

Chairman,  
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The Institution of Engineers, Malaysia

## **2-DAY COURSE ON EXPLOSIVE TECHNOLOGY FOR TUNNELING AND UNDERGROUND SPACE**

Organised By:

Tunneling And Underground Space Technical Division, IEM

Date : 6 – 7 May 2015 (Wednesday & Thursday)  
Venue : C&S Lecture Room, 2nd Floor  
Wisma IEM, Petaling Jaya, Selangor  
Time : 9.00 a.m. - 5.00 p.m.

BEM Approved CPD/PDP Hours = 11 hours  
Ref No : IEM15/HQ/114/C

**GST will be implemented effective from 1  
April 2015**

### REGISTRATION FORM

## **‘EXPLOSIVE TECHNOLOGY FOR TUNNELING AND UNDERGROUND SPACE’**

**6 -7 May 2015 (Wednesday & Thursday)**

**Closing Date : 3 May 2015**

No	Name(s)	M'ship No.	Grade	Fee (RM)*
		SUB TOTAL		
		Add GST @ 6%		
<b>Total Payable</b>				

\* Fees MUST be fully paid BEFORE the CLOSING DATE. Seats could only be confirmed upon payment.

Enclosed herewith a crossed cheque No: \_\_\_\_\_ for the sum of RM \_\_\_\_\_ issued in favour of “**The Institution of Engineers, Malaysia**” and crossed ‘A/C payee only’. I/We understand that the fee is not refundable if I/We withdraw after my/our application is accepted by the Organising Committee as stated in the **cancellation term**. If I/We fail to attend the seminar, the paid registration fee will not be refunded.

Contact Person: \_\_\_\_\_ Designation: \_\_\_\_\_

Name of Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ (O) \_\_\_\_\_ (Fax)

\_\_\_\_\_ (H) \_\_\_\_\_ (HP)

Email: \_\_\_\_\_

\_\_\_\_\_  
Signature & Stamp

\_\_\_\_\_  
Date

Photocopies are acceptable

### REGISTRATION FEE (GST NOT INCLUDED)

GRADE	Normal	Online
IEM Student Member	RM250.00	RM200.00
IEM Graduate Member	RM350.00	RM300.00
IEM Corporate Member	RM550.00	RM500.00
Non IEM Member	RM750.00	RM700.00

#### IMPORTANT NOTES

- Closing Date : **3 May 2015**
- For **ONLINE REGISTRATION**, payment MUST BE MADE ON REGISTRATION [via RHB Now and Maybank2u -Personal Saving & Personal Current; Any Credit Card - Visa/Master.
- Payment via **CASH/CHEQUE/BANK-IN TRANSMISSION/BANK DRAFT/MONEY ORDER/ POSTAL ORDER/LOU/LOG/WALK -IN will be considered as NORMAL REGISTRATION**
- FULL PAYMENT** must be settled before commencement of the event, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non-refundable. IEM reserve the right to reject any LOU/LOG not in accordance with these instructions. The Organising Committee reserves the right to alter or change the programme due to unforeseen circumstances.

## Synopsis

This two day Course and visit to the local explosive factory is intended to introduce the explosive technology from legal and technical perspective applied to underground space and tunnel excavation. and enable those in the industry to at least have some understanding on what our blasting engineers and shotfiring team are doing.

The Course will cover the introduction to explosive engineering, definition, classification and selection of explosive for a particular application in the morning of the first day. In the afternoon the lecture will cover the application in the Drill & Blast operation in the underground space and tunneling including the introduction to tunnel blast design..

On the second day the Course participants will be visiting the Tenaga Kimia Berhad explosive factory at Batu Arang where explosive for application in mining, quarrying and construction including tunneling are manufactured. This also included demos and further lectures by the experts from the company on the application of their products.

This Course is designed for engineers, geologist and other professionals including those involved in Safety administration in underground space excavation and tunneling. It is an introduction to future Courses in Drill & Blast and Explosive Technology for application in tunneling and construction industry.

## About The Speaker



Ir Hj Look keman bin Sahari graduated in 1979 in mining engineering from Strathclyde University , Glasgow and in 1991 obtained M. Sc in Explosives Ordnance Engineering from Royal Military College of Science Cranfield University, United Kingdom . He worked with the Mines Department ( Now JMG) for 17 years and retired in 1996 . He later on works as Consulting Engineer specializing in Explosives and Blasting for mining quarrying and construction work. He had attended an Explosives Technology Course for open pit and Underground blasting at Queen University, Canada and recently attended a

Workshop on Drill & Blast for Tunneling at New Delhi organize by the international Society of Explosive Engineer, US.

He had visited many tunneling projects such as Pergau Hydroelectric, Pahang- Selangor water transfer project, MRT tunneling project , and also was the team leader in investigation of potential effect of ground vibration from Karak – KL second tunnel blasting work to the failure of Genting Sempah – Genting Highland road . He also taught at the Shotfiring Course conducted by the Institute of Quarrying, Malaysia. He had also given lectures on explosive technology and construction blasting at IEM.

## Course Schedule & Outline

Day 1		Day 2	
08:30 – 09:00	Registration	07.30	Registration
09:00 - 10:30	Introduction to Explosive Technology	08.00	Bus leave for TENAGA KIMIA BERHAD Explosive factory at Batu Arang
10:30 – 11:00	Tea Break	10.00 – 14.00	Briefing and lectures on Explosives manufactured at the factory including explosives used for blasting in underground space and tunneling work followed by visit to the factory and also demonstration.
11:00 – 13:00	Classification and Essential properties engineers need to know	14.00 – 15.00	Lunch Break
13:00 – 14:00	Lunch Break	15:00 – 16:00	Q & A
14:00 – 15:30	Explosive application in Underground Space excavation and Tunneling	17.00	Reach IEM
15:30 – 16:00	Tea Break		
16:00 – 17:00	Explosive application in Underground Space excavation and Tunneling		

## Cancellation Policy

IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund less 30% if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with prior notification and substitute will be charged according to membership status.