

ASSET INTEGRITY - INSPECTION MAINTENANCE & REPAIR - OIL & GAS ASSETS

"Safeguarding Oil & Gas Assets through Proactive Integrity Management"

Schedule

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

► **Available delivery methods:** Face-to-Face & Online Training, In-House Training

Introduction

Asset integrity is critical in the oil and gas industry to ensure operational safety, minimize unplanned outages, and extend asset lifespan. This course provides practical and technical knowledge on asset inspection, maintenance strategies, and repair methodologies, tailored to the challenges of upstream, midstream, and downstream operations. Participants will learn to manage corrosion, structural degradation, and equipment failure while complying with international standards.

Objectives

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

- Understand the components and lifecycle of asset integrity management (AIM)
- Implement risk-based inspection (RBI) and non-destructive testing (NDT) techniques
- Develop proactive maintenance and repair strategies for aging or degraded assets
- Apply international codes (API, ASME, ISO) for inspection and repair standards
- Integrate asset integrity with safety and environmental management systems

Why Attend

- Gain practical tools for identifying and addressing integrity threats
- Learn how to reduce unplanned downtime through proactive AIM
- Build internal capacity for inspection, data interpretation, and repair planning
- Improve regulatory compliance and ensure safe oil & gas operations
- Understand real-world applications through industry case studies

Target Audience

- Asset Integrity Engineers and Inspectors
- Maintenance and Operations Managers
- Mechanical, Structural, and Process Engineers
- Corrosion Engineers
- HSE Professionals
- Offshore Platform and Pipeline Managers
- Integrity, Reliability, and Risk Engineers

Individual Benefits

- Enhance your expertise in inspection and integrity techniques
- Improve diagnostic and decision-making skills for maintenance and repair
- Boost your career in reliability and safety engineering
- Gain international best practice exposure for working in hazardous environments

Organizational Benefits

- Lower total cost of asset ownership through reduced failures and downtime
- Enhance workforce capability to manage high-risk facilities
- Improve asset availability and life-cycle performance
- Meet safety and environmental regulations with robust AIM systems

Instructional Methodology

- Expert-led technical lectures
- Group workshops and risk-based planning exercises
- Real-world case studies from onshore and offshore facilities
- Visual tools, standards-based reference materials, and inspection reports
- Interactive Q&A and scenario-based troubleshooting

Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Foundations of Asset Integrity in Oil & Gas

- Module 1 (07:30 – 09:30): Introduction to Asset Integrity and Lifecycle Management
- Module 2 (09:45 – 11:15): Key Integrity Threats: Corrosion, Fatigue, Wear, and Erosion
- Module 3 (11:30 – 01:00): International Codes and Standards (API 580/581, ISO 55000, ASME)

Day 2: Inspection Planning and Techniques

- Module 4 (07:30 – 09:30): Risk-Based Inspection (RBI): Planning and Prioritization
- Module 5 (09:45 – 11:15): Non-Destructive Testing (NDT) Methods: UT, RT, MT, PT, AE
- Module 6 (11:30 – 01:00): Inspection Data Management and Decision Support Tools

Day 3: Maintenance Strategies and Corrosion Control

- Module 7 (07:30 – 09:30): Preventive vs Predictive Maintenance Strategies
- Module 8 (09:45 – 11:15): Corrosion Management Planning: Internal & External
- Module 9 (11:30 – 01:00): Cathodic Protection, Coatings, and Chemical Inhibitors

Day 4: Repair Techniques and Mitigation Planning

- Module 10 (07:30 – 09:30): Engineering Repairs: Welded, Clamped, and Composite Repairs
- Module 11 (09:45 – 11:15): Fitness-for-Service (API 579) and Failure Analysis
- Module 12 (11:30 – 01:00): Case Studies: Repair Decisions and Emergency Response

Day 5: Integration, Reporting, and Practical Simulation

- Module 13 (07:30 – 09:30): Integrating AIM with HSE, CMMS, and Operational Systems
- Module 14 (09:45 – 11:15): Final Workshop: Asset Inspection and Repair Planning Exercise
- Module 15 (11:30 – 01:00): Group Presentation, Feedback, and Certificate Distribution

Certification

Participants will receive a Certificate of Completion in “Asset Integrity – Inspection, Maintenance & Repair – Oil & Gas Assets” upon successfully completing the program.

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