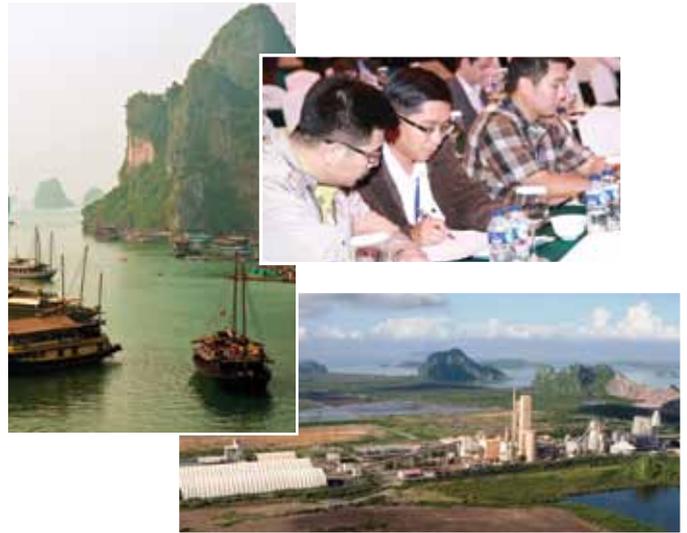


## TECHNICAL WORKSHOP

Meliá Hanoi, Vietnam

25 - 27 June 2018



### OPTIMISING A DYNAMIC PROCESS

This three-day technical training workshop explores the progressive levels of cement manufacturing process optimisation. The course begins with raw materials and their preparation, moves on to the fuels for firing a cement kiln and the ventilation of exhaust gases, and concludes with milling processes. An understanding of all these stages and how they interact is necessary in order to control and optimise cement production. The aim of this workshop is to provide and enhance that understanding of these individual processes and their interaction.

Optimisation is a fundamental requirement to maximise the productivity and efficiency of the cement manufacturing process. It is a way to minimise manufacturing costs, while maximising product quality and the profitability of a cement factory and company. This Cemtech technical training workshop will aim to explain how that can be achieved.

### OUTLINE COURSE PROGRAMME

#### Monday, 25 June 2018

##### Introduction & 1<sup>st</sup> Level of Optimisation: Raw materials

- The fundamental objectives of clinker and cement manufacture
- Best available technology
- Raw materials for cement manufacture
- Raw mix design
- Raw materials processing
- Chemistry and thermodynamics in the cement kiln

#### Tuesday, 26 June 2018

##### 2<sup>nd</sup> Level of Optimisation: Fuels and combustion

- Fundamentals of flames and combustion
- Fuel preparation – solid fuels, oil and natural gas
- Alternative fuel strategies
- Best practice alternative fuels utilisation
- Combustion air and oxygen requirements
- Exhaust gas volume

#### Wednesday, 27 June 2018

##### 3<sup>rd</sup> Level of Optimisation: Milling processes

- Drying in raw and coal mills
- Cement grinding mills
- Principles and energy requirements for grinding
- Pre-grinding in roll presses
- Separators in grinding circuits and separation efficiency
- Conservation of mass and determination of circulating load
- Principles of the operation of ball mills
- Internal inspection and media charging

## TRAINING FORMAT

The format of these technical training workshops will be a series of lectures provided by Dr Clark, interspersed with exercises to illustrate and practice the concepts discussed in the lectures. Open discussion forums will be encouraged following each lecture and exercise. The exercises will be largely Microsoft Excel based therefore participants should bring their laptop or arrange to complete the exercises jointly with another participant.

The workshops will be of interest to both the technical and managerial staff of cement companies. Guidance will be provided in the completion of the exercises which will be within the compass of all delegates to Cemtech conferences.

### COURSE TUTOR BIOGRAPHY

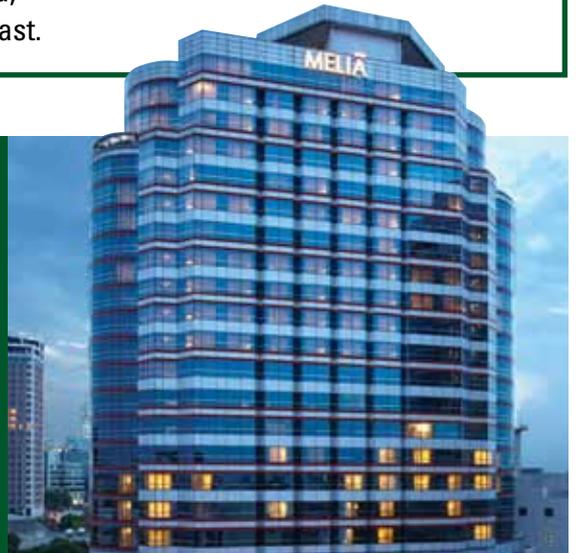
Dr Michael Clark is a leading cement plant operations and technology specialist with over 40 years' experience in the cement industry. His skills cover the whole process of cement manufacturing from quarry planning, through clinker production, cement manufacture and distribution. He is regarded as the leading international expert in problem identification and efficiency improvements throughout the manufacturing process.

With a PhD in the manufacture of white cement, Dr Clark's career highlights include senior operational positions within Blue Circle Industries and ABB Linkman Systems Ltd, after which he founded Whitehope (UK), an international consultancy specialising in the cement industry. In addition, Dr Clark is Technical Consultant for International Cement Review and Moderator of the CemNet.com e-Learning suite of training courses.

Dr Clark has worked in over 30 countries around the world in Asia, Africa, Australia, the Americas, eastern Europe and the Middle East.

### VENUE AND ACCOMMODATION

The training course will take place at the Meliá Hanoi, Vietnam. A specially-discounted room rate of USD109++ (VND2,507,000++) will be available to those wishing to stay in the Meliá Hanoi Hotel. For other hotel recommendations at different budget levels, please contact the organisers.



### REGISTRATION FEE

- **Standard rate:** USD 1495 / EUR 1205 / GBP 1050 per participant
  - **Groups of three or more (20% discount):** USD 1195 / EUR 965 / GBP 840 per participant
  - **Vietnam producers only (30% discount):** USD 1045 / EUR 845 / GBP 735 per participant
- Participants will be provided lunch and refreshments on each day of the training course.

**FREE to participants:** Technical Workshop Manual with Excel plant simulation models.

**PLUS** a complimentary copy of The Cement Plant Operations Handbook, 6th Edition, published by International Cement Review.

For programme details and workshop registration, visit:

**[www.Cemtech.com/Asia18/Workshop](http://www.Cemtech.com/Asia18/Workshop)**

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