telegrafia®

Comprehensive Warning System for Quarries and Mines

A Reliable Warning System as a Pillar of Safety in Surface Mines

Working in large surface mines, which often include tailings ponds or dams, is an extremely high-risk activity. **Hazards such as dam collapses, environmental disasters, planned detonations**, and sudden landslides can pose a serious threat to both workers and nearby residents.

A reliable warning system is a key tool for ensuring safety in such areas. Electronic sirens can **cover the entire mine site, tailings pond, and surrounding areas**, with their penetrating sound overpowering even the extreme noise of heavy machinery. In addition to acoustic signals, they also provide voice announcements and **visual warnings, such as flashing lights and signal boards**, ensuring clear and understandable communication in crisis situations.

In case of threats such as a dam failure or landslide, the system enables immediate evacuation, protecting the lives of nearby residents. Integration with detection systems allows for a rapid response to unforeseen events, minimizing potential damage.

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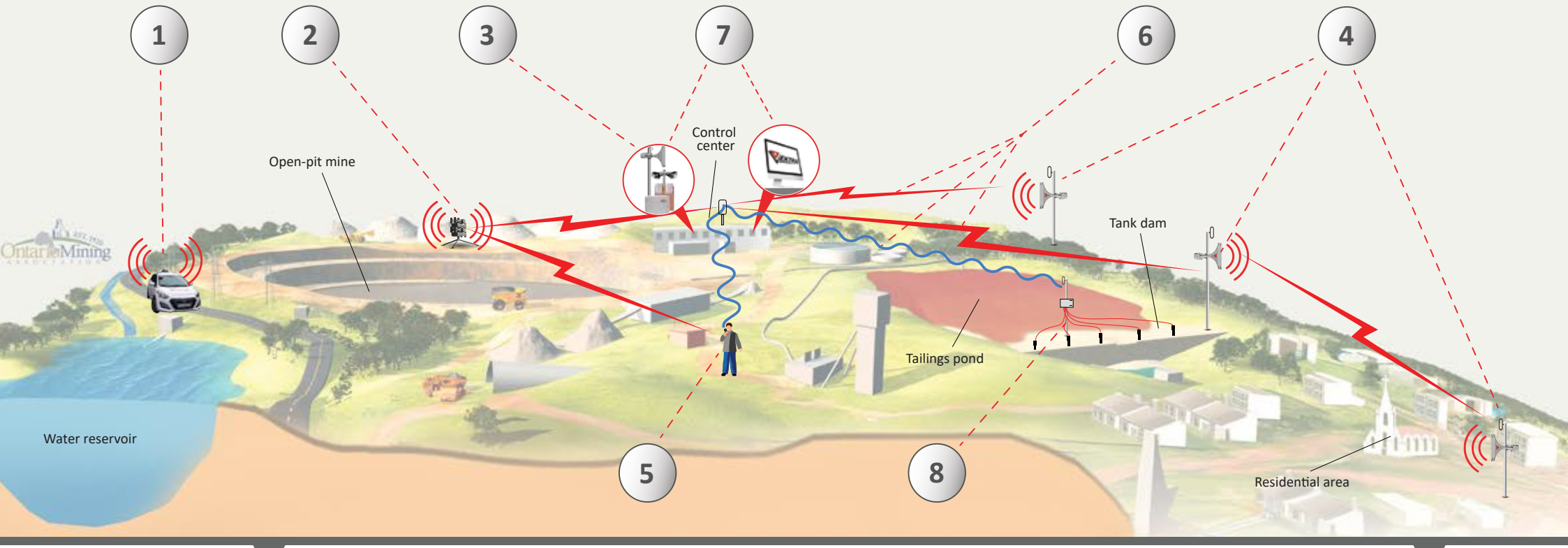

1 Pavian Car

The Pavian Car is a compact mobile siren that provides flexible and rapid warning. Mounted on a vehicle, it enables operational coverage of remote or hard-to-reach areas. It is independent of external power sources and, thanks to easy installation and operation, effectively complements stationary siren.

2 Portable Pavian Portable Siren

The Pavian Portable siren provides flexibility in acoustic warnings, as it can be positioned anywhere within the mine depending on current needs. Despite its compact size, it delivers high performance and supports multiple power supply options.

3 PA system Amadeo

An indoor public address system installed in quarry buildings. This system allows for broadcasting voice alerts inside mine facilities, effectively complementing acoustic and visual signals.

4 Pavian Electronic Siren

Pavian sirens automatically transmit warning signals based on critical sensor values, covering entire endangered areas, including mine sites and surrounding communities. They ensure rapid warning in case of danger and feature high intelligibility for evacuation, population coordination, and rescue operations. They operate independently of commercial infrastructure and can be powered by solar panels.

5 Notified Competent Person

Competent persons are informed via phone calls or SMS messages about emergency situations and are summoned to workstations for emergency response and rescue operations.

6 Communication Infrastructure

The communication infrastructure ensures instant communication between the control center and other components of the monitoring, warning, and notification system via digital or analog radio, TCP/IP, GPRS, or short-distance wireless connections. It also allows integration with third-party systems.

7 Warning and Notification Control Center

The control center, equipped with the OCP16 control panel or Vektra® software, collects, analyzes, and evaluates sensor and monitoring station data, with backup technology ensuring a high level of security. The system allows for the configuration of different situational scenarios based on threat developments. It can notify competent personnel at the first signs of a potential flood situation, send preventive warnings to residents via sirens in endangered areas, or automatically activate the warning system in case of immediate danger.

8 EMA Monitoring Station and Sensors

The EMA monitoring station collects data from sensors and transmits it to the warning control center, mobile phones, or directly activates electronic sirens, PA systems, or visual signaling devices. It helps prevent or respond proactively to risks such as landslides, poor air quality, fires, seismic activity, or dam failures.

Ensure maximum protection with our advanced warning system solutions.

A comprehensive warning system for mines and quarries is designed to provide complete protection while allowing customization to meet the specific needs of each location. With the support of a control center and Vektra® software, maximum safety and effective warnings are ensured across all hazardous zones. One of its key advantages is its ability to acoustically cover large areas and deliver clear alerts even in noisy environments. When integrated with advanced monitoring sensors, the system ensures immediate response to potential threats, enhancing overall safety and risk management.

Warning Technology in Quarries and Open-Pit Mines

The warning system utilizes a combination of modern technologies to ensure maximum protection for workers and nearby residents. **Pavian electronic sirens** provide reliable acoustic warnings, supplemented by visual signaling devices such as flashing lights, traffic signals, and LED displays. These elements guarantee that warnings are clear and understandable, even in noisy environments or visible over long distances.

The system can be integrated with third-party detection sensors, such as seismic, geotechnical, or meteorological detectors, allowing for automatic warning activation when threats are detected. This flexible approach enables seamless integration with existing technologies, ensuring the system is ready to respond to various scenarios.

All system components are centrally managed from a **control center**, equipped with **Vektra®** software. This advanced platform enables real-time monitoring of the entire system, management of individual devices, and rapid response to any emerging threats. Operators have a comprehensive overview of all critical zones, allowing them to efficiently coordinate warnings and evacuation procedures.

Why Invest in Electronic Sirens

- **Effective warning even in noisy environments -** The penetrating sound of sirens overcomes the noise of heavy machinery, ensuring that employees and residents are promptly informed about imminent dangers such as landslides, explosions, or dam collapses.
- **Automatic threat response -** Integration with third-party detection systems allows for the immediate activation of warnings when a hazard is detected. This feature ensures a rapid reaction to unforeseen events, minimizing loss of life and property damage.
- **Centralized management and easy operation -** The entire system is controlled from a central control center, equipped with modern Vektra® software, enabling real-time monitoring of all devices, efficient system management, and evacuation coordination.
- **Adaptability to different environments and conditions** - The system is designed to accommodate various types of locations. Mobile sirens (Pavian Portable / Pavian Car) offer flexibility and easy relocation, while stationary Pavian sirens provide permanent coverage for high-risk areas.
- **Integration with detection systems** - The sirens can work with external detection systems, enabling the immediate activation of warnings in the event of sudden incidents, enhancing the protection of people and property.

Telegrafia warning system

A comprehensive warning system for quarries and mines represents a cutting-edge solution for ensuring the safety of workers, residents, and property in the challenging conditions of the mining industry. By combining acoustic, visual, and digital technologies, it provides reliable protection and rapid response to unforeseen events.

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