Mine Mechanization and Automation

Program objectives

The Mine Mechanization and Automation Program contributes to the development of innovative mining practices and equipment to increase underground mine productivity, worker health and safety and alternative or cost-effective energy.

Expertise

The main areas of activities include drilling and rock fragmentation, alternative energy for mining operations, noise and vibration abatement, underground communication and control systems, and hoisting equipment.

Key projects

Drilling and rock fragmentation

- improved mine productivity through continuous and selective mining related technologies
- initiative on Explosive-Free Rock Breaking technology
- experimental procedures for standardized evaluation and adaptation of mining equipment

Alternative energy for mining operations

- research and development (R&D) projects for developing and testing prototypes of hybrid diesel-electric and fuel-cell loaders
- computer-based tools to evaluate energy savings from improved technologies such as hybrid vehicles and automated ventilation control systems

Worker health and safety

- design and development of equipment and systems to reduce the exposure of mine workers to noise and vibrations
- participation in regulatory subcommittees on mine hoist safety and mine rescue
- monitoring of mine hoists and hoisting conveyances
- R&D agreements with universities on underground wireless communications

Contact Us

This research is part of CANMET-MMSL's broader plan to foster sustainable growth in Canada's mining and mineral industry. To work with us, contact

www.nrcan-rncan.gc.ca/mms-smm/tect-tech/index-eng.htm

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