Quality control of reinforced concrete slabs and building construction

11 – 15 November 2019, UK - London

Course Objectives:

This 5 days basic course aims at providing Inspection, Quality control, Quality assurance and Total quality management of reinforced concrete slabs, construction materials in construction projects, analysis and detailing. Different types & data for foundation design, concrete liquid retaining structures, proper selection of their types, tall buildings act.
The participants will be familiar with all quality management technique and procedure and the available non-destructive testing for concrete and steel structure project.
After attending the course you will Prepare QA/QC for site work and communicate well with project manager, construction manager, project engineers and site foreman.

Who Should Attend?

This course is designed for construction engineer, project managers, QA and QC staff for junior and senior engineer.
Engineers who is interested in understanding the aspect of QA/QC in the construction industry such as engineers, supervisor's construction managers, and other interested parties

Course Curriculum:

Day 1

- First Exam
- Introduction to quality and application of quality limits on structural and engineering materials
- Definition of quality
- Inspection, Quality control, Quality assurance and Total quality management of construction materials in construction projects
- Inspection, Quality control, Quality assurance and Total quality management
- Principles of Quality control with local and international codes of practice (ACI – BSS – ASTM)
- Introduction to concrete constitutes
- Introduction to reinforcing steel
- Introduction to post tensioned tendons
- Solved examples, world case studies, applications and open discussions, GCC EXPERIANCES.

Day 2

- Types of concrete
  - Ordinary concrete
    - ✓ Advantages
    - ✓ Disadvantages
    - ✓ Method of application for various type of structural elements
  - concrete mixtures
    - ✓ Advantages

✓ Disadvantages
✓ Method of application for various type of structural elements

- reinforced concrete with polymers

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

- Self-Compacted Concrete

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

- High strength concrete

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

- High-performance concrete

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

- Ultra-High-performance Concrete

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

- Fibre-reinforced polymers

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

- Reinforcement Steel

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

- Cement

✓ Advantages
✓ Disadvantages
✓ Method of application for various type of structural elements

Solved examples, world case studies, applications and open discussions, GCC EXPERIANCES

Day 3

- Types of reinforced concrete slabs

✓ Solid slabs
✓ Hollow block slabs
✓ Flat slabs
✓ Flat slabs with column head
✓ Flat slab with drop panels
✓ Flat slab with both column head and drop panels
✓ Waffled slabs
✓ Paneled system
✓ Precast slab system

✓ Pretension slab system
✓ Posttensioned slab system

- Solved examples, world case studies, applications and open discussions, GCC EXPERIANCES

Day 4

- Site visit to a laboratory facility unit for testing concrete and structural elements and structural materials and method of testing according to codes of practice (ACI – BSS – ASTM)
- Examples for :
  - ✓ Testing for fresh concrete (Definitions – Types and methods).
  - ✓ Testing for Hardened concrete (Definitions – Types and methods).
  - ✓ Testing for Reinforcement steel (Definitions – Types and methods).
  - ✓ Testing for reinforcing tendons (Definitions – types and methods).

Solved examples, world case studies, applications and open discussions, GCC EXPERIANCES

Day 5

- ✓ Form work quality control
- ✓ Types of formworks
- ✓ Wooden form work
- ✓ Plywood form work
- ✓ Aluminium form work
- ✓ Fiber glass form work
- ✓ Doka system
- ✓ Peri system
- ✓ Myvan system

- Training on the work specification for some agenda items chosen by the trainee is presented and discussed as well as the method of preparing laboratory tests and prepare for inspection and quality control engineering reports
- Solved examples, world case studies, applications and open discussions, GCC EXPERIANCES
- Final Exam

Course Fee : US$ 4,500