



## IMPROVING MINE EFFICIENCY & SAFETY WITH ADVANCED BLASTING TECHNOLOGIES

**Dates: April 15 - 17, 2019**

**Jodhpur**

**Programme Director:** Professor Sushil Bhandari Formerly Dean, Faculty of Engg. JNV University, Jodhpur  
Dr. P. K. Rajmeny, Formerly Head Rock Engineering, Hindustan Zinc Limited  
Dr. M.R. Saharan, Formerly Sr. Scientist, Central Mining and Fuel Research Institute

Mining processes upstream and downstream are related with blasting. Blasting results can be used to the improvement of operations. Greater control over fragmentation, muck piles, excavation and dilution are just the beginning. There are also benefits of lower vibration and safe blast configurations that eliminate expensive downtime and social issues. This course has been designed for blasting personnel to optimize operations in modern mines. Topics will cover a variety of themes: modern theory, products, accessories, design, control of results, adverse impact. Courses will include use of software and app.

### ➤ **Blast Design for Desired Fragmentation**

Rock fragmentation process and role of discontinuities and in-situ stresses, explosives energy delivery and partitioning, fragmentation prediction and measurement, Dust and Fines generation and control, throw, dig ability, effects of geology.

### ➤ **Open Pit Blasting Operations and Management**

Blast design and patterns, Practical blast design, QA/QC, wall control, large scale blasting, dilution control and costing, air decking, Predicted and actual blast results.

### ➤ **Downstream Effects of Blasting**

Effect of powder factor, impact of blast design parameters on mine economics, case studies, damage monitoring, prediction and control, energy consumption in downstream operations. Integration of drilling and blasting operations

### ➤ **Explosives & Initiating Systems**

Selection of explosives, design to avoid malfunction, delay sequence and influence on fragmentation and diggability, electronic detonations on fragmentation, effect of timing, electronic detonators.

### ➤ **Managing Environmental Impact of Blasting**

Blast design to minimize complaints, blasting close to structures, Flyrock. Dust fumes & fines generation control

### ➤ **Software and App for Blast Optimization, Data Analytics**

Instrumentation vibration and air blast monitors, laser profilers, data collection, drill deviation monitors, drill performance monitor, fragmentation image analysis systems, blast design software, Smart Blasting App, Blast Information Management System for Surface and Underground Operations.

### ➤ **Presentations by Industry**

Industry presentations will be given on topics such as experience with electronic detonators, drill monitoring, modelling of blasting, security, use of instrumentation and innovative solutions with case studies.

Participants would be given case studies to solve industry problems, quizzes.

### **REGISTRATION**

**Fee: Rs. 15,000.00 (18% IGST Extra) per participant**

- Registration fee includes course material, demonstration and hands on experience on use of software and instruments.
- Payment is to be made through Bank draft or Bank transfer to:

**CONTINUOUS EXCELLENCE PRIVATE LIMITED, HDFC BANK LTD (BASANI INDUSTRIAL AREA JODHPUR 342005)**

**Account No: 50200010847331, RTGS/NEFT IFSC: HDFC0001420 MICR: 342240004**

- The course is Non-Residential. Early bird discount will be provided if payment sent 15 days before the organization date of the course