



SRMEG Safe & Efficient Blasting (SEB) Course, Singapore For Underground Tunnelling & Applications

Venue: Shaw Foundation Alumni House (Seminar Rooms 2 & 3)
11 Kent Ridge Drive, Singapore 119244
Tuesday & Wednesday, 8 to 9 July 2014

#### **COURSE OBJECTIVES**

The SEB course is designed to further enhance the skills and knowledge of those people either directly involved with blasting activities such as engineers, shotfirers and drill and blast crew members or those indirectly involved with blasting, such as project management personnel or government and regulatory officials.

The objective of the course is to provide participants with a greater understanding of the requirements of drilling and blasting in an underground environment, so that they are able to carry out their job responsibilities more;

**SAFELY** - without risk of causing injury or damage; <u>and</u> **EFFICIENTLY** - maximise blasting performance whilst optimizing overall costs.



www.cma.sg/events.html

Typically, the 2 day SEB course is attended by mine and construction personnel that may have had little exposure to drill and blast practices in the past though have the need to have a basic operational blasting knowledge.

#### **SPEAKERS**

Abhisek Roy
Ajay Chaplot
Wayne Wrigley

## **REGISTRATION FEE**

SRMEG/EAS Members:

\$450.00

Non-Members:

\$550.00

PDU/STU: TBA

#### **COURSE OUTCOMES**

Completion of the course will train participants to:

- Compare various explosive products and systems and decide on the safest and most efficient combination, including the formulation of blast designs and determination of explosives quantities,
- Correctly prime and charge blast holes to ensure optimum blasting performance,
- Select a suitable initiation system, including delay intervals and tie-up methods,
- Modify blast patterns in difficult or unusual areas to maintain good blast results,
- Have an understanding of ground vibration and overpressure (airblast), their causes and how to control them,
- Evaluate the risks associated with blasting,
- Identify potential safety hazards relating to explosives (especially misfires) and understand how to avoid them,
- Understand how latest explosives product innovations, measurement and software technology can be used to optimize project costs and timelines while meeting environmental restrictions.





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## **SPEAKERS BIO**

## Abhisek Roy

Abhisek is a Mining Engineer with 12 years of experience in Drill & Blasting services industry. He has been working in ICI / Orica since 2003 in various Technical, Commercial and Operations roles. Abhisek's primary expertise is in underground civil tunnel blasting technology. He has specifically worked in underground blast design, advanced underground Bulk explosives & delivery systems and initiating systems technology and application, catering to complex and challenging needs of the underground civil & mining clients in Asia.

Abhisek is currently the Advanced Services Manager for Asia leading a team of specialist mining engineers who implement advanced blasting solutions at Orica's largest accounts in Asia.

## **Ajay Chaplot**

Ajay is a mining engineer with 8 years experience in mining and civil tunnelling industries. He has worked in Orica since 2010. Prior to that, he worked in Underground and open-pit hard rock metal mines in technical and operations roles. After joining Orica, he has gained hands-on experience of pumping bulk emulsion explosive and provided technical support to Jurong Rock Caverns Project as a blasting engineer.

He is currently working as Product Manager for Initiating Systems and Electronic Blasting systems in Asia. He is responsible for Product Marketing Support.

## Wayne Wrigley

Wayne has been in the Mining industry for the last 34 years (since 1980) and has been with ICI / Orica for > 20 years, working as a drill and blast specialist and a Technical Services Manager. Wayne has had extensive practical experience working across mine sites / civil construction projects in Australia and Asia and is a certified Orica 'Safe and Efficient Blasting' trainer.

His current role is Advanced Services Specialist for Asia, being a key member of the Orica Services team in Asia.





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## **COURSE AGENDA**

The course has been developed to include an introduction of explosive products and applications on Day 1, and on Day 2 provide an update on the latest blasting technology applications with practical case studies, and a view of the future in Drilling & Blasting technology related to Underground Civil applications.

DAY 1: 08 July 2014 (Tuesday )	
Time	Topic
8:45 AM	Registration
9:15 AM	Introduction and Terminology
9:35 AM	Explosives Properties
10:35 AM	Tea Break
11:00 AM	Explosives/Rock Interactions
11:30 AM	Explosives Range / Selection
12:30 PM	Lunch
1:30 PM	Initiation Systems
2:30 PM	Basic Tunnelling Blast design
3:10 PM	Shotplus-T Demo (Tunnelling software)
3:30 PM	Tea Break
3:50 PM	Principles of Priming
4:20 PM	Vibration and Environmental Control
5:20 PM	Question Time
6:00PM	End of day 1 Session

DAY 2: 09 July 2014 (Wednesday)	
Time	Topic
9:15 AM	Start
9:15 AM	Underground Bulk Systems
10:00 AM	Tea Break
10:20 AM	Pentex D Booster & Electronic Blasting Systems
11:10 AM	Hong Kong Case Studies
11:40 AM	Korea Case Studies
12:00 PM	Lunch
1:00 PM	Construction Blasting Case Studies in Australia
2:00 PM	Asia Tunnelling Case Study
2:45 PM	Questions
3:15 PM	Course Concludes