 7365) Option 4

Outside Canada: +1 514 332 5350