



Maintenance & Reliability Management

Pipeline and Piping Inspection Maintenance Repair Management

Course Introduction

Pipeline and piping systems are essential for transporting critical fluids and gases in various industries, from oil and gas to water and wastewater. Effective inspection, maintenance, and repair management are vital for ensuring pipeline integrity, safety, and operational efficiency. By identifying issues early, preventing failures, and efficiently managing repairs, organizations can avoid costly downtimes and reduce the risks associated with pipeline malfunctions or accidents.

This training program will cover all key aspects of pipeline and piping system management, from inspection and maintenance to repair and continuous improvement. Participants will learn how to perform effective inspections, apply maintenance strategies, and implement successful repair techniques.

Target Audience

This course is designed for maintenance managers, engineers, and supervisors responsible for the inspection, maintenance, and repair of pipeline and piping systems in industrial and commercial environments.

Learning Objectives

- Understand the role of pipelines in industrial operations and their importance in maintaining system reliability.
- Learn how to apply various inspection techniques to assess pipeline conditions accurately.
- Gain expertise in developing and implementing effective pipeline maintenance strategies.
- Learn various pipeline repair methods and how to apply them safely and effectively.

- Understand how to manage and optimize pipeline inspection, maintenance, and repair programs for continuous improvement.

Course Outline

• 01 DAY ONE

Introduction to Pipeline and Piping Systems

- Overview of pipeline and piping systems in industrial applications
- Understanding the critical role of pipelines in operations
- Types of pipelines and materials used in construction
- Common pipeline failures and their causes
- Key industry standards and regulations (ASME, API, etc.)
- Importance of effective inspection and maintenance in pipeline integrity
- The role of management in ensuring safe and reliable pipeline systems

• 02 DAY TWO

Pipeline Inspection Techniques and Technologies

- Introduction to common pipeline inspection methods (visual, ultrasonic, X-ray, etc.)
- The importance of regular and thorough inspection for early detection of issues
- Non-destructive testing (NDT) techniques for pipeline integrity
- How to choose the appropriate inspection method based on pipeline conditions
- The role of drones and robotics in modern pipeline inspections
- Ensuring compliance with inspection standards and regulatory requirements
- Interpreting and documenting inspection results for maintenance planning

• 03 DAY THREE

Pipeline Maintenance Practices and Strategies

- Developing a comprehensive pipeline maintenance plan
- Types of maintenance: preventive, corrective, and predictive
- Routine maintenance tasks and their importance in extending asset life
- Managing corrosion and other degradation factors in pipelines
- Implementing preventive maintenance to avoid costly repairs
- The role of condition monitoring in predicting maintenance needs
- Best practices for maintaining pipeline operational efficiency and reliability

• 04 DAY FOUR

Pipeline Repair Techniques and Procedures

- Overview of pipeline repair methods: welding, clamping, and coating
 - Steps involved in planning and executing a pipeline repair
 - Addressing common pipeline damage types (cracks, leaks, dents)
 - Safety considerations when performing pipeline repairs
 - Temporary versus permanent repair solutions
 - The role of innovative repair technologies (e.g., composite materials)
 - Case studies of successful pipeline repair projects
- 05 DAY FIVE

Pipeline Management and Continuous Improvement

- Managing pipeline inspection, maintenance, and repair records
- Integrating data-driven decisions into pipeline maintenance management
- Using software tools for pipeline management and scheduling repairs
- Key performance indicators (KPIs) for assessing pipeline system health
- Continuous improvement methods for optimizing pipeline management
- Strategies for reducing downtime and repair costs

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
June 16, 2025	June 20, 2025	5 days	4250.00 \$	UAE - Dubai
July 28, 2025	Aug. 1, 2025	5 days	4250.00 \$	UAE - Dubai