

Asset Integrity
Management in Oil & Gas:
Ensuring Safety,
Compliance &
Performance
Kuala Lumpur

AGILE LEADERS
Training Center



# Asset Integrity Management in Oil & Gas: Ensuring Safety, Compliance & Performance

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#### **Course Overview:**

The Asset Integrity Management Training Course in Oil & Gas Industry is a specialized corporate training program designed to empower professionals with the practical expertise to manage and sustain the integrity of petroleum assets across their lifecycle. Integrating global standards such as ISO 55000, this course addresses operational challenges, aging infrastructure, and the increasing demand for reliability in both offshore and onshore systems. Participants will explore methodologies like Risk-Based Maintenance RBM, FMECA, RCM, and asset inspection principles as applicable in topside and subsea asset integrity. This course not only strengthens foundational knowledge but also bridges the gap between theory and field execution. Expect to gain essential skills in Oil and Gas Asset Reliability, performance optimization, and risk mitigation through interactive modules and practical scenarios. Designed for today's complex industrial environment, this training ensures participants are well-equipped to implement and improve Asset Integrity Management in Oil and Gas organizations.

### **Target Audience:**

- Maintenance Engineers
- Reliability Engineers
- Operations Managers
- · Asset Managers
- Technical Inspectors
- Facility Engineers
- Project Managers
- Integrity and HSE Specialists

### **Targeted Organizational Departments:**

- Engineering & Maintenance
- Asset Integrity & Reliability
- Inspection & Corrosion
- Project Management
- Operations & Production
- Health, Safety & Environment HSE



#### **Targeted Industries:**

- Oil & Gas Upstream, Midstream, Downstream
- Petrochemicals
- Offshore Drilling and FPSOs
- Energy Infrastructure and Utilities
- Industrial Plants and Refineries

#### **Course Offerings:**

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

- Apply ISO 55000 Asset Management standards in petroleum operations
- Conduct Risk-Based Maintenance Training and plan inspection strategies
- Analyze failure modes using FMECA and RCM in Oil and Gas applications
- Implement Asset Integrity Best Practices across facility systems
- Assess, monitor, and extend asset lifecycle for improved reliability
- Address challenges in Offshore Asset Integrity Training and subsea systems
- Execute efficient inspection plans from an Oilfield Equipment Inspection Course perspective
- Integrate insights from Petroleum Asset Lifecycle Management into long-term asset strategies

### **Training Methodology:**

The course employs a multi-modal learning approach grounded in real-world application and strategic thinking. Participants will engage in:

- Case Studies: Review real scenarios of Asset Integrity Management in Oil and Gas to draw applicable lessons
- Group Exercises: Team-based tasks on designing integrity improvement plans and applying FMECA and RCM
- Interactive Sessions: Facilitator-led discussions around the use of ISO 55000, RBM, and inspection tools in various petroleum contexts
- **Workshops**: Hands-on practice sessions simulating offshore inspection routines and lifecycle tracking
- Feedback & Reflection: End-of-day sessions to capture insights and apply them to participants' organizational needs
  - The entire methodology is reinforced with tools and approaches that align learning with operational realities in **Oil and Gas Asset Reliability**.



#### **Course Toolbox:**

- Digital workbook & handouts
- ISO 55000 guideline excerpts
- Risk matrix & hazard log templates
- Maintenance planning checklist
- Failure Mode and Effects Analysis FMEA template
- Lifecycle performance dashboard samples
- Online access to further readings and industry case studies
   Note: This course offers insights and examples of tools but does not include licensed software or proprietary toolkits. All resources are aligned with themes such as Asset Integrity Best Practices and Subsea and Topside Integrity Management.

#### **Course Agenda:**

#### **Day 1: Fundamentals of Asset Integrity Management**

- Topic 1: Introduction to Asset Integrity Management in Oil and Gas
- Topic 2: Asset Management Lifecycle and Process Framework
- Topic 3: ISO 55000 Overview and Certification Relevance
- Topic 4: Classification of Asset Failures and Integrity Issues
- Topic 5: Building Asset Integrity Policies and Strategic Planning
- **Topic 6:** Roles and Responsibilities in Asset Integrity Programs
- Reflection & Review: Key success factors in launching integrity programs

#### Day 2: Risk-Based Approaches to Asset Integrity

- **Topic 1:** Risk Identification and Categorization for Petroleum Assets
- Topic 2: Risk Assessment Tools: Risk Matrix, Risk Register, Hazard Logs
- Topic 3: Contingency Planning and Risk Control Measures
- Topic 4: Regulatory Compliance and Risk Mitigation Techniques
- Topic 5: Decision-Making Under Uncertainty and Asset Criticality
- Topic 6: Risk Communication Across Technical and Managerial Teams
- Reflection & Review: Applying risk-based integrity strategies in real settings

#### Day 3: Maintenance Strategies and Reliability Engineering

- Topic 1: Principles of Reliability-Centered Maintenance RCM
- **Topic 2:** Conducting FMECA in Oil and Gas Operations
- Topic 3: Predictive, Preventive, and Corrective Maintenance
- Topic 4: Risk-Based Maintenance Planning and Scheduling
- Topic 5: Maintenance of Static and Rotating Equipment
- Topic 6: Case Studies in Offshore Asset Integrity and RCM Application
- Reflection & Review: Evaluating reliability performance through KPIs



#### **Day 4: Lifecycle Management and Performance Optimization**

- Topic 1: Lifecycle Phases in Petroleum Asset Management
- Topic 2: RAMS: Reliability, Availability, Maintainability, Safety Principles
- Topic 3: Asset Integrity KPIs and Data Collection Techniques
- Topic 4: Digital Tools and Dashboards for Asset Monitoring
- Topic 5: Condition Monitoring and Performance Trend Analysis
- **Topic 6:** Strategies for Extending Asset Life and Cost Optimization
- Reflection & Review: Linking lifecycle planning to financial performance

#### **Day 5: Asset Integrity Improvement and Execution**

- Topic 1: Performance Audits and Integrity Assessment Methodologies
- Topic 2: Building Effective Integrity Improvement Plans
- Topic 3: Execution of Inspection Programs and Audit Schedules
- **Topic 4:** Subsea vs. Topside Integrity: Technical Considerations
- Topic 5: Leadership and Culture in Asset Integrity Excellence
- **Topic 6:** Enterprise-Wide Integration of Asset Integrity Strategies
- Reflection & Review: Consolidation of learning and strategic application

#### **FAQ:**

### What specific qualifications or prerequisites are needed for participants before enrolling in the course?

No formal qualifications are required, but a background in engineering, operations, maintenance, or asset management in the energy sector is recommended for maximum benefit.

### How long is each day's session, and is there a total number of hours required for the entire course?

Each day's session is generally structured to last around 4-5 hours, with breaks and interactive activities included. The total course duration spans five days, approximately 20-25 hours of instruction.

### How does this course address differences between topside and subsea asset integrity?

The course includes dedicated content and case studies that compare integrity challenges across subsea and topside systems, offering practical frameworks for both contexts.



## How This Course is Different from Other Asset Integrity Management Courses:

This Asset Integrity Management Training Course in the Oil & Gas Industry is uniquely tailored to bridge theoretical frameworks with practical execution strategies, making it ideal for both operational and managerial staff. Unlike generic AIM programs, this course emphasizes tools like FMECA and RCM in Oil and Gas, offshore reliability strategies, and compliance with ISO 55000. It draws extensively from real-world field challenges and strategic methods, ensuring that participants walk away with actionable skills, not just academic knowledge. The integration of Risk-Based Maintenance Training, lifecycle planning, and structured asset inspection principles adds unmatched depth. Whether you're responsible for Oilfield Equipment Inspection, performance dashboards, or Subsea and Topside Integrity Management, this course delivers comprehensive coverage tailored for today's energy industry complexities.



### **Training Course Categories**



Finance and Accounting Training Courses



Agile PM and Project Management Training Courses



Certified Courses By International Bodies



Communication and Public Relations Training Courses



Data Analytics Training and Data Science Courses



Environment & Sustainability Training Courses



Governance, Risk and Compliance Training Courses



Human Resources Training and Development Courses



IT Security Training & IT Training Courses



Leadership and Management Training Courses



Legal Training, Procurement and Contracting Courses



Maintenance Training and Engineering Training Courses



### **Training Course Categories**



Marketing, Customer Relations, and Sales Courses



Occupational Health, Safety and Security Training Courses



Oil & Gas Training and Other Technical Courses



Personal & Self-Development Training Courses



Quality and Operations Management Training Courses



Secretarial and Administration Training Courses



### **Training Cities**



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### **Training Cities**



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Milan - Italy



Montreux - Switzerland



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Muscat - Oman



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San Diego - USA



Sharm El-Sheikh -Egypt



Tbilisi - Georgia



Tokyo - Japan



**Trabzon - Turkey** 



Vienna - Austria



Zanzibar - Tanzania



Zoom - Online Training

## WHO WE ARE

Agile Leaders is a renowned training center with a team of experienced experts in vocational training and development. With 20 years of industry experience, we are committed to helping executives and managers replace traditional practices with more effective and agile approaches.

### **OUR VISION**

We aspire to be the top choice training provider for organizations seeking to embrace agile business practices. As we progress towards our vision, our focus becomes increasingly customer-centric and agile.

### **OUR MISSION**

We are dedicated to developing valueadding, customer-centric agile training courses that deliver a clear return on investment. Guided by our core agile values, we ensure our training is actionable and impactful.

### WHAT DO WE OFFER

At Agile Leaders, we offer agile, bite-sized training courses that provide a real-life return on investment. Our courses focus on enhancing knowledge, improving skills, and changing attitudes. We achieve this through engaging and interactive training techniques, including Q&As, live discussions, games, and puzzles.





### **CONTACT US**





