

DETAILED VERSION OF MEDIA RELEASE

Reutech Mining: Improving mine safety as well as productivity

In recent times there has been much debate about mine safety. With many mining houses listing the safety of their people as their number one priority, one of the leading global mining houses states: “We are determined to create an environment which is fatality free, where everyone goes home safe and well after every day and every shift.”

Another claims: “Mining will always carry risks, but we’re working towards a future where that never means serious injury or loss of life.”

The South African Department of Mineral Resources states: “Mining is known as one of the most dangerous occupations in the world, with many contributing factors that cause fatalities and accidents in the mining environment. It is crucial to provide safe working conditions for miners. The Mine Health and Safety Inspectorate and the South African mining industry are committed to the principle of zero harm.”

Speaking at the Reutech Mining-hosted business breakfast held during the Electra Mining 2018 exhibition, Jan de Beer (executive manager of Reutech Mining), states that the majority of the role players in the industry agree that it is essential for mining to become safer—but it is also clear that productivity and profitability must increase. De Beer believes that it is achievable to increase both while creating a zero-harm environment, and that the increased implementation of modern technology can contribute to this drive.

Fourteen years ago, a major mining group requested Reutech Radar Systems to address the safety risks relating to falls of ground in open pit mines. Two years later, in 2006, Reutech Mining was formed with the delivery of the first-generation Movement and Surveying Radar (MSR). The company has since then assisted our global clients by providing advanced technology equipment that increases mine safety and supports an increase in productivity.

Reutech Mining delivers products that assist with the protection of the physical perimeter monitoring of mines, as well as other solutions that provide early warnings in terms of fall of ground in both surface and underground mines.

Physical perimeter monitoring

Mine sites are responsible for all people entering their sites, whether legitimate workers or illegal miners. Illegal entrants pose numerous safety risks, since they pose threats to legitimate workers as well as to equipment designed to keep legitimate workers safe.

Traditional perimeter monitoring systems include among others vibration detection wires that are localised to the fence only, as well as camera systems. Not only do cameras require continuous monitoring, but those are also affected by fog, dust, rain and low-light conditions.

Reutech Mining provides a range of modern advanced solid-state compact surveillance radar systems that allow for the identification of any moving object beyond the fence. These moving targets are tracked to establish the intent of the potential intruder long before he/she reaches the fence. Once a target is identified, an alarm is raised to warn the operator. Camera systems can also be slewed and cued to assist with the threat assessment. Multiple sites in South Africa, the DRC and Mozambique are using the Reutech PIMS system with great success.

Fall of ground: surface mines

One of the biggest risks in surface mines remains the fall of ground from big open pit slopes. Reutech Mining's MSR is its third generation slope stability radar. This flagship from Reutech Mining is used on six continents and in 27 countries, and is the fastest scanning real aperture radar capable of detecting submillimetre movement up to 4 000 m away from the rock face. The MSR also offers the most advanced alarm configuration options available on the market, and it operates in environmental conditions ranging from -50°C to +55°C. With data being available in near real time, the MSR is able to detect small and large areas moving on the mine slope—allowing its user timeously to evacuate equipment and personnel from potential fall of ground risk areas.

There are hundreds of examples where the MSR successfully provided early warning and detection of slope movements, resulting in prevention of loss of life or injuries.



MSR with Slope Vision fitted.

To assist with the distribution of MSR information, Reutech has developed its Multi-Purpose Platform (MPP) that can be configured as a WiFi repeater station to facilitate the transmission of slope stability data to the geotechnical office, or that can operate as an in-pit alarm system containing sirens, strobe lights or a pager system to warn employees working close to a potentially dangerous slope.



MPP in WiFi repeater configuration with Slope Vision fitted.

Based on user demands, Reutech Mining developed the Slope Vision system. This georeferenced camera system allows the user remotely to steer the camera system to view specific coordinates and to capture still images or create video recordings. The Slope Vision system can be utilised by a variety of resources on the mine's network to monitor operations. Once the MSR detects movement on the slope, the Slope Vision system can be commanded to explore the area of movement without compromising the radar scanning. This provides real-time visual inspection of dangerous slopes.

Reutech Mining now and into the future

South African-based Reutech Mining has been involved with the mining industry for the past fourteen years. During this period, it has been providing equipment to enhance productivity and improve safety on mines on six continents and in 27 countries. Global mining houses continue to select Reutech Mining as a preferred supplier, and its products have obtained certification from numerous international entities such as FCC, ACMA, ICASA, Industry Canada, CE, UL, UL(C) etc.

Reutech Mining is a division of Reutech (Pty Ltd) and part of the JSE listed Reunert group of companies.

Working hand in hand with the mining industry, Reutech Mining plans to expand its product range in 2019 to offer the mining industry more options to ensure that it keeps moving closer to the ideal of zero harm.