## A tough bit for hard rock

## Rockmore International announces a new drill bit design especially suited for hard rock guarry drilling

Right: Rockmore's CrossFlow bit

verall drilling efficiency is greatly influenced by bit penetration rates. Increasing this is mostly determined by impact energy and flushing efficiency.

## Five minutes with... Peiman Eghdami, executive

vice-president, Rockmore International

"Rockmore exports its drilling tools to the mining and construction sectors in more than 75 countries," says Mr Eahdami.

"The construction segment includes quarries, civil and

infrastructure projects, tunnelling and other related hard rock drilling applications. Latin America today has the highest demand for our products related to the construction sector.

"The main trend today in quarry drilling is the progression to larger blast hole diameters using heaver and larger drill rigs. The biggest challenge in the construction sector is the uncertainty and fragility of the economy. We expect demand for guarry drilling to increase slightly in North America, level off in Latin America, and possibly decline in Europe and Asia. Our revenue forecast for 2012 is a 15% increase over 2011."

Rockmore has targeted improvements in bit design so that the rock cuttings flush more effectively from the bit face, leading to better penetration rates and increased bit life.

The CrossFlow bit design incorporates new features in the bit face, particularly in the geometry and placement of flush holes, flush grooves and tungsten buttons. The intent is to remove broken rock chips from the face and up towards the hole annulus as guickly and effectively as possible.

The flush holes are nearer the centreline of the bit than on conventional designs, helping the flushing medium, usually compressed air for guarry drilling, to push the cuttings away from the centre. Standard flush hole positions do not provide adequate flushing medium at the centre of the bit. This creates a dead zone where rock chips can remain, prohibiting good advancement.

The flush holes are in newly designed flushing grooves that promote maximum flow of rock cuttings away from the bit face. These V-shaped grooves are much wider at the bit edge than conventional designs.

Also, rock chip velocity is reduced at the wider section of the flush groove at the bit edge, leading to a reduction of steel erosion ('body wash') on the body of the bit, which will extend bit life greatly.

The CrossFlow's tungsten carbide buttons are placed strategically to penetrate and break the rock as effectively as possible, thus improving penetration rates. The ideal contact mechanism is deep penetration of the carbide into fresh unbroken rock at each blow.

The design offering includes threaded button bits in 89-127mm sizes for tophammer applications, while DTH button bits are currently in development.

By using the Rockmore CrossFlow bit design, drilling operators in guarries can reduce drilling consumable costs and increase their overall drilling efficiencies.

Streamlined design means fewer parts, easier maintenance New piston geometry for more impact energy Optimized air channels deliver more energy to the piston

with Rockmore's High Performance DTH Hammer featuring SonicFlow Technology - The ROK Series

Patented SonicFlow technology minimizes backflow and turbulence

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