

List of Abstracts

Automation and Introduction of New Technologies in Blasting Operations (9)

- A review of dam foundation excavation techniques in China
- Building Accurate and Inexpensive Accelerometer-Based Seismographs
- The study on remote monitor management information system of rotary drill
- Research and application of information supervision technology in blasting operation field
- Use of uniformly distributed non-explosive material in the blast hole to improve blast performance
- The research and application of industrial explosive site mixing system based on IOT Technology
- Prediction of Run of Mine Particle Size Distribution and Grinding Circuit Performance Using Blast Hole Drilling Data
- Lowering Cost of Mining with Wireless Detonators, the latest Initiation Innovation
- Blasting technique for optimizing the comprehensive cost of mining and mineral processing

Blast damage (13)

- Blast damage studies at the Äspö HRL
- Exploring the impact of blast damage on the degree of fragmentation - where a blasting side effect turns into a pitfall for the mining value chain
- Evaluation of blast induced damage zone in civic tunnels
- Estimation of blast Induced damage of saturated rib-pillars in large diameter blast hole (LDBH) stope
- An experimental investigation on fracture patterns near blasthole under different boundary conditions
- Estimation of tensile strength of Laurentian granite under high strain rate loading
- Blast Induced Overbreak Control in Roadway Tunnels of Himalayan Rocks in India
- Comparison of the Potential Effects of Earthquake-Induced Damage and Blast-Induced Damage on Earthfill Dams
- Near-Field Energy Distribution in Wall Control Blasting - An Engineering Approach
- Assessment and control of backbreak using near-field vibration signatures for superior highwall stability in dragline bench blasting
- Analysis on composition and propagation characteristics of seismic wave induced by horizontal smooth blasting
- Evaluation of seismic impact on houses and residents from excavation blasting of a large scale rock slope in China
- Overbreak in Underground Excavations - Some Key Insights

Blast design and Drilling Accuracy (5)

- Optimizing the Specific Charge for Limestone Blasting at Aruwakkalu Limestone Quarry
- Application of an in-house MWD system for quarry blasting
- Hole Deviation Monitoring and Control Using an iPhone - Accuracy, validation and potentialities
- Determination of stemming length in surface blasting using advanced statistical methods
- Role of blasting in achieving value based ore control for underground mines

Blast Vibration Predictions and blasting in built-up areas (11)

- Digital Filters for A and C Weighting for Sound Level Data
- Response Spectra for Vibration and Shock Loads
- Vibration modelling and mechanisms of wall control blasting
- Characteristics of Blasting Vibration Induced by Tunnel Rock Excavation Under High In-site Stress
- Do different standards for blasting seismographs mean different accuracy?
- Study on blast-induced vibration for the short-delay blasting with single free surface
- Blasting Excavation Technologies of a Sandstone Deep Foundation Pit under Complex Urban Environment
- Research on crack propagation rule in single hole bench blasting based on rock mesostructure
- Dynamic Responses of Adjacent Buildings Induced by Blasting Demolition
- Study on the Influence of Long Term Frequent Blasting Vibration on Buildings and Human Body
- Development of random forests and Cubist models for predicting blast-induced ground vibrations in hard rock condition

Blasting Methods that Improve Tunnelling and Drifting (3)

- Optimal Design Features of Parallel Cut Hole Blasting to Enhance Economy and Progress in Tunnel Excavations
- Measurement While Drilling technique in Blasting Damage Calculation
- Solution of emulsion explosive misfire in soft rock tunnel blasting

Blasting, Loading, Hauling and Crushing; Systems Approaches and economy (7)

- Blasting Vs Secondary Crushing and Additional Grinding - Pro's and Con's
- Using the stress model to relate crushing and processing to blasting
- Fragmentation Driven Continuous Improvement Process
- Productivity improvement in Aggregate Quarry vis-a-vis Fragmentation by Blasting
- Improving Downstream Performance Through a High Flexible Energy Explosive
- Applied data analytics on blast-induced outcomes using multi-year blasting data from an open pit mine
- Effect on cominution properties of blast preconditioned magnetic mortar

Demolition Blasting and Special blasting Techniques (3)

- Safe dismantling of unstable boulder using controlled blasting which had threatened the life of several people in historical Gaya Town, India
- Blasting demolition of frame-shear structure building in complex urban demolition conditions
- Directional Blasting Demolition of a 45m-high Brick Chimney in Complicated Surroundings

Explosive performance: From detonics to rock on the ground (4)

- Emulsion characterization with cylinder test and JWL parameters determination
- Continuous Wavelet Transforms - A Way to Tease Explosive Performance from Seismograms
- The relationship between detonation performance and physical properties of a low density explosive
- Calibration and Validation of Reactive Flow Model Parameters for an emulsion explosive

Mass Blasts in surface and underground operations: Problems and Solutions (2)

- Estimating critical conditions to avoid failure of electronic detonators by dynamic pressure
- Current sublevel caving functionality uncovered - what's next?

Mechanics of Dynamic Rock Blasting (8)

- Filming blast fragmentation of rock and mortar cylinders
- Proposed improvements for single blasthole test reporting methodology and observations from a series of tests conducted in underground rock salt mines.
- Experimental and numerical investigation on rock fragmentation under combined blastholes with different diameters
- Investigation of blasting vibration control of high rock slope with joints
- Study on dynamic failure process in rock under blast loading from adjacent blasthole
- Numerical simulation of stress distribution of two-borehole blasting in deep metal mine
- Rock Fracture and Fragmentation, and Derivation of improved Crushing and Drilling Rate Indices: A Review
- Measurement and analysis of strain wave signal in concrete mortar block under explosion loading

New products and development (industrial presentations) (2)

- Present and future prospect of exploder for underground coal mines of India
- The Class 3 Permissible Water Gel Explosive with High-strength and its Tunneling Blasting in Under Ground Coal Mine

Numerical Simulations of Rock Blasting: from detonation to rock on the ground (10)

- Modeling VOD Effects on Rock Fragmentation Within Multiple Blasthole Fragmentation (MBF) Model
- Blast design for underground long hole stope to safeguard surface Industrial structures from blast induced vibration.
- Modelling blast fragmentation of cylinders of mortar and rock
- A FEM-SPH Coupled Procedure for the Analysis of Blast induced Damage in Rock
- An Engineering Model to Estimate Blast Movement and Resulting Ore Loss and Dilution
- Creating and Parallel Processing of 3D Spherical Distinct Element Models for Underground Blasting
- Numerical Techniques for Estimation of Vibration and Frequency in Underground Workings arising out of Blasting in Adjacent Surface Mines
- Comparison between coupled SPH-FEM numerical model of a single hole blast and experimental test
- Multi-scale numerical modeling of blast-induced vibrations and dynamic slope stability with applications in large open pits.
- Numerical investigation for timing effects on fragmentation based on a coupled FEM-BPM-PBM model

Rock fragmentation: Influence of Delay Time and rock mass (1)

- Optimal Delay Periods and Complex Timing Sequences Using Electronic Delay Detonators.

Rock fragmentation: Monitoring; Instrumentation, Techniques and Analysis (17)

- The influence of blasthole deviation on fragmentation in laboratory tests
- Bezier Curve Fits to Fragmentation Data
- Study on the influence of precise delay blasting on rock fragmentation
- The fragmentation energy fan applied to blasting and drop weight comminution of rock
- Muck-pile size distribution evaluation using co-occurrence matrices textural features of digital images
- Using electronic detonators and physical markers to reduce mining dilution
- Flattening of hill by blasting in densely populated area for construction of International Airport at Navi Mumbai, India
- Pre-split blasting techniques at Dragline benches for stable bench with improved fragmentation level
- The complete diagnostic program for underground stope blasting to optimize dilution
- Evaluation of UAV System Accuracy for Automated Fragmentation Measurement
- AL/AN/FO Optimum Formulation
- Pattern Expansion Optimization Model based on fragmentation analysis with Drone Technology
- Advances in the development of a novel algorithm for fragmentation analysis based on photogrammetry 3D images
- Full-scale blasting tests in the frame of the SLIM project
- Measurement and Analysis of Strain Wave Signal in Concrete Mortar Block under Explosion Loading
- The Relationship Between Fragmentation Efficiency and the Shape of the Explosive Charge
- Investigation of the rock blast fragmentation based on the specific explosive energy and in-situ block size

Sustainable blasting techniques: Reduction of environmental footprints (3)

- Making economically viable the exploitation by D&B in a quarry within sensitive, highly populated area
- Explosive Energy Distribution in Surface Mine Blasting - A sustainable approach
- Implementation of 100% used oil to replace fuel oil on emulsion in efforts to do energy conversation at PT. Kaltim Prima Coal

Well Documented Case Studies (6)

- Controlled Blasting Techniques for Underground Excavations near Operational Hydro-Mechanical Equipment - A Case Study of Tehri Hydro Power Project, India
- The Development of an Innovative Blasting Technique that Uses a Unit Charge and Stress Reflection Methodology to Design Underground Blasting Patterns with the Objective of Transforming Underground Blasting Operations into Primary Crushing Operations.
- Safe mineral exploitation by innovative mining techniques in cap zone area. (A case study of concurrent working at Rampura-Agucha)
- Design and implementation improvements for wall control blasting in an anisotropic rock mass at Phu Kham mine
- Application of Power Deck system in wet condition in Goharzamin iron ore mine
- Blasting for graded material