

Assmang's Black Rock Mine Expands Simulator Fleet to Further Improve Operator Safety and Productivity

10 March 2015

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Assmang's Black Rock manganese operation in the remote Northern Cape province of South Africa is expanding its training simulation capacity to increase safety and productivity levels. Black Rock's training team recently completed factory acceptance testing of their new CYBERMINE simulator for an Atlas Copco 235-H bolter at global training simulator provider ThoroughTec Simulation.

"We have a big need for operators that know how to use this bolter safely and efficiently," says Gideon Hayward, HRD Manager at Black Rock Mine Operations. "Operators of the 235 need to know how to support the hanging walls correctly to prevent potentially fatal rock falls." Black Rock has seen a reduction in Lost Time Injuries (LTI) since moving over to the advanced 235-H bolter, of which they have around 20 in their fleet across their Gloria and Nchwaning 2 and 3 mines. Now they want to use their latest CYBERMINE high fidelity simulator to improve upon these safety and efficiency levels in a cost effective way. Black Rock now boasts five CYBERMINE simulators across a range of underground equipment, including complex drill rigs, scalers, ADTs and LHDs.

Safer, more advanced equipment is only as good as the operator. "We need to ensure that our operators follow correct operating procedures when handling the equipment and by using the simulator we are able to achieve that," says Hayward. The simulator will monitor functions such as colliding the boom with the face, drilling without flushing, inserting the incorrect amount of resin and score the operator on their performance.

"It costs nothing to damage the machine during a simulation exercise," says Willie Koekemoer, Black Rock's Training Facilitator. "It's a cheaper environment to make mistakes." For example, damage to certain components on the bolter can cost tens of thousands of rands a day and it also means the bolter is taken out of operation. "We obviously want to prevent this from happening, so we'll use the simulator to show the operators where they're going wrong without using an actual bolter and it's in a safe environment," says Koekemoer.

New bolter operators at Black Rock will be required to use the simulator extensively before going underground. "There will also be annual refresher training for every operator," says Hayward.

ThoroughTec's CYBERMINE simulator system is now in its fourth generation. Every mining simulator features a simulated cab, a highly realistic replica of the actual mining equipment, with fully functional simulated instruments and controls. The replicated cab is mounted on a motion platform capable of imparting up to six degrees of freedom and is surrounded by a full 360° panoramic, high-resolution



projection display system with surround sound audio. Control of all aspects of training and evaluation is exercised in real time from an advanced instructor station.

ThoroughTec is able to simulate any machine from any mining OEM, surface or underground, and has the widest range of simulator cabs in the industry.

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About ThoroughTec Simulation:

The team at ThoroughTec Simulation has been designing simulator based training systems for over twenty years. During this time the company has grown into one of the world's leading training simulation organisations, supplying the mining, construction and military sectors.

Providing Operator Training Systems and Tactical Training Systems for a range of vehicles and applications, ThoroughTec is the de facto supplier of simulator systems to the South African Military as well as supplying a number of European militaries. This military engineering has been utilised in the development of CYBERMINE mining equipment simulator systems, elevating them above competitors through military grade quality, reliability and low cost of ownership.

ThoroughTec's range of CYBERMINE mining simulators is the broadest in the industry, encompassing all aspects of both surface and underground mining operations for hard and soft rock and capable of replicating a mine's entire working fleet from load and haul through to the most complex production and ancillary equipment. CYBERMINE mining simulator systems are designed and engineered to make mines safer, more productive and more cost effective.

ThoroughTec's headquarters and R&D and production facility are in Durban, South Africa, with global sales and support subsidiary offices in Perth and Brisbane, Australia; Santiago, Chile; Toronto, Canada; Salt Lake City, USA and Moscow, Russia.

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Product Pictures

(Higher resolution product pictures suitable for print are available upon request)