



SC021: Construction Quality Control and Assurance

Training Description:

The purpose of this course is to present the measures to be taken to determine the compliance with plans and specifications through test and systems of inspection during construction. Construction quality control is defined as a planned system of activities that ensures that a facility was constructed as specified in the design. The system includes inspections, verifications, audits, and evaluations of materials and workmanship necessary to determine and document the quality of the constructed facility.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Define construction quality control and assurance and apply quality management techniques and procedures and the non-destructive testing for concrete and steel structures
- ✓ Implement total management system using the ISO 9001 standards, quality assurance, quality control and who will perform, Pareto chart, process chart for ready mix plant, coefficient of variation and the quality of auditing the construction site
- ✓ Determine the nature of concrete variability
- ✓ Practice quality control procedure for concrete forum that includes pouring concrete in hot and cold weather, workability test for concrete, cube and cylinder test, the replacement of steel bars and etc.
- ✓ Apply proper welding procedure by understanding the welding symbol and precaution awareness in welding process
- ✓ Discuss non-destructive test and the various type of procedures including magnetic particle test, penetration test, radiographic test and ultrasonic test
- ✓ Define the defects from RT Film

Training Designed for:

This course is intended for all Structural and Civil Engineers, Road Construction Engineers and construction supervision of road projects. This course is also suitable to those who are interested in understanding the aspect of QA/QC in the construction industry such as Engineers, Supervisor's Construction Managers and other interested parties.

Training Requirement:

"Hand's on practical sessions, equipment and software will be applied during the course if required and as per the client's request."

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ Total Quality Management System

- ISO 9001 Requirement
- Quality Assurance
- Quality Control
- Pareto Chart
- Process Chart for Ready Mix Plant
- Coefficient of Variation
- Auditing the Construction Site Quality

DAY TWO:

❖ The Nature of Concrete Variability

- Concrete Materials Properties
- Aggregate QC
- Cement QC
- Concrete mix QC
- Submittal Steel Sections QC
- Check Laminar and Porosity in Steel Sections

DAY THREE:

❖ Quality Control for Concrete Forum

- Pouring Concrete in Hot and Cold Weather
- Workability Test for Concrete
- Cube and Cylinder Test
- The Replacement of the Steel Bars
- The Permissible Deviation in Erection Steel Structure
- Comparison between different Non-destructive Test
- Core Test
- Rebound Hammer
- Lok Test
- Load Test
- Ultrasonic Test

DAY FOUR:

❖ Welding Procedure

- Materials that is using in Welding in Steel Structure
- Understanding the Welding Symbol
- The Precaution in Welding Process
- The Reasons of Welding Defects

DAY FIVE:

❖ DIFFERENTIATE BETWEEN NON-DESTRUCTIVE TEST

- Magnetic Particle Test Procedure
- Penetration Test Procedure
- Radiographic Test Procedure
- Radiographic Test Precaution
- How to Define the Defects from RT Film
- Ultrasonic Test Procedure

- ❖ Course Conclusion
- ❖ POST-TEST and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

Aisha Relativo - Training & Career Development Manager

aisha@cmc-me.com / training@cmc-me.com

Tel.: +971 2 665 3945 or +971 2 643 6653 | Mob.: +971 52 2954615