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MineARC's GuardIAN Remote Monitoring & Diagnostics for Refuge Chambers

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PARIS- 15 November 2017

Title – Speaker + LOGO



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Stakeholders

OEM: MineARC Systems

Head Engineer: Daragh Quinn (MineARC Systems)

Software Engineer: Mitchell Pontague (MineARC Systems)

Electrical Engineer: David Pescott (MineARC Systems)



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MineARC Systems

MineARC Systems, established in 1999, has been a manufacturer and supplier of emergency refuge systems to the tunnelling, underground mining and chemical processing industries for over 15 years. With five offices across the globe and sales to over 50 countries, MineARC is the world leader in this niche area of manufacturing expertise.





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GuardIAN Remote Monitoring System

- Released in September 2016
- Designed to provide real-time monitoring, communication and diagnostics of refuge chambers
- Provides the confidence that an operation's fleet of refuge chambers are emergency ready at all times
- Can be integrated with other site technology
- Reduces operational costs
- Improves on-site safety





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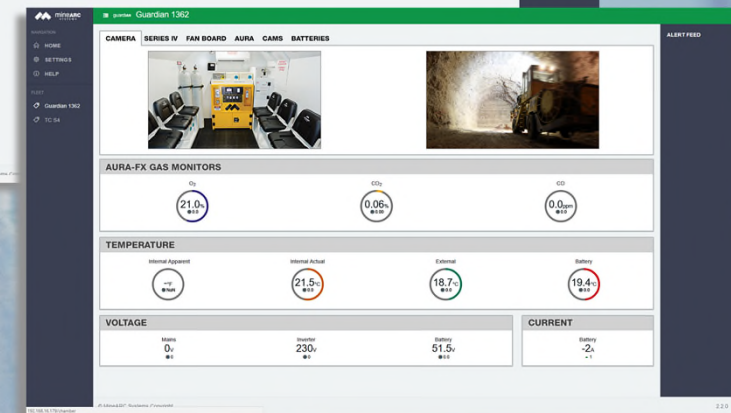


GuardIAN Remote Monitoring System

- The secure online interface is hosted on an internal server within the refuge chamber - no client software installation is required
- All diagnostics and real-time monitoring are accessible through a secure, locally hosted webpage
- The online interface dashboard features a summary of the entire refuge chamber fleet
- Ability to drill down to a detailed report of each chamber

Chamber	Alarms	MA Number	Type
Guardian ELVP	0	004	Series 4
TC TEMP	2	005	ELVP
TC 73	0	0056	Series 3
TC 54	0	1362	Series 4

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GuardIAN – Major Features

Refuge Chamber Monitoring

- Internal video monitoring is provided by a remote controlled, motion activated GuardIAN IP camera
- Motion detectors will notify GuardIAN to send an email notice to designated staff with a still image alerting them to chamber usage
- Live video streaming can greatly assist in evacuation planning during an emergency





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GuardIAN – Major Features

VOIP Video Phone

- To assist occupants during an emergency or safety drill, GuardIAN equips refuge chamber with a VOIP video phone
- Facilitates face-to-face comms between the refuge chamber and the surface
- Improves psychological well-being of chamber occupants during an emergency





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GuardIAN – Major Features

System Monitoring, Fault Diagnostics

- MineARC's refuge chamber control system links directly to GuardIAN, streaming real-time system data to a surface control room
- Data includes automated system checks, fault logging, system diagnostics, gas monitoring, internal & external temperature measurements, atmospheric integrity and system activations





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GuardIAN – Major Features

Multi-Device Interface

- GuardIAN's secure online interface is hosted on an internal server within the refuge chamber
- Easily accessible from any computer, tablet or smartphone
- The interface enables the user to monitor their full chamber network status on one simple menu screen





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GuardIAN Remote Monitoring System

The GuardIAN Remote Monitoring and Diagnostics System is the first of its kind in the world; making emergency refuge safer and more reliable than ever before.

Due to this, our clients can be confident that a MineARC TunnelSAFE refuge chamber is the safest, most advanced system of its kind.

