

€ TRAINING

ASME Plant Inspector Level 1





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Introduction:

The ASME Plant Inspector Level 1 training program provides foundational skills for inspecting industrial plants, covering techniques, codes, and standards set by ASME for ensuring safety and integrity. Completion of this program enables individuals to effectively assess the integrity and safety of various plant components and equipment.

Training Objectives:

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

- Understand the rationale and significance of inspection in industrial settings.
- Implement Risk-Based Inspection RBI methodologies for efficient assessment.
- Grasp engineering materials and fundamental design principles essential for inspection.
- Conduct in-service monitoring for piping and pressure vessels.
- Perform assessments for useful remaining life and storage tank inspection.
- Design comprehensive inspection plans while executing testing and examination procedures.

Targeted Audience:

- NDT Technicians/Inspectors.
- Inspection/Integrity/Project Engineers.
- Technical Assistants.
- Project/Inspection Coordinators.
- Plant Supervisors.

Program Outline:

Unit 1:

Inspection Essentials: Pressure Equipment, Materials, Objectives, Requirements:

- Background engineering knowledge including pressure equipment types and basic materials.

- The inspection role includes the objectives of inspection reports.
- Statutory requirements.
- Equipment failure modes including principal stress and crack propagation.

Unit 2:

DMs, Detection, Evaluation, and Professional Practices:

- Damage mechanisms DMs including fatigue and creep.
- Detection of DMs including techniques of thickness measurement.
- Evaluation of degraded items including measurement of vessel peaking and distortion.
- Professional or technical plantation.

Unit 3:

Equipment Inspection: Plans, Reporting, Skills, and Industries:

- Specific equipment inspection plans including inspection frequencies.
- Inspection reporting includes the use of the correct technical terminology.
- Practical skills include writing an assessed inspection plan..
- Petrochemical and process industries and become knowledgeable in inspection plans.

Unit 4:

Plant Inspection: Technical Management, Income Sources, and Certification:

- Technical and management-related knowledge relating to plant inspection
- Various sources of income namely, Salary, work contract, Commission, and Rent.

Unit 5:

Advanced Inspection Techniques and Technologies:

- Introduction to advanced inspection techniques for enhanced assessment capabilities.
- Application of non-destructive testing NDT methods such as ultrasonic testing UT and radiographic testing RT for comprehensive inspections.



- Utilization of advanced technologies like drones and robotics for remote and inaccessible areas.
- Integration of data analytics and predictive maintenance tools to optimize inspection processes and enhance equipment reliability.