



Construction & Building Envelope Inspection



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Introduction:

Inspection is the observation of construction for conformance with the approved design documents. This course on Construction & Building Envelope Inspection will highlight and cover all the inspection & testing aspects for concrete and steel structure construction, and building envelope. It will enable individuals, who are in the inspection and testing field or want to be a specialist inspector, to understand the nature and the importance of this function.

This training course will help the attendees to understand the types of inspection and testing involved in a construction project, which are mandatory to assure the quality of materials used as well as the workmanship. It will also provide guidance and recommendations for design and inspection consideration to provide a long-lasting exterior building envelope system

Targeted Groups:

- Engineers
- Architects
- Practicing Building Construction Inspectors
- Project Engineers
- NDE Lab Personnel
- Technicians and Technologists involved with building construction
- Contractors and Building Owners

Course Objectives:

At the end of this course the participants will be able to:

- Learn about testing and inspection techniques of engineering materials
- Understand the workmanship of building construction
- Learn how to be familiar with NDE for the steel and welding
- Have the capability to inspect the finishing work activity
- Understand the testing and inspection for road construction
- Explore the ways and skills for the inspection

Targeted Competencies:

- Discussions on the Quality Management System
- The Importance of Inspection and Testing Activity
- Applying the Inspection and Testing in many construction areas
- Focusing on Practical and Theoretical Ways of Inspection
- How to integrate new inspection techniques into the work domain?

Course Content:

Unit 1: On-site Quality Management System & Inspection:

- Total Quality Management System
- What is Inspection?
- Why is Inspection needed?
- What components require Special Inspection?
- What are the role and responsibilities of Special Inspectors?

Unit 2: General Inspection Guidelines:

- Field Inspectors
- Steel Reinforced Bars Inspection
- Concrete Construction Inspection
- Structural Masonry Inspection
- Shotcrete Inspection
- Concrete NDT

Unit 3: Steel Structure Inspection Guidelines:

- Structural Steel Inspection
- Anchor Bolts, Dowels, and Hold-down System Inspections
- Non-destructive Testing
- Level II and Level III NDE
- Welding Inspector
- Fireproofing Inspection
- Test Method for determining Concrete Floor Flatness and Levelness F-Numbers
- Classification of Soils for Engineering Purposes

Unit 4: Soil Inspection Guidelines:

- Field Inspectors
- Soil Inspection On-site
- Earthwork Inspection
- Asphaltic Concrete Inspection
- Road Construction Inspection

Unit 5: Architectural Inspection Guidelines:

- What makes up the building envelope?
- Roofing and Architectural Sheet Metal
- Insulation Types and Inspection
- Wood Work Inspection

Unit 6: Architectural Work Inspection Guidelines:

- Plastering and Painting Types and Inspection
- Tiles Materials Inspection
- Exterior Cladding Systems
- Deck and Below-grade Waterproofing
- Doors, Windows, and other Wall Penetrations
- Compatibility of Building Envelope Components for Blast Resistance