



MINE HOISTS AND CABLES

THE CHALLENGE

Safely hoisting personnel and material is a crucial activity in a mine's life. Moreover, industry's growing interest in deep mining increases the importance of issues such as wire rope safety. Knowing when to remove a hoisting cable from service is critical, from both a safety and cost perspective.

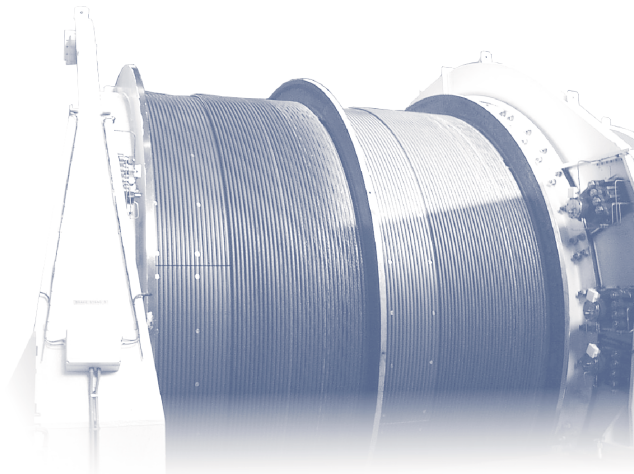
NRCAN CAN HELP

NRCAN's plays a strong role in mining safety and in providing sound science to support regulations CANMET-MMSL's research program brings together specialists in hoist inspection and non-destructive wire-rope testing. The focus of this area of research is to improve safety in underground mining, and to evaluate approaches that may provide savings in both capital and operating expenses. CANMET-MMSL also provides hoisting equipment inspection services.

OUR EXPERTISE

CANMET-MMSL has developed a range of expertise through its R&D activities:

- In-situ, non-destructive wire rope testing
- Wire rope research into "damage index" principles
- Inspection of mine hoisting equipment
- Safe criteria for retirement of wire ropes

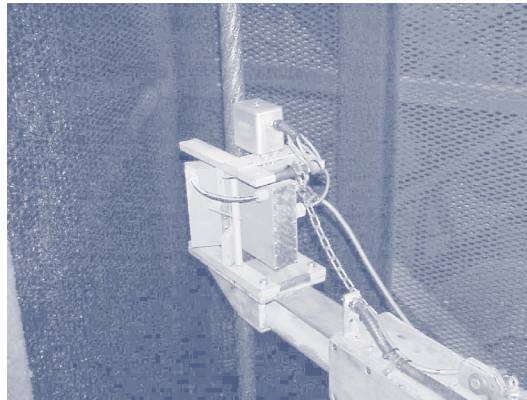


Hoist cable



SUCCESSFUL PARTNERSHIPS

- CANMET-MMSL has successfully installed a continuous non-destructive wire rope testing system on a skip rope in a northern Canadian mine. Objectives are to provide mine personnel with a means to test the rope's integrity on a regular basis, and to provide research data to test the "damage index" principle. As an immediate benefit from this research project, the mining company has hands-on, real-time monitoring of the rope integrity leading ultimately to enhanced worker safety and greater control in rope replacement scheduling.
- CANMET-MMSL is collaborating with a provincial association to provide technical support and inspection services to member mining companies that use hoists. A CANMET-MMSL technician tests and inspects each mine hoist, taking measurements (such as the deceleration rate of a hoist) and determining the hoist technical limits. The project has raised the overall quality control related to hoists and improved mine safety at these operations. It has also increased the association's technical knowledge in this area.
- A CANMET-MMSL report titled "A Review of the Technical Aspects of Using Wire Ropes for Hoisting in Mines", is being readied for publication. The report centers on the practices and technical issues that confront both mine operators and mine inspectors in some of the world's principal mining nations. CANMET-MMSL may soon undertake the role of developing a national standard for the operation and inspection of mine hoisting plants, if approved by the Canadian Association of Chief Inspectors of Mines. The development of a Canadian Code of Practice based on sound science principles, would be an important step towards the harmonization of mining regulations in Canada.



"Permascan", real time, non-destructive wire-rope testing

CONTACT US

CANMET-MMSL's goal is to help find sound, science-based solutions to operational challenges.

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