

# **Quality Control and Assurance for Concrete and Steel Structure Projects Training program**

## **Introduction**

This course is intended for structural and civil engineers who are interested in the quality control and QA with the most recent non-destructive testing for concrete and steel structure.

## **Objectives**

The participants will be familiar with all quality management technique and procedure and the available non-destructive testing for concrete and steel structure project.

## **Who Should Attend?**

Construction engineer, project managers, QA and QC staff for junior and senior engineer.

## **Methodology**

This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include;

- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions

## **Certificate**

**BTS** attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration

## Contents

- ISO 9001 requirement
- Total Quality management system
- Quality assurance
- Quality control
- Who will perform the quality control?
- Pareto chart
- Process chart for ready mix plant
- Coefficient of variation
- Auditing the construction site quality
- 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
- Quality control for concrete form
- 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
- 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.
- 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