Strategic Asset Reliability and Integrity Management Training Course



20 - 24 Dec 2026

Istanbul

4900 € (Per Person)

Ref: #OG9050_225585

Course Introduction / Overview:

This comprehensive training course provides a holistic framework for mastering Strategic Asset Reliability and Integrity Management. In today's competitive industrial landscape, extending asset life, ensuring operational safety, and optimizing maintenance expenditure are paramount to achieving business excellence. This program moves beyond traditional maintenance routines to instill a proactive culture of reliability and integrity. Participants will delve into the core principles that govern asset performance, exploring how to build and sustain a robust Asset Integrity Management System (AIMS). The curriculum is deeply rooted in internationally recognized standards and methodologies, drawing on the foundational work of experts like John Moubray, whose book "Reliability-Centered Maintenance" revolutionized the field. By integrating reliability engineering tools such as FMEA and RCA with strategic asset management frameworks like ISO 55000, this course equips professionals with the skills to mitigate risks, prevent failures, and enhance profitability. BIG BEN Training Center has designed this immersive experience to bridge the gap between theory and practice, ensuring that every concept is translated into actionable strategies that can be implemented immediately to drive tangible improvements in asset performance and operational efficiency from A to Z.

Target Audience / This training course is suitable for:

- Reliability Engineers and Specialists.
- Maintenance Managers, Superintendents, and Planners.
- Asset Integrity Engineers and Managers.
- Operations and Production Managers.
- Plant and Facility Managers.
- Inspection and Corrosion Engineers.
- Process Safety Professionals.
- Technical and Engineering Team Leaders.
- Project Managers involved in asset lifecycle.

Target Sectors and Industries:

- Oil and Gas (Upstream, Midstream, and Downstream).
- Petrochemical and Chemical Processing.
- Power Generation and Utilities.
- Heavy and Light Manufacturing.
- Mining and Mineral Processing.
- Pharmaceuticals and Biotechnology.
- Aerospace and Defense.
- Marine and Shipping.
- Government agencies and public sector utilities.

Target Organizations Departments:

- Maintenance and Reliability.
- Engineering and Technical Services.
- Operations and Production.
- Asset Management and Integrity.
- Health, Safety, and Environment (HSE).
- Inspection and Quality Assurance.
- Capital Projects and Planning.
- Procurement and Supply Chain.

Course Offerings:

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

- Develop a comprehensive asset integrity management system (AIMS).
- Implement Reliability-Centered Maintenance (RCM) principles to optimize maintenance tasks.
- Conduct effective Root Cause Analysis (RCA) to eliminate recurring failures.
- Utilize Failure Modes and Effects Analysis (FMEA) for proactive risk mitigation.
- Design and implement predictive maintenance (PdM) programs.
- Align asset management strategies with ISO 55000 standards for organizational excellence.
- Apply risk-based inspection (RBI) methodologies to focus inspection resources.
- Measure and improve asset performance using key metrics like OEE.
- Foster a culture of reliability and continuous improvement within their teams.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and practical, ensuring participants gain skills they can apply directly in their work environment. This course moves beyond traditional lectures, employing a blended learning approach that includes expert-led presentations, in-depth technical discussions, and collaborative workshops. A cornerstone of the program is the extensive use of real-world case studies from a diverse range of industries, allowing participants to analyze challenges and successful strategies in asset management. Group exercises will be a key feature, providing hands-on experience in applying tools like FMEA, RCA, and RCM to practical scenarios. Participants will be encouraged to share their own professional experiences, fostering a rich learning environment of peer-to-peer knowledge exchange. Open Q&A sessions and facilitated discussions will ensure that complex concepts are fully understood. The instructor will provide continuous feedback and guidance, helping attendees to build a robust and actionable plan for enhancing asset reliability and integrity within their own organizations. This dynamic and participant-centered approach guarantees a valuable and impactful learning experience.

Course Agenda (Course Units):

Unit One: Foundations of Strategic Asset Management

- Introduction to Asset Integrity and Reliability Engineering.
- The business case for asset management and its link to profitability.
- Understanding the asset lifecycle from design to decommissioning.
- Overview of international standards, including ISO 55000.
- Defining roles and responsibilities in asset management.
- Asset hierarchy and data management principles.
- Fundamentals of Life Cycle Costing (LCC).

Unit Two: Core Reliability Engineering Tools and Analysis

- Introduction to reliability data and statistics.
- Failure Modes and Effects Analysis (FMEA) and FMECA.
- Conducting a systematic Root Cause Analysis (RCA).
- Introduction to Weibull Analysis for failure prediction.
- Understanding fault tree and event tree analysis.
- The P-F curve and its application in maintenance.
- Data collection strategies for reliability analysis.

Unit Three: Developing and Optimizing Maintenance Strategies

- The evolution from reactive to proactive maintenance.
- Principles and application of Reliability-Centered Maintenance (RCM).
- Developing a Predictive Maintenance (PdM) program.
- Overview of condition monitoring technologies (vibration, thermal, oil analysis).
- Strategies for maintenance planning and scheduling excellence.
- Optimizing preventive maintenance (PM) tasks.
- Managing spare parts and materials for reliability.

Unit Four: Implementing an Asset Integrity Management System (AIMS)

- The core elements of a successful AIMS framework.
- Principles and methodology of Risk-Based Inspection (RBI).
- Developing and implementing corrosion management strategies.
- Integrating Process Safety Management (PSM) with asset integrity.
- Managing mechanical integrity and quality assurance.
- Procedures for Management of Change (MOC).
- Auditing and assessing the effectiveness of an AIMS.

Unit Five: Leadership, Culture, and Continuous Improvement

- Leading the transition to a reliability-focused culture.
- Key Performance Indicators (KPIs) for asset management.
- Calculating and improving Overall Equipment Effectiveness (OEE).
- Developing a continuous improvement loop for asset performance.
- The role of leadership and communication in driving change.
- Future trends in asset management: IIoT, AI, and Digital Twins.
- Developing a strategic roadmap for asset management excellence.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How can an organization effectively balance the upfront investment in advanced reliability technologies with the long-term, often less tangible, benefits of improved asset integrity and reduced operational risk?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by offering a uniquely integrated and strategic perspective on asset management, rather than treating reliability engineering and asset integrity as separate disciplines. While many programs focus solely on the technical application of tools, this training course emphasizes the critical link between these technical functions and the overarching business objectives of safety, profitability, and sustainability. It provides a holistic framework that aligns with the ISO 55000 standard, teaching participants not just how to use tools like FMEA or RCM, but how to embed them within a robust management system that drives a proactive culture. The curriculum is built upon a foundation of practical application, utilizing a rich portfolio of cross-industry case studies that move beyond theory to address the real-world complexities of implementation. Furthermore, the course dedicates significant focus to the leadership and change management aspects required to transition an organization from a reactive to a reliability-centered mindset. This strategic, integrated, and culturally-aware approach ensures participants leave with a comprehensive and actionable roadmap for achieving sustainable asset performance excellence.