

Hexagon's holistic approach to drill and blast incorporates solutions to improve yield, fragmentation and dilution.

Incorporating technology ranging from blast design and high-precision drilling to post-blast analysis and optimisation, the approach empowers mines to take back the purchasing power on their bulk commodity explosives, according to the company.

"A well-designed blast pattern and the effective execution of the blast plan using high-precision drills are an important part of an effective drill and blast operation," the company said.

Hexagon's MinePlan portfolio features HxGN MinePlan Blast, a comprehensive software utility for drill and blast reconciliation.

"Rather than risking high-wall stability problems, uneven blasting, poor fragmentation, unnecessarily high energy costs, and dangerous working conditions, MinePlan Blast incorporates charge and blast design templates that are based on sound engineering principles and methods proven in mines worldwide," the company said.

The MineOperate portfolio, meanwhile, features machine guidance for drills (as well as dozers and loading equipment), with the OP Pro HP solution ensuring drilling is performed to the right position and elevation.

"It provides accuracy and instantaneous feedback, meaning improved loading times across the fleet, less mis-routed material, fewer hours of rework on ramps, roads, and benches, and fewer over- and under-drilled holes," the company said. "It is proven to improve both the quality of material produced and fragmentation with precise drill hole placement and depth."

OP Pro HP integrates with Hexagon's operational management hub, MineEnterprise, for a single source of reporting and support, the company says.

Then there is fragmentation data to consider.

Here, Blast Movement Technology (BMT) is an integral part of Hexagon's drill and blast solutions, providing accurate ore location information for open-pit mines. BMT, via sensors and software, provides blast information used to recover a mine's resources. It ensures that, post-blast, the mine retains a full vision of where its orebody moved to.

Hexagon's Split Engineering systems are used to automatically monitor different areas and processes along the operation, such as in shovels, excavators, loaders, haul trucks, crushers, conveyor belts, mill feed and screen decks, providing a unified approach to fragmentation management, Hexagon says.

Monitoring trends in size at each point in the comminution circuit enables operational adjustments in real time, while alarms can be created for oversize events, reducing the downtime from inefficiencies caused by blockages and broken screen decks.

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