

ASSET INTEGRITY MANAGEMENT: MATERIALS/CORROSION ENGINEERING & OIL & GAS PRODUCTION, PROCESSING & TRANSPORT ASSETS

“Safeguarding Critical Infrastructure from Design to Decommissioning”

Schedule

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

Introduction

This intensive training course provides a comprehensive overview of Asset Integrity Management (AIM) with a focus on materials engineering, corrosion control, and the lifecycle management of oil & gas production, processing, and transportation assets. Participants will gain a deep understanding of how to prevent failures, extend asset life, and ensure operational safety and efficiency in line with global standards and best practices.

Objectives

Participants will learn to:

- Implement a full Asset Integrity Management System (AIMS)
- Analyze degradation mechanisms and corrosion threats
- Select materials compatible with process conditions and environments
- Integrate design, maintenance, and inspection for life-cycle integrity
- Apply international standards such as API, NACE, ASME, and ISO

Why Attend

- Gain a multidisciplinary understanding of asset integrity from materials to operations
- Learn to prevent asset failures through informed engineering and management strategies
- Enhance safety, compliance, and profitability by improving inspection and maintenance
- Receive up-to-date knowledge on corrosion mitigation and failure prevention techniques
- Develop a proactive mindset for lifecycle asset performance and integrity assurance

Target Audience

- Integrity, Reliability, and Maintenance Engineers
- Corrosion and Materials Engineers
- Process and Operations Engineers
- Project and Asset Managers
- HSE and Quality Assurance Professionals
- Inspection Engineers and Facilities Supervisors

Individual Benefits

- Master practical skills in corrosion control and material selection
- Enhance your engineering decision-making with AIM principles
- Become a critical contributor to your organization's integrity programs
- Improve your professional value in upstream, midstream, and downstream operations

Organizational Benefits

- Extend asset service life and reduce unplanned shutdowns
- Lower OPEX through targeted inspection and maintenance
- Ensure regulatory compliance and environmental safety
- Align AIM with operational excellence and risk management goals

Instructional Methodology

- Case-based expert instruction
- Visual learning with process diagrams and failure photos
- Interactive workshops and group exercises
- Real-world case studies from upstream to pipeline integrity
- Compliance alignment with API 580/581, ASME B31.8, NACE MR0175/ISO 15156

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: Asset Integrity Management Fundamentals

- Module 1 (07:30 – 09:30): Overview of Asset Integrity Management Systems (AIMS)
- Module 2 (09:45 – 11:15): Lifecycle Integrity: Design, Construction, Operation, Decommissioning
- Module 3 (11:30 – 01:00): Roles of Corrosion and Materials Engineering in AIM

Day 2: Corrosion Mechanisms and Control Strategies

- Module 4 (07:30 – 09:30): Internal and External Corrosion Mechanisms in O&G Assets
- Module 5 (09:45 – 11:15): Coatings, Cathodic Protection, Inhibitors, and Corrosion Monitoring
- Module 6 (11:30 – 01:00): Material Selection for Corrosive Environments (NACE Guidelines)

Day 3: Inspection and Integrity Evaluation Techniques

- Module 7 (07:30 – 09:30): NDT Techniques: UT, RT, MT, PT, and Advanced Methods
- Module 8 (09:45 – 11:15): Risk-Based Inspection and Fitness-for-Service Assessments
- Module 9 (11:30 – 01:00): Data Management, CMMS, and Integrity KPI Tracking

Day 4: Processing, Pipelines, and Transport Asset Integrity

- Module 10 (07:30 – 09:30): Integrity Challenges in Oil & Gas Processing Units
- Module 11 (09:45 – 11:15): Pipeline Integrity: Pigging, Leak Detection, and Pressure Testing
- Module 12 (11:30 – 01:00): Case Studies: Failures and Best Practices in Field Operations

Day 5: Governance, Simulation, and Planning

- Module 13 (07:30 – 09:30): Integrity Governance, Audits, and Regulatory Compliance
- Module 14 (09:45 – 11:15): Group Integrity Challenge Simulation & Troubleshooting Workshop
- Module 15 (11:30 – 01:00): Personal Action Planning and Certification Ceremony

Certification

All participants will receive a Certificate of Completion in “Asset Integrity Management: Materials, Corrosion & Processing Assets” upon successful participation.

Why Choose MAWA Events

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