

INSPECTION, MAINTENANCE & REPAIR

“Extend Asset Life and Performance Through Strategic Inspection, Maintenance, and Repair.”

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

Introduction

This intensive 5-day course equips participants with essential knowledge and hands-on techniques in inspection, preventive maintenance, and repair of critical industrial equipment and infrastructure. The program blends industry standards, inspection protocols, risk-based maintenance, and repair strategies to minimize downtime and maximize asset reliability. Whether in oil & gas, power, utilities, or manufacturing, this training ensures professionals can maintain safe, efficient, and regulatory-compliant operations.

Objectives

By the end of the course, participants will be able to:

- Understand principles and types of industrial inspections (visual, NDT, etc.)
- Design and implement preventive and condition-based maintenance programs
- Evaluate equipment condition and determine optimal repair strategies
- Apply codes and standards for inspection and repair (API, ASME, ISO)
- Document inspection findings and plan corrective actions

Why Attend

Unexpected failures and downtime can result in huge financial losses and safety risks. This course empowers professionals to proactively detect degradation, maintain compliance, and carry out timely repairs to extend asset life and minimize risk.

Target Audience

- Maintenance and Inspection Engineers
- Mechanical, Civil, and Process Engineers
- Plant and Facility Managers
- Reliability and Asset Integrity Professionals
- QA/QC and Technical Supervisors

Individual Benefits

- Develop critical skills in inspection methods and reporting
- Learn to evaluate component conditions and recommend repair techniques
- Improve understanding of maintenance planning and scheduling
- Qualify for advanced roles in reliability, inspection, or technical services

Organizational Benefits

- Improve asset integrity and reduce downtime
- Optimize maintenance resources and scheduling
- Ensure compliance with regulatory and safety standards
- Enhance operational performance and lifecycle cost savings

Instructional Methodology

- Real-world case studies and best-practice frameworks
- Hands-on activities in visual inspection, assessment, and planning
- Interactive discussions, group exercises, and diagnostics simulations
- Tool demonstrations and guided repair planning workshops
- Final certification exam and personal action plan

Course Outline

DETAILED 5-DAY COURSE OUTLINE (CUSTOMIZABLE)

Training Hours: 7:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee Breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Principles of Inspection & Asset Degradation

- Module 1: Introduction to Maintenance Types – Preventive, Predictive, Corrective (07:30 – 09:30)
- Module 2: Inspection Objectives and Techniques (Visual, NDT, Invasive) (09:45 – 11:15)
- Module 3: Failure Modes and Degradation Mechanisms (Fatigue, Corrosion, Creep) (11:30 – 01:00)
- Module 4: Risk-Based Inspection (RBI) Fundamentals (02:00 – 03:30)

Day 2: Inspection Methods & Documentation

- Module 1: Visual and Dimensional Inspection Tools (07:30 – 09:30)
- Module 2: NDT Techniques – UT, PT, MT, RT, Eddy Current (09:45 – 11:15)
- Module 3: Inspection Planning, Checklists & Safety Procedures (11:30 – 01:00)
- Module 4: Inspection Reports and Defect Categorization (02:00 – 03:30)

Day 3: Maintenance Strategies & Scheduling

- Module 1: Preventive Maintenance Program Design (07:30 – 09:30)
- Module 2: Condition-Based Maintenance – Sensors & Diagnostics (09:45 – 11:15)
- Module 3: Spare Parts, CMMS, and Work Order Management (11:30 – 01:00)
- Module 4: Maintenance KPIs and Performance Tracking (02:00 – 03:30)

Day 4: Repair Planning and Execution

- Module 1: Determining Repair Needs – Acceptance Criteria and Limits (07:30 – 09:30)
- Module 2: Welding Repairs, Coating Restoration, Component Replacement (09:45 – 11:15)
- Module 3: Temporary vs Permanent Repairs & Fitness for Service (11:30 – 01:00)
- Module 4: Codes and Standards – ASME, API 510/570, ISO Guidelines (02:00 – 03:30)

Day 5: Case Studies, Action Planning & Certification

- Module 1: Integrated Maintenance & Repair Case Study (07:30 – 09:30)
- Module 2: Auditing & Continuous Improvement Strategies (09:45 – 11:15)
- Module 3: Group Workshop – Prepare a Maintenance Plan (11:30 – 01:00)
- Module 4: Final Exam, Wrap-Up, Certification & Action Planning (02:00 – 03:30)

Certification

Participants will receive a Certificate of Completion – Inspection, Maintenance & Repair upon successfully completing the course and final assessment. This credential supports advancement into senior maintenance, reliability, or inspection-focused roles in asset-intensive industries.

Why Choose MAWA Events

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