Quality Control on Construction Site

A Realistic Method for Resolving Construction Issues

Introduction

The scorching weather and other environmental factors are causing structural engineers a lot of trouble. When building a reinforced concrete structure, quality control is a multifaceted process involving engineering, administration, and statistics. In hot climates, greater vigilance is needed in the concrete industry and during building construction to ensure that the structure is built to withstand the weather. Every example and actual case study related to initiatives involving oil and gas.

The use of statistics as a tool to manage all aspects of building projects, particularly the concrete product, will be the main focus of this training session on construction quality control on site. The range of the various codes and specifications serves as an illustration of the concrete quality control.

The state-of-the-art methodology to control the quality of the concrete, detailed methods to control the specification recommendations, and all the new, modern techniques and methodology used in the concrete industry to enhance the quality of the concrete are all covered in this training course on civil and construction engineering. The primary QC idea for shell specs and other multinational oil and gas businesses will be covered in this training session on construction quality control on site.

Included in this Course N Carry training programme will be:

- Various standards and norms for quality assurance
- Test of quality control (visual presentation)
- Qualitative factors' effects on project sustainability
- Key competencies and information needed for QC On Site
- Concrete quality control protocol in a warm climate
- QC for operations involving steel structures

Objectives

Following this training session, attendees will:

- Become familiar with all quality management methods and approaches.
- Find out about non-destructive testing options for projects involving steel and concrete structures.

- Recognise the useful instruments for managing the concrete as well as the entire project, which entails field testing and the necessary lab space.
- Learn about the different methods used to assess the structures that are being built.
- Discover how to test modern field parameters like concrete strength.
- Acquaint yourself with all methods of quality control in hot climates.

Training Methodology

To guarantee optimal comprehension, retention, and understanding of the material provided, this Construction Quality Control on Site training course will make use of a range of tried-and-true adult learning strategies. There will be a lot of interaction and participation in the daily workshops. Images and videos will be utilised to provide examples.

Organizational impacts

- By improving the calibre of engineering review, increase the organization's project output.
- Lower the organization's costs by implementing a novel maintenance plan.
- Enhance the organization's investment by becoming aware of the most recent QC technology and how it works in actual projects.
- Enhance the project's investment by outlining the best practices for designing, building, and maintaining a sturdy structure.

Personal Imapct

- Boost the trainee's capacity for design
- Become more knowledgeable about the most recent execution phase
- Become more proficient in the maintenance approach
- Develop the ability to improve the quality of each stage of the oil and gas project.

Who should attend?

Professionals in charge of quality assurance and control are the target audience for this Course N Carry training course, which covers the most latest non-destructive testing methods for steel and concrete structures.

This training course on Construction Quality Control on Site is also beneficial for:

- Civil and structural engineers
- Engineers in Construction
- Supervisors of Projects
- Managers of Construction
- Experts in Quality Assurance and Quality Control

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Day 1

Overview of Concrete Total Quality Management (TQM)

- System of Total Quality Management
- Control and Quality Assurance
- Who is going to handle quality control?
- Limitations of Quality Management in Oil and Gas Projects
- Pareto Graphic
- How can the concrete from the ready-mix facility be controlled?
- How may concrete casting be managed on-site?
- Variation Coefficient
- Examining the Quality of the Construction Site
- Taking Care in the Design Mix during Hot Weather

Day 2

Concrete Material's Components

- Codes of Advice for Quality Assurance
- Standards and Codes Restrictions such as ACI and EN
- Comparing Various Non-destructive Testing Methods
- Concrete Variability's Nature
- Getting Ready for Concrete
- Properties of Concrete Materials: Cement and Aggregate
- Examine the Steel Bars for Corrosion
- A Concrete Foundation Construction Quality Control Example Using a Vibrating Machine

Day 3

Qualities of New Concrete

- Fundamental Statistics
- Gathering Information for Assessments
- Figures for the Quality Control Information
- Assessing the Grade of the Product
- Mixture for Concrete Design
- Care in the Design Mix for a Remote Area with a Hot Climate
- Quality Control for New Concrete
- Concrete Formwork Quality Control
- Concrete Pouring Issues in Hot Weather
- Concrete Workability Test
- Test of Cube and Cylinder

- Changing Out the Steel Bars
- The Allowed Variance in Steel Structure Erection
- Applied Load in Construction Activities on the Steel Pipe Rack Structure

Day 4

Comparing Various Non-destructive Testing

- Comparing the Results of Various Fresh Concrete Tests
- Fundamental Exam
- Rebounding Hammer
- Lok Examination
- Test of Load Under Machine for Floor Deck
- Ultrasonic Examination
- Corrosion Events Impact Productivity
- Various Systems of Corrosion Protection
- Quality Control for the Oil and Gas Plant Corrosion Protection System
- Using QC on Steel and Wood Formwork
- QC for Steel Reinforcing
- The QC Onsite Procedure
- QA/QC Case Study for Gas Plant Foundation

Day 5

Integrity Supervision

- Materials for Steel Structure Welding
- Quality Control for Equipment Installation and Maintenance of Static Equipment
- Quality Control in Tank Building
- QC for Machine Installation and Foundation Construction
- The Welding Process's Precaution
- Anchor Bolts Quality Control
- The Causes of Flaws in Welding
- Summary of the Five Techniques (PT,MP,RT,UT,VI)
- Oil and Gas Plant Integrity Management System