NEWS THIS MONTH

YOUR SOURCE FOR ALL THINGS ROCK-BREAKING

BEST PRACTICES TO PREVENT FLY ROCK

Fly rock is one of the most significant safety concerns in conventional blasting operations, as it can pose risks to personnel, equipment, and surrounding infrastructure. In sensitive environments where control and precision are essential, the Nxburst™ Rock Breaking Cartridge offers a safer, controlled alternative to traditional explosives—greatly reducing the risk of fly rock through its unique non-detonating design and predictable energy release.

Understanding Fly Rock

Fly rock occurs when rock fragments are ejected beyond the intended break area due to excessive energy release, inadequate stemming, or geological inconsistencies. In conventional blasting, the rapid detonation of high explosives creates extremely high-pressure shock waves that fracture rock violently, making it more difficult to predict fragment behaviour. This unpredictability is especially hazardous in confined or populated areas such as construction sites, tunnels, or quarries near infrastructure.

How Nxburst Minimizes Fly Rock

Nxburst cartridges utilize a deflagration reaction rather than a detonation. This means the gas-generating reaction occurs subsonically, producing a controlled pressure pulse rather than a shock wave. The result is a gentle yet powerful expansion of gases that fractures the rock without projecting fragments at high velocity. Once the gases have broken their confinement within the rock, the event is over and excess pressure is never created.

Key factors contributing to fly rock prevention include:

Blasting Mats: Nothing is better than an actual physical barrier to contain fly rock. Standard rubber tire blasting mats and conveyor belting work well with Nxburst.

Controlled Energy Output: Each Nxburst cartridge has a precisely measured charge, ensuring consistent energy release suited to the hole size and rock type.

Improved Stemming Efficiency: Because Nxburst produces lower peak pressures, the stemming material (such as crushed rock or stemming plugs) remains more effective in containing gases within the borehole.

Reduced Vibration and Overbreak: The non-detonating nature minimizes ground vibration and reduces the potential for excessive fracturing that can lead to uncontrolled rock ejection.

Localized Fracture Patterns: The energy is directed primarily along existing fissures or pre-drilled lines, enabling clean, predictable rock breakage.

Operational Best Practices

Even with Nxburst's inherent safety advantages, adherence to proper loading, stemming, and initiation procedures remains critical while conducting thorough site assessments to account for geological variations.

THE ISEE GOES TO RENO!

This coming January the International Society of Explosive Engineers annual conference on explosives and blasting technique comes to Reno, Nevada.

This premier industry event will bring together professionals from around the world to explore the latest advancements in explosives engineering, engage in hands-on learning, and take advantage of unparalleled networking opportunities.

Whether you're a seasoned professional or new to the field, this conference is your gateway to education, growth, and connection.

Register your attendance at: https://isee.org/conference