

## EIT Raw Materials

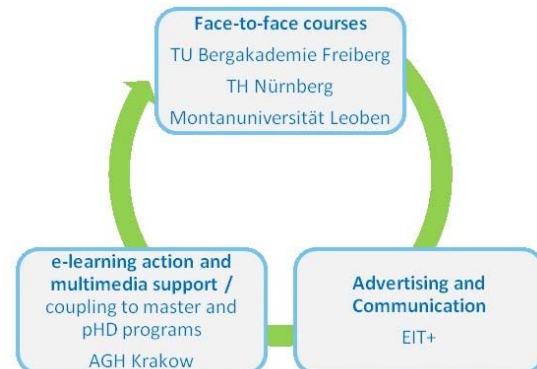
### Lifelong learning

The project "CLC EAST Professional School" ECLC ProSchool provides a program for skilled workers of the raw materials sector with courses offered at TU Bergakademie Freiberg, TU Nürnberg and Montanuniversitaet Leoben.

The courses are tailored and continuously developed to meet and follow the needs and requirements of the industry in the CLC East region.

An interconnection to the local Master and PhD programs is foreseen.

The program also will help career changers to enter raw materials industry easier.



For further information, please check the following

<https://weiterbildung.tu-freiberg.de/TUF/search.xhtml>



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## ECLC ProSchool

*part of the RM Academy*

Techniques for improved blast vibration control

13-14.09. or

08-09.11.2018



Montanuniversitaet's RIC Leoben organises courses on the following topics:

- ◆ Innovative subsurface mining imaging systems,
- ◆ Innovative and/or automatic machines/equipments/systems
- ◆ Environmental and health issues in surface mining

## Course Title

Techniques for improved blast vibration control

## Description:

Alternative solutions to reduce vibrations instead of reducing MIC or hole diameter will be trained. The correct setup of geophones and data analysis is very important in terms of vibration control. Trainees will be able to understand vibrations better.

## Objectives:

- ◆ Review Fundamentals of Vibration
- ◆ Measurement and Analysis
- ◆ Assess Application of Electronic Blast Timing
- ◆ Practice using Seismograph Software and Analyzing Software
- ◆ Practice making recommendations to customer based on vibration assessment and analysis

## Target audience:

Quarry managers, consultants and field engineers who will be willing to understand the next level in vibration management and reduction of PPV.



## Agenda:

### Day 1

**8:00-10:00**

Vibrations from Blasting the Source, Particle Velocity, Amplitude and Frequency

**10:15-12:00**

Measurement of Vibrations, Seismograph, Measurement Practices, Basic Analysis

**Lunch**

**13:00-15:00**

Vibration Analysis, Advanced Analysis Techniques, Propagation Graphs, Frequency Analysis

**15:15-18:00**

Blasting Vibration Criteria, Review of Standards, Structure Response, and Human Response

### Day 2

**8:00-10:00**

Vibration Modeling, Software Application: Seed Waveforms, Timing Selections

**10:15-12:00**

Airblast Modeling, Software: Propagation, Timing Selections

**Lunch**

**13:00-15:00**

Blast Analysis and Advanced Design, Analyze customer data and make recommendations

**15:00** Adjourn

## Lecturers:

Austin Powder GmbH

Mark Ganster

## Course fee:

600 € EIT members

780 € non EIT members

Course materials and catering are included



## Format:

The course will be held as a two-day workshop.

## Location:

Montanuniversitaet Leoben

Seminar room S

Peter Tunner-Strasse 15, 3rd floor

8700 Leoben, Austria

## Registration:

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