

Reutech Mining detects rising demand for long-range monitoring

Reutech Mining is a division of Reutech Radar Systems that develops and manufactures ground and naval radar systems. The company is a subsidiary of JSE listed engineering and technology firm Reunert Ltd. Reutech Mining supplies advanced geotechnical monitoring and surveying systems for surface mining operations worldwide. These systems contribute significantly toward improving mine safety, planning and increased production output.



The MSR

DEVELOPMENT OF THE MSR

The MSR was designed and developed at the facilities of Reutech Radar Systems in Stellenbosch, South Africa. The first system was delivered in 2006. The system uses state-of-the-art radar and surveying technology to provide highly accurate, real-time, all-weather surveying and slope movement monitoring – a critical element in the early prediction of slope failures in open-pit and open-cast mines.

Slope stability features include real-time detection of sub-millimetric slope movements, geographically referenced slope movements and advanced, dual user-defined alarm generation software to cater for all types of mining operations. It offers selectable scan speeds and users are able to configure high-threat areas and exclusion zones. The system also provides full recording and playback functionality. The MSR can effectively operate up to a distance of 2,500m and perform under extreme weather conditions. It can withstand temperatures varying from -30°C to +55°C, extreme dust environments, wind speeds of up to 100km/h and rainfall of up to 60mm/h.

Application of the MSR in mining

The MSR was designed specifically to operate reliably under harsh mining conditions and provides fully geo-referenced data accurately, which in turn allows on-system integration with standard digital terrain maps (DTM). This enables the system to function "blindly" as it were,

completely unaffected by light or atmospheric conditions. Data regarding the different digital model layers on a site can be imported to allow correlation of radar-based displacement data for specific material types, joints and faults located on the mine slope. These features ensure accurate monitoring and facilitate rapid response to any anticipated slope failure. Early detection of slope instability ensures that people and expensive equipment can be evacuated from problem areas safely and timeously.

Over the past 24 months, the MSR systems have had a global average operational availability of more than 98% without the requirement of having full-time technicians on any mine site.

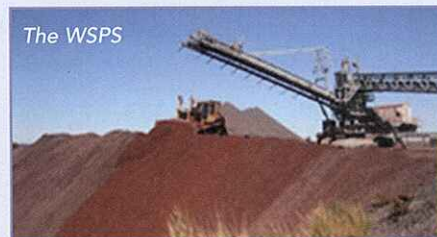
Markets & Support

The MSR is the most advanced slope monitoring system available in the global market today and is used at mines across the globe. Products are supported worldwide by local agents and a centralised full-time call centre.

MSR now CE-Compliant

As a part of recently expanding its global presence, Reutech Mining subjected the MSR to severe scrutiny by an independent facility to ensure compliance to all applicable European Union standards. The company has now been authorised to use the coveted CE mark on all models in the MSR range. This again proves that Reutech continues to ensure that its products are and remain not only compliant to the relevant standards but more importantly safe for application by our clients.

The MSR has been approved by the FCC in the US.



The WSPS

WASTE SPREADER POSITIONING SYSTEM

Reutech Mining and Stone Three Venture Technology successfully collaborated in the delivery and deployment of the first Waste Spreader Positioning System at the Sishen iron-ore mine in the Northern Cape, South Africa.

The system ensures the safety of the operator by alerting him if the waste spreader moves too close to the edge of the waste heap. In addition,



The SPC

the system provides protection to the waste spreader which is achieved by calculating a safe zone on top of the waste heap that provides the waste spreader with the ability to move around safely on the waste heap while distributing material.

NEW SELF-POWERED CONTAINER (SPC)

The SPC is a multi-purpose, fully customisable sealed container unit used in cases where sensitive instruments need to be protected against the elements.

The system can remotely monitor and control all hardware housed in the container and also includes a fully customised Solar Power System. Reutech Mining now offers solar energy solutions for remote operations or areas where electricity is required but unavailable.

WHAT DOES THE FUTURE HOLD?

As mines grow deeper and steeper to ensure the more cost-effective extraction of ore, the demands for slope stability monitoring is ever-increasing. Reutech Mining embraces the challenge to create systems which will offer detection at a longer range and increased reliability, which in turn will guarantee improvement of mine safety and increased productivity.

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