Concrete Quality Control on Hot Climate

This course is Designed, Developed, and will be Delivered under

08 - 12 October 2017
Dubai, United Arab Emirates
**WHY CHOOSE THIS TRAINING COURSE?**

Structural engineers are encountering many problems due to the hot climate and the other environmental conditions. Quality control in construction of the reinforced concrete structure is a complete function which involves management, statistics and engineering.

In this training course, the focus is on using the statistics as a tool to control all the activities of the construction projects, especially the concrete product. The quality control of the concrete is illustrated in scope of the different codes and specifications. This training course will deliver a state-of-art methodology to control the concrete quality, introduces ways to control the specification recommendations in detail, and all the new modern the techniques and methodology used in concrete industry to enhance the concrete quality.

The case studies of this course will be for oil and gas projects, as most projects are time-driven and need to be of high-quality to maintain the sustainable facilities along the production-filled life. In a hot climate, it needs more precaution in the concrete industry and on the construction of the building to match with the requirement of the weather. All the examples are real case studies of oil and gas projects.

**This training course will feature:**

- Different codes and standards for Quality control
- Quality control test (video presentation)
- Effects of quality in project sustainability and structure durability
- Main skills and required knowledge for QC On Site
- QC procedure and precaution for concrete in a hot climate
- Effect of good QC on structure lifetime

**WHAT ARE THE GOALS?**

**By the end of this training course, participants will:**

- Be familiar with all quality management techniques and procedures
- Learn available non-destructive testing for concrete structure projects
- Understand the practical tools to control the concrete and the whole project that includes field-testing and the required laboratory facilities
- Be familiar with various techniques for evaluating the structures under construction
- Learn modern field measurements such as concrete strength
- Be familiar with all quality control techniques in hot climate

**WHO IS THIS TRAINING COURSE FOR?**

This training course is intended for structural and civil engineers responsible for the Quality Control and Quality Assurance, with the most recent non-destructive testing for concrete structure.

This training course is also beneficial for Construction Engineers, Project Managers, Construction Managers, Quality Assurance and Quality Control professionals.

**HOW WILL THIS TRAINING COURSE BE PRESENTED?**

This training course will utilize a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. The daily workshops will be highly interactive and participative. Videos and photos will be used for illustration.
Daily Topics

DAY ONE
Concept of TQM

Competency Description: As an engineer, you need to know the main element of quality management system on site.

Key behaviours:

- Understand the approach of ISO9001 and its application in oil and gas projects
- Understand the practical QA & QC for different oil & gas companies
- Understand the hot climate precaution and definition

Topics to be covered:

- Total Quality management system
- Quality assurance
- Quality control
- Who will perform the quality control?
- Quality management constrain in oil and gas projects
- Pareto chart
- How to control the concrete from ready mix plant
- How to control concrete casting onsite
- Coefficient of variation
- Auditing the construction site quality
- Precaution in design mix in hot climate

DAY TWO
Quality Control for Materials

Competency Description: As an engineer, you need to know the construction methods and ways of QC for main structure foundations and building in oil and gas plant.

Key behaviours:

- Understand the approach of codes for QC
- Understand the roles of the inspector onsite
- Understand the main element of concrete QC

DAY THREE
Quality Control for Fresh Concrete

Competency Description: As an engineer, you need to know the ways of concrete QC onsite.

Key behaviours:

- Understand the concept of quality statistics
- Understand the hot climate effect on concrete mix
- Understand the QC for HSC

Topics to be covered:

- Basic statistics
- Collecting a data for evaluations
- Statistics for the quality control data
- Evaluating the grade of the quality
- Concrete design mix
- Precaution in design mix in hot climate for remote area
- QC for fresh concrete
- Quality control for concrete forum
- Pouring concrete in hot climate
- Workability test for concreted
- Cube and cylinder test
- The replacement of the steel bars
Daily Topics

DAY FOUR
Quality Control to Maintain Concrete Durability

**Competency Description:** As an engineer, you need to know the NDT methods and the concrete durability.

**Key behaviours:**
- Understand the relation between QC onsite and design approach
- Understand the concrete NDT dynamic load characteristic
- Understand the relation between QC and concrete durability

**Topics to be covered:**
- The best ways of construction
- Curing methods
- Wooden and steel from QC
- Steel reinforcing QC
- Maintain concrete cover
- Procedure of QC onsite
- Corrosion phenomena affect quality
- Different corrosion protection system

DAY FIVE
Non Destructive Testing for Concrete

**Competency Description:** As an engineer, you need to know the ways of steel structure QC on site.

**Key behaviours:**
- Understand the NDT for concrete
- Understand the differences between NDT
- Understand the how to chose the best method fit for purpose
- Relation between QC and IMS for oil and gas plant

**Topics to be covered:**
- Comparison between different Non-destructive test
- Core test
- Rebound hammer
- Look test
- Load test for floor deck under machine
- Ultrasonic test
- Concrete cover measurement
- Case study for foundation in gas plant
### REGISTRATION DETAILS

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### HOTEL ACCOMMODATION

Hotel accommodation is not included in the Registration Fee. A reduced corporate rate and a limited number of rooms are available for attendees wishing to stay at the hotel venue.

Please make your request for accommodation **at least 3 weeks** prior to the commencement of the course.

### CERTIFICATION

A Certificate of Completion will only be awarded to those delegates who attend the entire course.

### COURSE SCHEDULE

**08 - 12 October 2017**  
Dubai, United Arab Emirates

### REGISTRATION FEES

**US$ 4,500/- per participant**  
This fee is inclusive of Documentation, Lunch and Refreshments

### MODE OF PAYMENT

- [ ] Please invoice my company  
- [ ] Please invoice me  
- [ ] Cheque payable to “PetroKnowledge Limited”

### WAYS TO REGISTER

- **T:** +971 2 5577 389  
- **F:** +971 2 5577 128  
- **E:** info@petroknowledge.com  
- **W:** www.petroknowledge.com

### CANCELLATIONS & SUBSTITUTIONS

You must notify the Registrar of cancellations at least 2 weeks before a scheduled seminar in order to be eligible for a credit. If you cannot attend, you may send a replacement from your organisation at no charge. There is a $250 handling charge for all cancellations or rescheduling. We reserve the right to cancel a seminar due to low enrolment. All registrants will be notified in advance and a full refund will be provided upon request.

### DISCLAIMER

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