



Inspection, Repair & Maintenance Of Crude Oil Storage Tanks



Introduction:

This unique program is designed for oil and gas industry personnel, suppliers, contractors and subcontractors responsible for the design, construction, inspection, maintenance, regulatory compliance, or operation of API above ground storage tanks. The course will provide a comprehensive overview of the relevant standards for new construction and existing tank inspection, repair, alteration and maintenance, highlighting the most recent revisions and upcoming changes. Emphasis will also be placed on essential storage tank technology not covered by the standards. This course conforms to API 650, API 653, and API 620.

Who Should Attend?

Production Engineers, Operators, Technicians, Senior Operating personnel, Foremen, Production Chemists, Custody Measurement and Tank Plants & Farms Personnel, Marine Operation Personnel, Oil Movement Personnel, Metering Engineers and Process, Facilities Engineers

Course Objectives:

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By the end of this course delegates will be able to:

- Gain an understanding of the design, material and fabrication aspects of tank construction with respect to repair or restrictions of use after degradation in service
- Learn about the different types of tanks
- Know about the basics of tank site, design & construction
- Gain an understanding of the failures and problems of oil and gas tanks
- Learn how to troubleshoot the various tank problems for better efficiency
- Understand the principles, output and limitations of inspection methods and techniques.
- Be able to make a sound assessment of the integrity of a storage tank and foundation, and offer guidance on the need for repair, its urgency and methods of affecting such repair
- Learn the API standards and specifications
- Acquire a thorough understanding and practice of EH&S safety standards and practices

Course Outline:

- Types of Tanks
- Tank Site, Foundation Design & Construction
- Preventing Bottom Leaks, Tank Settlement
- Materials - Carbon Steel, Aluminum, Stainless
- Design, Sample Problems, Heated Tanks
- External/Internal Pressure, Seismic, other Loads
- Nozzles and Roof Types
- Erection, Welding Requirements
- Testing & Tolerances
- Inspection, Radiography, Ultrasonic Alternative
- Welding Requirements
- Oil storage tank safety requirements

- Codes of practice
- Building Regulations and planning consent
- Types of oil and their indemnification
- Steel and thermoplastic oil storage more than 3500litres
- Constructional standards
- Oil tank fittings
- Fuel feed pipe-work
- Oil storage tank system design including L1
- Thermostatic controls
- Gauges and overfill alarm
- Contamination problems
- Maintenance standards
- Marking, API Monogram
- Documentation, Special Service Standards, Inquiries
- Existing Tank Evaluation, Inspection, Repair, Alteration & Reconstruction
- Definitions of Authorized Inspector, Storage Tank Engineer
- How to evaluate and keep bottoms leak free
- Inspection and required frequency
- Repair and alteration requirements
- Examination and testing
- Low Pressure Storage Tanks
- Refrigerated and Cryogenic (such as LNG) Tanks
- Tank Failures & Tank Problems