

RISK-BASED ASSET INTEGRITY MANAGEMENT / ASSET INTEGRITY ASSURANCE

“Safeguarding Critical Assets through Strategic, Risk-Based Integrity Management”

Schedule

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

► **Available delivery methods:** In-House Training

Introduction

This comprehensive course provides participants with practical and technical knowledge in applying risk-based strategies for Asset Integrity Management (AIM). The training covers the lifecycle of integrity planning, integrating inspection, maintenance, and risk assessment techniques to optimize asset performance, reduce downtime, and ensure regulatory compliance. Using a structured approach aligned with global standards (e.g., API, ISO, ASME), the course emphasizes critical decision-making based on risk, condition, and performance data.

Objectives

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

- Understand core principles of Asset Integrity and Risk-Based Inspection (RBI)
- Identify key degradation mechanisms and failure modes across asset types
- Conduct criticality assessments and prioritize inspection/maintenance
- Integrate condition monitoring, fitness-for-service (FFS), and lifecycle thinking
- Apply industry standards and methodologies (API 580/581, ISO 55000)
- Develop and manage a fit-for-purpose Asset Integrity Assurance Plan

Why Attend

- Gain confidence in applying RBI frameworks to improve asset performance
- Reduce inspection and maintenance costs without compromising safety
- Learn to manage asset failure risks through proven methodologies
- Enhance regulatory compliance and prepare for integrity audits
- Improve collaboration between operations, inspection, and risk teams

Target Audience

- Asset Integrity and Inspection Engineers
- Maintenance and Reliability Professionals
- Corrosion Engineers and Mechanical Engineers
- HSE Officers, Risk Managers, and Integrity Assurance Leads
- Oil & Gas, Power, Petrochemical, and Industrial Facility Operators

Individual Benefits

- Enhance technical competence in RBI and AIM frameworks
- Gain tools for decision-making and prioritization under constraints
- Improve your ability to ensure uptime, compliance, and integrity
- Become a valuable contributor to cross-functional asset teams

Organizational Benefits

- Extend the life of critical assets through optimized integrity plans
- Improve safety, environmental performance, and asset utilization
- Reduce cost of failure through proactive inspection strategies
- Align with global AIM best practices and industry regulations

Instructional Methodology

- Instructor-led workshops with real-world case studies
- Interactive RBI modeling exercises using API 580/581 tools
- Asset integrity planning templates and sample documentation
- Group activities, problem-solving, and scenario simulations
- Visual presentations, videos, and performance analytics

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 Fundamentals & Degradation Threats

- Module 1 (07:30 – 09:30): Fundamentals of Asset Integrity & Lifecycle Management
- Module 2 (09:45 – 11:15): Degradation Mechanisms: Corrosion, Fatigue, Creep, Erosion
- Module 3 (11:30 – 01:00): Risk Management in Integrity Planning

Day 2: Risk-Based Inspection Principles and Tools

- Module 4 (07:30 – 09:30): Introduction to RBI: Principles, Benefits & Standards (API 580/581)
- Module 5 (09:45 – 11:15): Criticality Assessment & Damage Mechanism Identification
- Module 6 (11:30 – 01:00): Probability and Consequence Modeling in RBI

Day 3: Risk-Based Integrity Planning & Execution

- Module 7 (07:30 – 09:30): Inspection Planning & Optimization Based on RBI Output
- Module 8 (09:45 – 11:15): Fitness-for-Service (FFS) Evaluation and Repair Decisions
- Module 9 (11:30 – 01:00): Managing Inspection Data and Integrity KPIs

Day 4: Implementing and Auditing AIM Programs

- Module 10 (07:30 – 09:30): Asset Integrity Assurance Program Design
- Module 11 (09:45 – 11:15): Integration with Maintenance, Reliability & HSE Systems
- Module 12 (11:30 – 01:00): Governance, Compliance & Audit Readiness

Day 5: Case Studies, Tools & Action Planning

- Module 13 (07:30 – 09:30): Case Study: Integrity Challenges in Oil & Gas Facilities
- Module 14 (09:45 – 11:15): Hands-on RBI and Integrity Simulation Workshop
- Module 15 (11:30 – 01:00): Action Plan, Review, and Certification

Certification

Certificate of Completion Risk-Based Inspection (RBI) Toolkit Sample Integrity Plan Templates

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training

Interested in running this course for your team?

Please contact us:

TEL:

+601116373203

EMAIL:

info@mawaevents.net

© Material published by MAWA Events shown here is copyrighted. All rights reserved. Any unauthorized copying, distribution, use, dissemination, downloading, storing (in any medium), transmission, reproduction or reliance in whole or any part of this course outline is prohibited and will constitute an infringement of copyright.