



## Construction Quality Control On Site

Date	Venues	(\$Fees	Book your seat
07 Jan -11 Jan 2024	Bahrain	2900	<a href="#">Register Now</a>

## Introduction

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.

This training course case study and practical sessions will be for oil and gas projects as most projects are time driven and need a high quality to maintain the sustainable facilities along the production filed life.

In a hot climate, it needs more precaution in concrete industry and on the construction of the building to match with the requirement to this weather. All the examples and real case studies are for oil and gas projects.

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 techniques and methodology used in concrete industry to enhance the concrete quality. The course will cover the main Quality Control concept for Shell specifications and other international oil and gas companies.

### This training course will feature:

- Different codes and standards for Quality Control
- Quality control test (video presentation)
- Effects of quality in project sustainability
- Main skills and required knowledge for QC On Site
- QC procedure for concrete in a hot climate
- QC for steel structure activities

## Objectives

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

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

# Training Methodology

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.

## Organizational Impact

- Improve the organization projects output by enhancing the quality of engineering review
- Reduce the organization expenses by new idea for maintenance scheme
- Improve the organization investment by knowing the Up to date technology in QC and its practically in real project
- Improve the projects investment by define the way to have a durable structure by better design, construction or maintenance

## Personal Impact

- Enhance the design capability of the trainee
- Increase knowledge of up to date of execution phase
- Increase the skill for maintenance approach
- Increase the skill to enhance quality of all phases of the oil and gas projects

## Who Should Attend?

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 and steel structure.

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

## SEMINAR OUTLINE

### DAY 1

- 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 2

- Codes recommendation for the quality control
- Codes and specifications limitations as ACI and BS
- Comparison on different non-destructive testing

- Construction ways in hot climate
- The nature of concrete variability
- Concrete materials properties
- Aggregate QC
- Cement QC
- Concrete mix QC
- Steel sections QC
- Check laminar and porosity in steel sections
- Example of QC of concrete foundations construction under vibrating machine

### DAY 3

- 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 form
- Pouring concrete in hot climate
- Workability test for concrete
- Cube and cylinder test
- The replacement of the steel bars
- The permissible deviation in erection steel structure
- Material receiving, storage and preservation at site
- Interface between E & I, piping and structure in construction activities


### DAY 4

- Core test
- Rebound hammer
- Lok test
- Load test for floor deck under machine
- Ultrasonic test
- Corrosion phenomena affect quality
- Different corrosion protection system
- QC for corrosion protection system for oil and gas plant
- Wooden and steel form QC
- Steel reinforcing QC
- Procedure of QC onsite
- Case study for foundation in gas plant

### DAY 5

- Materials used in welding steel structure
- QC for Equipment preservation and installation for static equipment
- QC for tank construction
- QC for foundation construction and machine installation
- The precaution in welding process
- Anchor bolts QC
- The reasons of welding defects
- Overview of the 5 methods (PT,MP,RT,UT,VI)
- Integrity management system for oil and gas plants

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