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Boart Longyear's GTUMX diamond coring bit

Solid to the core

MINERAL exploration services and products provider Boart Longyear has launched the GTUMX diamond coring bit as the latest addition to its Ultramatrix line.

The GTUMX is designed for shallow holes and conventional drilling for both exploration and geo-technical applications.

It offers the ability to drill faster with high penetration rates and to outperform existing bit technology in a wide range of ground formations.

Boart said the GTUMX was ideal for customers seeking an affordable alternative to their current bit selection.

The company plans initially to promote the AXT size GTUMX bit in South Africa, followed by additional bit size releases and expansions into the Asian Pacific, European and Latin American regions.

Boart Longyear global product manager Matthew Baird said: "Boart Longyear is excited to introduce the GTUMX diamond core bits into the marketplace, especially South Africa.

"The GTUMX bits are ideal for shallow holes and conventional drilling. This allows our customers to be very competitive with a bit of true value at a reasonable price," he added.

Boart said the GTUMX diamond coring bits used an advanced metallurgical formula combined with large synthetic diamonds for high penetration capabilities and a longer bit life that allowed it to turn easily from one ground formation to another.

The GTUMX also features a razorcut design on the face of the bit to speed up exposure of the diamonds and enable the bit to begin cutting right out of the box.

A wide tapered waterway dramatically improves surface flushing and cutting while reducing wear on the inner-diameter of the bit, particularly in broken, abrasive conditions.

Establishing bonds

UNDERGROUND consumables supplier Minova has launched a silicate resin for bonding rock bolts.

The newly developed Carbothix resin supports injection bolts and rod anchors.

Injection bolts are charged with the silicate resin before use but alternatively, the bolt-into-grout process uses pumps to prefill boreholes.

Minova said Carbothix had a setting time of four hours and was an efficient solution for anchoring in tough geological conditions.

While special pumps are used to prefill boreholes or prepare injection bolts, the viscosity of the resin increases within minutes in the application process to prevent it from leaking from boreholes, even at large diameters. After four hours the bolts can sustain loads of up to 360kN – a pull-out force proven in tests using 600mm bolts with 25mm diameter threads in 32mm boreholes.

In addition to injection and filler grouting applications, Carbothix also guarantees reliable sealing against flowing water.

Portable profiling

A MINING software and hardware provider says it has the solution to archaic and disjointed systems when it comes to drill and blast design.

Maptek is promoting its BlastLogic drill and blast accuracy management system, which aims to tackle inefficiencies caused through disparate operational data and multiple systems.

The Adelaide-based firm explained how the variable nature of the drilling process and geological structures, a breakdown in any one area could result in sub-optimal blast performance.

While the program runs on desktops for a complete overview of drill and blast data, workers in the field can also add and view information on a tablet during operations.

Maptek said the complete program provided miners with access to inconsistent drill and blast data that enabled the simple analysis of historical performance to enhance blast accuracy, and mineral recovery.

The program shows the 3D spatial location of drill patterns, surfaces and changing drill hole characteristics, and enables electronic data sharing in the field.

Blast summary reports consolidate all relevant information, providing an overview of the schedule, process data and load plan. Finalised blast designs are also published to the BlastLogic Tablet.

The program calculates the most appropriate load plan for each hole, taking into account the number and order of decks given different depths and wetness of the holes.

While charge placement is checked for accuracy through 3D visualisation against known surfaces, Maptek said the load plan could be refined hole-by-hole.

Mine workers in the field can add and view information on a tablet during drill and blast operations