

13th WORLD CONFERENCE ON EXPLOSIVES AND BLASTING

KRAKOW 2025

ICE Kraków Congress Centre 20th - 23rd September 2025

Platinum Sponsor: > AUSTIN POWDER

President's Foreword

On behalf of the European Federation of Explosives Engineers - EFEE, I am delighted to announce and to invite you all to our 13th World Conference on Explosives and Blasting taking place in Kraków, Poland from 20th - 23rd September 2025.

The EFEE World Conference on Explosives and Blasting is one of the most important international blasting events in the industry and continues to grow in both size and reputation.

The conference is organised in cooperation with the Association of Polish Blasting Engineers (SPIS) to whom we are hugely grateful for their support and for welcoming us to this superb destination.

SPIS are hosting two functions during the programme, a preconference workshop on the Use of explosives in demolition works on Sunday 21st September and a post conference technical excursion to GIG experimental mine, BARBARA and NITROERG on Wednesday 24th September.

The city of Kraków is the second-largest and one of the oldest cities in Poland, dating back to the seventh century. The city is the leading centre of Polish academic, economic, cultural, and artistic life. Cited as one of the most beautiful cities in Europe, it became a UNESCO World Heritage Site in 1978.

The 13th World Conference on Explosives and Blasting will take place at ICE Conference Centre. ICE offers cutting edge conference space, providing an ideal home for the exhibition, technical presentation rooms, networking and catering.

Following the success of our Dublin conference, we will be repeating our Emerging Professionals reception from 7pm on Saturday 20th September. This year the reception will be hosted on board the Restaurant Aquarius boat with refreshments and entertainment.

The conference formally starts on Sunday 21st September with registration, technical excursion and welcome reception and will continue on Monday 22nd September and Tuesday 23rd September with technical sessions and the exhibition.

Our extensive exhibition draws top organisations from the explosives and blasting industry. It plays a crucial role in the conference, enabling the showcase of cutting-edge technologies and fostering global connections with suppliers. Numerous exhibitors and sponsors have already pledged their support.

The conference will be supported by explosives end-users, manufacturers, drill and blast operators, consultants and contractors. We anticipate over 450 professionals from over 50 different countries, creating an engaging and unique forum for meetings and discussions between professionals from tunnelling, construction, demolition, quarrying as well as the mining industry. The conference is an excellent opportunity to share industry experiences, and to learn about new technologies, products and techniques.

I'm really looking forward to welcoming you all to Kraków for our 13th World Conference, place the date in your diaries 20th - 23rd September 2025.



Mathias Jern

President, EFEE -**European Federation of Explosives Engineers**



Gold Sponsors:









Supported by:





Technical Committee

Jari Honkanen (Chair), Finland Espen Hugaas, Norway Jörg Rennert, Germany Nathan Rouse, Ireland Mateusz Pytlik, Poland Kristen Kolden, US
Igor Kopál, Slovakia
Assisting members:
Travis Davidsavor, US
Andrzej Biessikirski, Poland

Conference Committee

Jari Honkanen (Chair), Finland Elżbieta Błotny, Poland Marilena Cardu, Italy Alan Dolan, Ireland Roger Holmberg, Sweden José Carlos Góis, Portugal Igor Kopál, Slovakia
Donald Jonson, Sweden
Krzysztof Pietkiewicz, Poland
Simon Price, UK
James Tyler, UK
Johan Finsteen Gjødvad,
Denmark

Registration

Conference registration includes admission to all technical sessions, the exhibition, a copy of the proceedings and admission to the welcome drink's reception on Sunday 21st September 2025 at the ICE Kraków Congress Centre.

Early Bird Registration All rates are subject to Polish VAT at 23%

 Delegate (Non EFEE Member):
 €835.00 zł3600.00

 Student:
 €100.00 zł450.00

EFEE Individual Members

Including membership to EFEE: €760.00 zł3300.00

EFEE Corporate Members: €700.00 zł3000.00

EFEE National Association Members: €700.00 zł300.00

Individual, Company and National Association Members – two discounted registration per person or organisation.

All participants including speakers are required to pay the registration fee.

To take advantage of our "early bird" registration discount, register online before Thursday 31st July 2025:

Register today on-line: www.efeeworldconference.com

For further information please email: info@efeeworldconference.com

Official Languages

The official language of the conference is English. A translation service will not be provided.

Schedule of Events

Saturday 20th September 2025

19.00 - 23.00 Emerging Professional Reception - Aquarius, Restaurant - Vistula River

Sunday 21st September 2025

09.00 – 14.00 Pre-Conference Technical Workshop Use of explosives in demolition works
 - AGH University of Science and Technology
 12.00 – 17.00 Exhibition Set-up - ICE Kraków Congress Centre
 12.00 – 17.00 Conference Registration - ICE Kraków Congress Centre
 18.00 – 20.00 Welcome Reception and Opening Speeches
 - ICE Kraków Congress Centre

Monday 22nd September 2025

08.00 – 12.00 Conference Registration - ICE Kraków Congress Centre
08.30 – 17.30 Technical Sessions - ICE Kraków Congress Centre
08.30 – 17.30 Exhibition - ICE Kraków Congress Centre
12.30 – 13.30 Poster Session - ICE Kraków Congress Centre
12.30 – 13.30 Lunch - ICE Kraków Congress Centre
20.00 – 00.00 Stara Zajezdnia Kraków Networking Dinner and

Entertainment - Stara Zajezdnia Kraków

Tuesday 23rd September 2025

08.30 - 15.00 Technical Sessions - ICE Kraków Congress Centre
 08.30 - 15.00 Exhibition - ICE Kraków Congress Centre
 12.30 - 13.30 Poster Session - ICE Kraków Congress Centre
 12.30 - 13.30 Lunch - ICE Kraków Congress Centre

Wednesday 24th September 2025

07.00 – 16.00 Post Conference Technical Excursion - GIG Experimental Mine, BARBARA and NITROERG

Saturday 20th September 2025: Emerging Professionals Reception Aquarius, Restaurant - Vistula River

The EFEE Emerging Professionals invite all conference attendees to join us for this popular networking reception. The purpose of the reception is to provide a unique opportunity for industry professionals to network and socialise, the evening before the conference officially kicks off.

This sponsored function, hosted by EFEE will take place on Saturday, 20th September from 7pm until 11pm with a river tour, drinks, snacks, networking and local entertainment. Attendance is limited to 200 and is available during the online registration process.

Ticket costs:

Attendance: €30.00 zł130.00 **Students:** €20.00 zł85.00

Those looking to be involved in EFEE should reach out to the Emerging Professionals at info@efee.eu as involvement in this group is a great route to becoming involved in the society as a whole.



Sunday 21st September 2025: Pre Conference Technical Workshop Use of explosives in demolition works AGH University of Science and Technology

A unique opportunity to exchange opinions and experiences with specialists from around the world. The workshop will pay special attention to shaped charges. There are numerous demolition methods and demolition conditions are diverse, so together let's broaden horizons and raise standards - for greater safety and better efficiency. All this in the company of international speakers and experienced professionals - discussions, quizzes and practical demonstrations.

After the workshop attendees have the option to join a walking tour around Kraków and the oldest Polish university, the Jagiellonian University, founded in 1364 (Collegium Maius, Collegium Novum, Collegium Iuridicum, Kanonicza Street).

Entry includes a light lunch and refreshments

Timings

09.00 - 14.00 followed by tour

Ticket costs:

EFEE / SPIS - Member: €125.00 zl540.00 EFEE / SPIS - Non-Member: €150.00 zl650.00

Supported by













Wednesday 24th September 2025: Post Conference Technical Excursion GIG Experimental Mine, BARBARA and NITROERG

During this trip we will have a unique opportunity to visit two important places for the explosives and mining industry in Poland located around 100km from Kraków.

The first visit is to Notified Body GIG's Experimental Mine, BARBARA, where they test and approve explosives for civil application. The visit includes a presentation of coal dust and methane explosion.

NITROERG company, is the largest manufacturer of detonators and explosives in Poland and one of the most important in Europe having almost 155 years tradition and experience. Here we will take a tour explaining the manufacturing process on state-of the art production lines.

07.00 Depart Kraków

08.00 GIG KD BARBARA – Notified Body Presentation of GIG's

activities as a notified body in the scope of the Directive

2014/28/EU

09.00 - 11.00 Visit to GIG's laboratories and practical demonstrations of

explosives tests

11.00 - 11.30 Transfer to NITROERG

11.30 - 12.30 Lunch

12.30 - 15.30 NITROERG - Bieruń NITROERG's Factory tours in groups:

Production of detonators

■ Production of emulsion explosives

Tickets include: Lunch, transfers and attendance at this special technical workshop and visit. Places are subject to approval. Further details will be available when booking launches in May 2025. The programme is for reference and subject to change.

Ticket costs:

EFEE / SPIS - Member: €150.00 zł650.00 **EFEE / SPIS - Non-Member:** €190.00 zł820.00

Supported by





Exhibition

A large industry exhibition will run alongside the technical presentations. This exhibition offers an excellent opportunity for explosives users, consultants, suppliers, and manufacturers to showcase their latest advancements to a broad segment of the industry. If you are interested in exhibiting at the conference, please contact

exhibition@efeeworldconference.com

To view our confirmed exhibitors, visit www.efeeworldconference.com

Venue Information

The 13th World Conference on Explosives and Blasting will take place at ICE Kraków Congress Centre. This impressive, modern venue, located on the Vistula River, opened in 2015 with the aim to boost the local economy. The cutting-edge facility with modern facilities and technology plays host to large exhibitions, concerts and events.

Accommodation

Conference accommodation will be available at the neighbouring Park Inn by Radisson, Kraków. Booking information will be available through the conference website and is available on a first come first served basis.

Stara Zajezdnia Krakow Networking Dinner

Seen as the queen function of the conference programme our networking dinner will take place on Monday 22nd September at Stara Zajezdnia Kraków and Microbrewery. The evening will encompass local cuisine, entertainment, and local Polish ales.

Tickets include: Transfers from the Park Inn, Krakow, dinner, drinks and Polish entertainment

Ticket costs:

Attendance: €115.00 zł500.00



Sightseeing

Kraków is a vibrant city, attracting millions of tourists each year who come to explore its museums, galleries, and lively atmosphere. Renowned for its stunning architecture, the historic Wawel Castle and the Main Market Square, which is one of the largest medieval town squares in Europe. In 1978, Kraków's Old Town was designated a UNESCO World Heritage Site. There are superb local attractions, including Oskar Schindler's Factory, Krakus Mound, Wieliczka Salt Mine, and many more. Further information is available at

visit www.visitkrakow.com

Zakopane Tour with Thermal Pools

Soak up the views of the Tatra Mountains, experience the hot spring pools and warm water slides of the best Thermal Baths, ride the M. Gubałówka funicular, stroll along Krupowki Street, and taste local cheese and vodka in the village of Chocholow.

Entrance Fee: From €57 Website

Wieliczka Salt Mine Tour

The 'Wieliczka' Salt Mine is an extraordinary place – hidden from the world, full of secrets and legends. Wieliczka was included on the first UNESCO World Heritage List in 1978 and is a priceless monument of world material culture.

There are a range of things to explore at the mine, however it's recommended to do the tourist or miners' tour.

Entrance Fee: From €28 Website

Auschwitz Tour

The Holocaust was one of the darkest chapters in human history. Learn the significance of Auschwitz-Birkenau State Museum when you visit with a guide who shares stories about its history, its former prisoners, and its survivors. Learn about the complex and its sad past as you walk through the grounds of Auschwitz and Birkenau.

Entrance Fee: From €40 Website

Kraków's Royal Route

One of the most enjoyable ways to take in Kraków's Old Town is to trace the historic path of royal coronations from Floriańska Gate to the castle and cathedral on Wawel Hill, where most of Poland's regal ancestors are buried there in the royal crypts.

Entrance Fee: Free of charge Website

Evening or Night River Cruise

Feast your eyes on the visual delights of Kraków, from the majestic Wawel Castle to the historic Zwierzyniec and Kazimierz districts. Hope onto a Vistula River cruise, one of the best ways to discover all that Kraków has to offer.

Entrance Fee: From €18 Website

Location

To view the conference location, please visit the Google map link: ICE Kraków Congress Centre - Google Maps

Getting there

ICE Kraków Congress Centre is 2.8km from the centre of Kraków, approximately a 10-minute drive. Kraków is well connected to the rest of Europe with regular flights, buses, and trains to over 30 countries.

Travel by Air

Kraków Airport www.krakowairport.pl

Kraków Airport is located approximately 16km west of Kraków City Centre and ICE Kraków Congress Centre. There are direct flights from most major European cities and connecting flights from the Middle East, Africa, Asia, Canada, the United States and Australia.

Flight Journey Lengths:

- 2 hour 10 minutes from Paris
- 8 hours 25 minutes from New York

For further flight information please visit: www.skyscanner.net

Travel By Train

Kraków has a well-connected public transport system with one main railway station in the city centre, Kraków Główny (Main Station).

Onward Journey to ICE Kraków Congress Centre

Public transport in Kraków is not expensive. A single 1-hour ticket for Kraków public transport costs 5 PLN, a 20-minutes ticket costs 2,80 PLN. These are your bus & tram passes, as long as you do not buy a single-use ticket. There are tickets available from 20-minutes tickets to 7 days and valid for both buses and trams.

Tickets can be bought in newsstands and in some corner shops, as well as ticket machines located in most bus and tram stops. Ticket machines can also be found in most trams and busses; however, those only accept coins.

From the Train Station

Both the Kraków Główny main railway station, the bus station and the ICE Kraków Congress Centre are located in the city centre. This allows you to reach ICE Kraków from the airport by public transit, as well as by taxi or your own car.

There are direct bus and tram connections from the Main Railway Station (Dworzec Główny) which stop at ICE Kraków, the trip via public transit takes no more than 20 minutes.

Please alight at **RONDO GRUNWALDZKIE** stop.

- Available bus lines: 101, 112, 124, 144, 162, 164, 169, 173, 179, 194, 219, 229, 300, 307, 310, 424, 469, 503, 608, 610, 612, 662;
- Available tram lines: 18, 22, 52, 62,

Timetable can be found here.

Taxi

Distance from Kraków airport to the city centre: 16km (10 miles).

Taxis are available at the Taxi rank outside Arrivals. The journey is 15km and approximately 25 minutes from the airport to ICE, expect to pay between €20 and €30.

Taxi app Uber is well-established and presents a good alternative to city taxis.

Several Taxi companies operate in Kraków, and their rates can vary.

Do not accept rides from drivers who might approach you inside or in front of the terminal, you will risk being overcharged.

Public Transport

Further information surrounding Kraków's public transport can be found by visiting: https://visitkrakow.com/getting-around-in-krakow/

Travel By Car

If you are driving by car, there is ample parking available. The underground car park in ICE Kraków consists of two levels that provide space for 329 cars (includes 20 parking spaces for the disabled marked in blue: 9 on level –1 and 11 on level –2).

Rates

		Bird 1 July *	Standard after 1 August*	
	€	PLN	€	PLN
Conference registration for NON EFEE Members	835.00	3600.00	960.00	4150.00
Conference registration for EFEE Individual Members and those applying for EFEE Membership	760.00	3300.00	875.00	3800.00
Conference registration for EFEE Corporate Members (3 discounted registration, per member)	700.00	3000.00	805.00	3500.00
Conference registration for EFEE National Association Members (3 discounted registration, per member)	700.00	3000.00	805.00	3500.00
Conference registration for Students (Including EFEE student membership for 2025/2026)	100.00	450.00		
Stara Zajezdnia Krakow Networking Dinner	115.00	500.00		
Welcome Reception	60.00	260.00		
Additional Printed Proceedings	90.00	400.00		
Additional USB Proceedings	75.00	325.00		
Emerging Professional Reception - Adults	30.00	130.00		
Emerging Professional Reception - Students	20.00	85.00		
Pre Conference Technical Workshop and City Tour - EFEE or SPIS Member	125.00	540.00		
Pre Conference Technical Workshop and City Tour - Non EFEE or SPIS Member	150.00	650.00		
Post Conference Technical Visit - EFEE or SPIS Member	150.00	650.00		
Post Conference Technical Visit - Non EFEE or SPIS Member	190.00	820.00		
To join EFEE -Individual Membership - 1yr	75.00	325.00		
EFEE Individual Membership - Available for Employees of EFEE, Corporate Members and Individual Members of EFEE National Associations and ISEE	55.00	237.00		
EFEE Individual Membership - 3yr	200.00	860.00		
EFEE Student Membership - 1yr	25.00	110.00		
* All rates are subject to Polish VAT at 23%				

Booking Information

EFEE Membership

EFEE members qualify for a discounted conference registration package. The cost to become an EFEE member is just €75.00 for professionals and €25.00 for students (excluding tax). EFEE membership can be purchased during the registration process which will immediately allow you to take advantage of the discounted rates.

Discounted membership fees are also available for employees of EFEE Corporate members and members of EFEE National associations and ISEE.

EFEE Corporate Members

If your organisation is an EFEE Corporate Member the company qualifies for three discounted delegate registrations. Any further bookings must be completed at the standard member registration rate.

EFEE National Association Members

EFEE National Association Members also qualify for three discounted delegate registrations. Any further bookings must be completed at the standard member registration rate.

Students

Take advantage of our competitive student registration packages. Your student reference number will be required during the registration process.

Register before 31st July to take advantage of our early bird offers.

Book online today:

PLATINUM SPONSOR



www.austinpowder.com

GOLD SPONSORS





www.eltek.com.gr

www.daveybickfordenaex.com





www.lubrizol.com

www.nitroerg.pl



www.sse.polska.pl

SILVER SPONSOR



www.iee-global.com

www.efeeworldconference.com

Technical Papers and Presentations

Technical presentations will be divided into key themes. Authors will present their papers in English to an audience in a lecture style format with some time for questions from the audience. A range of papers have been selected by our technical committee including:

Blast Vibration and Seismology

- A hybrid modeling approach to vibration prediction
- Comparison of International Vibration Standards and Structure for Quarry Blasting Close-in to Residential Structures Part II
- Compliance of Blast Vibration Standards: The Predominant Role of Weather and Seismic Activity in Residential Crack Displacement
- EFEE Environmental Committee Vibration Standards Comparisons Current Update
- Effect of blasthole diameter on vibration from signature hole blast monitoring
- Models of blast vibration
- Perforating drill holes as additional method of reducing ground vibrations level
- Precise controlled blasting using electronic detonators: a case study of a drain tunnel underpasses the existing twins-tunnel with small clearance
- Optimizing Signature Hole Analysis: Evaluating Charge Quantity and Confinement Effects on Seed Waveforms

Blasting Work Experiences

- A Methodology to Define Drill and Blast Designs for Drawbells at the Chuquicamata Underground Mine
- Drilling and blasting in the Arctic
- Effect of detonation propagation and confinement on VOD and blast induced vibrations in hard rock
- Electronic Initiation System applied in tunnel construction: Focusing on the Contour Holes and decking mode
- Evaluation of Pre-splitting and Line Drilling Techniques in Open-pit Bench Blasting to Minimize Slope Damage.
- Impact of using water gel explosives (Acuagels) compared to heavy ANFO in open-pit mining operations
- Improving Blast Reporting
- Investgation of Sheared Boreholes in the Kiirunavaara Mine
- Milliseconds to Millions: How Blasting Precision Drives Mining Efficiency
- Optimization of charge decking distance to avoid sympathetic detonation
 Drill cuttings vs Crushed rock vs Air
- Snowy 2.0 Pumped Hydro Project Marica Upstream Surge Shaft
- The critical importance of the bottom 30 centimeters of the blasthole in close-in construction blasting.
- The Influence of water on Blast Design and Implementation

Demolition Blasting

- Numerical Simulations for Enhanced Precision and Safety in Structural Blasting
- Precision Demolition Executing Large-Scale Multi-Structure Power Plant Implosions
- Prediction of vibration levels from falling masses using DIN 4150-1 in practice

Drill and Blast Design Methods and Modelling

- Advanced edge blasting techniques and digital simulation to reduce material spillage and optimize mining efficiency
- Al-Integrated Ore Body Movement Modeling for Enhanced Blast Outcomes
- Development of Scaled Damage Criteria for Blasting in Rock Masses
- Impedance-Based Blasting Optimization for NOx and Fragmentation Control
- Influence of empty guide holes configuration in single-blasthole experiments for careful blasting
- Multi-Physics Optimization of Blast Design in Complex Geological

- Environments: Comprehensive Integration of Explosive and Geological Parameters via Advanced Digitalization.
- Numerical modelling of airdecking in small diameter blast holes and its application in quarry blasting
- Techniques for quarrying dimension stones through controlled use of explosives

Explosive Detection for Security

 Findings on the development of efficient methods for neutralizing improvised explosive devices

Health & Safety in Drilling and Blasting

- A Pathway to Detonation of Ammonium Nitrate Due to Heat Energy
- Blasting at 120°C (250°F) in Opencast Coal Mining Using Thermal Insulating Blast Hole Sleeves
- Gaseous emissions of hydrogen peroxide emulsion explosives tested in an underground mine
- Perforating Gun Test Series
- Predictive Classification of Flyrock Distances Using Two Different Machine Learning Methods

Innovation and Technical Development

- An Empirical Study on the Estimation of Detonation Pressure by Separation Distance of Electronic Detonators using the Underwater Explosion Impact system
- Development of Gasless Lead-Free Time-Delay Compositions for Electric and Non-Electric Detonators
- Eliminating the TNT Risk for Opencast Boosters
- Explosive method of safe arch supports decommission in underground coal mines
- Green Primary Explosives Investigation and Evaluation
- Health, safety and environmental considerations in use of HPE explosives
- HMX Based Electronic Initiation System for Blasting in High Temperature Ground and/or Extremely Reactive Ground
- Optimizing Blasting Efficiency with Double Oxidizing Agent Bulk Emulsion:
 A Case Study from The Tokatindung Gold Mine
- Pioneering Transformation of Explosive Practices in Indonesia:
 Overcoming Geological Heterogeneity with Dual Salt Emulsion Technology
- Prilled-type hydrogen peroxide mining explosive the latest development of the hydrogen peroxide-based explosive technology
- Safer blasting using electronic detonators with integrated temperature measuring capabilities
- The Shock-Wave Laboratory at the TU Bergakademie Freiberg
- Wireless Blasting solutions in European mining operations

New Applications and Training

Optimising Sublevel Cave for Sustainable Mining

Sustainability and Environmental Topics in Drilling and Blasting

- Benefits of Shell's gas-to-liquids (GTL) fuel phases and Infineum's polyisobutylene succinic anhydride (PIBSA) concentrates for reducing post-blast emissions in bulk emulsions
- Development of bioremediation technology combined with explosive soil treatment (bioexplosion) for in situ cleaning of hydrocarbon pollution of soils.
- Improving Airblast Predictability With Composite Wave Modelling

Technical Posters

A new technical poster session will be displayed throughout the conference programme and presented during lunch on Monday and Tuesday. A range of posters have been selected by our technical committee including:

Blast Vibration and Seismology

- Advanced Techniques for Blast-Induced Ground Vibration Control in Proximity to Sensitive Structures: A Case Study of Indian Mining Operations
- Effectiveness of the Screening Methodology in Reducing Blasting Induced Ground Vibration

Blasting Work Experiences

- Efficient excavation of fractured rockmass using ringhole blasting technique in underground hard rock mine
- Excavation of Downstream Surge Gallery in Highly Stressed Foliated Rockmass by Application of Unique Site- Specific Excavation Methodology
- Factors affecting the accuracy of blasting in tunnel excavation by Drill & Blast
- Flood protection measures with extensive blasting work in a highly sensitive environment
- Influence of the wad material on blasting efficiency, relationship between detonation pressure and VOD.
- Julius Nyerere Hydro Power Project Cofferdam Demolition
- Optimization of horizontal advances with 28-foot drill rods through the use of electronic detonators for cut blasting in tunnelling mining projects
- Productivity Increase Through Pattern Expansion With Ultra High Energy Explosives

Construction, Mining & Quarrying (Blasting)

- East Wall Steepening at Bingham Canyon Mine
- Understanding and comparison of the effect of SLC ring and mine design parameters on draw width and gravity flow at LKAB's Kiruna and Malmberget sublevel caving mines

Drill and Blast Design Methods and Modelling

- Burden Determination for Confined Blast Applications
- "First estimated benefits from the use of digital technology in the planning and execution of drilling and blasting operations at a major limestone mining site in Brazil."
- From Bench to Mill: The X2Mill Solution for Optimized Blasting and Downstream Operations
- Hardness Predictor Model
- Study of P-wave velocity and its impact on the generation of damage due to geotechnical degradation
- The Benefits and Challenges of Digital Transformation in Mining: Insights from Two LHOIST Quarries in Germany

Health & Safety in Drilling and Blasting

 Design of Non-Standardized Tests for Identifying Critical Variables in Explosive Initiation Systems

Innovation and Technical Development

- Determining The Detonation Output Pressure Of A New Donor Explosive Charge By Using An Adapted Large Scale Gap Testing Methodology
- Digital Transformation in Drilling and Blasting Operations: A Case Study at a Limestone Quarry in Banten
- Emulsion explosive chemistry—their properties and link to the development/improvement of field products
- Enhancing Blasting Outcomes in Underground Mining with an Optimised Bulk Energy System
- Lead-free detonators based on Non-Primary Explosives Detonator Technology
- Optimization of Drilling and Blasting in an Open-Pit Polymetallic Mine Using Hydrogel Explosives: A Performance Comparison

New Applications and Training

 Advancing Vertical Transfer of Emulsion Explosives: Overcoming the 500 m Barrier to Achieve over 1000 m Drop Depths

Sustainability and Environmental Topics in Drilling and Blasting

 Formulation of bulk emulsions with reduced fuel phase content and improved environmental properties with Shell gas-to-liquids (GTL) fluids

