Asset Integrity Management (AIM)

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Tokyo (Japan)



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Why This Course

In asset-intensive industries such as oil & gas, power, petrochemicals, and manufacturing, maintaining asset integrity is critical to ensuring safety, uptime, and performance.

Failures in integrity management can lead to costly downtime, environmental harm, and major safety incidents.

The Asset Integrity Management program provides participants with the frameworks, technical knowledge, and leadership skills to implement effective integrity systems.

It integrates risk-based inspection, reliability engineering, and lifecycle asset management, empowering professionals to extend asset life, ensure regulatory compliance, and minimize operational risk.

Through case studies, applied tools, and interactive exercises, participants will learn to design, implement, and sustain an Asset Integrity Management System AIMS aligned with international standards such as ISO 55000, API 580, and PAS 55.

What You'll Learn and Practice

By joining this program, you will:

- Understand the concepts, components, and importance of Asset Integrity Management.
- Learn to build and implement a structured Asset Integrity Management System AIMS.
- Apply risk-based inspection RBI and condition monitoring strategies.
- Manage corrosion, fatigue, and equipment degradation effectively.
- Integrate reliability, maintenance, and safety disciplines for optimized performance.
- Understand regulatory requirements and international AIM standards.
- Develop KPIs, dashboards, and performance indicators for continuous improvement.
- Build a roadmap for sustainable asset reliability and integrity assurance.



The Program Flow

Day 1: Foundations of Asset Integrity Management

- Introduction to asset integrity and reliability concepts.
- The lifecycle approach — design, operation, maintenance, and decommissioning.
- The link between integrity, safety, and profitability.
- AIM frameworks and international standards ISO 55000, API 580, PAS 55.
- Case study: Lessons from major industrial incidents caused by integrity failures.

Day 2: Asset Integrity Management Systems AIMS

- Elements of an effective AIMS — policy, planning, execution, and review.
- Developing AIM programs aligned with operational risk profiles.
- Roles and responsibilities of operations, maintenance, and inspection teams.
- Documentation, recordkeeping, and data management.
- Workshop: Designing an AIMS structure for a sample facility.

Day 3: Risk-Based Inspection RBI and Condition Monitoring

- Fundamentals of RBI — risk assessment, consequence, and probability analysis.
- Inspection planning and prioritization based on asset criticality.
- Condition monitoring techniques — vibration, corrosion, and NDT non-destructive testing.
- Integration of RBI with predictive maintenance strategies.
- Simulation: Developing a risk-based inspection plan for critical assets.

Day 4: Corrosion, Reliability, and Performance Optimization

- Corrosion mechanisms and control strategies.
- Reliability engineering tools — FMEA, FMECA, and root cause analysis RCA.
- Performance metrics: MTBF, availability, and overall equipment effectiveness OEE.
- Data analytics and digital twins for real-time integrity management.
- Group activity: Solving a corrosion and reliability case study using integrated data.

Day 5: Governance, Compliance, and Continuous Improvement

- AIM auditing, assurance, and performance reporting.
- Regulatory compliance and documentation for authorities.
- Managing aging assets and life extension programs.
- Aligning AIM with ESG and sustainability initiatives.
- Final project: Building a comprehensive Asset Integrity Management Plan for your organization.



Individual Impact

- Gain a deep understanding of asset integrity principles and best practices.
- Strengthen technical, analytical, and risk management competencies.
- Learn to balance safety, reliability, and cost in operational decision-making.
- Build confidence in developing and implementing integrity systems.
- Position yourself as an Asset Integrity Management professional capable of leading reliability and safety initiatives.

Work Impact

- Improve asset reliability, uptime, and lifecycle performance.
- Reduce unplanned downtime and maintenance costs.
- Strengthen compliance with international integrity standards.
- Enhance safety, environmental protection, and risk control.
- Drive continuous improvement and operational resilience across asset portfolios.

Training Methodology

This program combines technical frameworks, applied analytics, and leadership development to ensure both depth and practicality.

Learning methods include:

- Case studies from oil & gas, energy, and heavy industries.
- Interactive workshops on risk assessment and inspection planning.
- Simulation exercises on reliability and condition monitoring.
- Group discussions on regulatory compliance and performance assurance.
- Templates, toolkits, and AIM implementation guides for professional use.

Beyond the Course

Upon completion, participants will be equipped to design, implement, and sustain an Asset Integrity Management framework that safeguards performance, safety, and value across all asset classes.

Graduates of this program will emerge as Asset Integrity Management Leaders — professionals capable of integrating technology, risk, and strategy to ensure operational excellence and reliability across the asset lifecycle.

