Asset Integrity Management

Assuring Sustainable Asset Integrity through Implementation of Best Practices

Course Overview

Improving the effectiveness of asset management and integrity activities is vital to ensuring physical assets perform their required functions, operate reliably and thereby support corporate goals and objectives. A successful Asset Integrity Management Program incorporates design, maintenance inspection, process, operations and management concept; all having a direct impact on the integrity of infrastructure and equipment. As a result, best practice facilities have implemented comprehensive, fully integrated systems and a culture directed at gaining greater lifetime effectiveness, value, safety, availability, profitability and return from production and manufacturing assets.

Asset Integrity Management is a 3 day training course designed to assist asset integrity managers with achieving maximum production capacity at the lowest lifecycle cost; while also maintaining the long term integrity of their assets. Attendees will learn new methods and techniques to gain an understanding of best practices for the most critical aspects of Asset Integrity Management.

Attendees will benefit from our interactive and adult learning techniques. Regardless of your level of expertise, this course will provide you with the framework to develop and deploy an Asset Integrity Management Program to take full advantage of the best practices and strengths of your organization.

Learning Objectives

- **Identify** the key elements of Asset Integrity
- **Understand** the importance of Integrity Assurance
- **Assess** whether an Integrity Assurance Framework is present
- **Incorporate** how Bow-Tie and Safety Cases are key inputs into an Integrity Assurance Program
- **Acquire** the reference integrity related KPIs
- **Explore** the need for monitoring Integrity Assurance
- **Determine** the key enablers to a sustainable Integrity Assurance Program

Who Should Attend

Vice Presidents, General Managers, Directors, Section Heads, Team Leaders, Senior Managers, Managers, Specialists and Engineers of:

- Asset Integrity Management
- Maintenance / Maintenance Planner
- Inspection
- Quality Assurance / Quality Control
- Maintenance Supervisors
- Integrity and Reliability Engineers
- Instrument and Control
- Plant Management

From cross-industries, especially:

- Oil & Gas
- Refineries
- Petrochemical & Chemical
- Engineering
- Power & Utilities

Course Outline (Day 1- Day 3)

DAY 1

Welcome & Introduction

- Meet & Greet
- Pre-Assessment

Module 1: Introduction to Asset Integrity (AI)

- ISO55000 Overview
- AI Overview
- AI Issues
- Case studies of AI Failures
- Asset Management & ISO 55000
- **Exercise / Assessment**

Module 2: Maintenance Excellence

- Leadership Commitment
- AI Philosophy
- Maintenance Excellence Concepts
- **Exercise**

Module 3: Maintenance & Asset Integrity Strategy

- Integrity Assurance
- Safety Critical Element (SCE) / Bow Tie
- Performance Standards
- Implementing Asset Integrity
- **Exercise**

DAY 2

Module 4: Asset Identification

- Asset Register
- Asset Hierarchy
- Bill of Materials (BOMs)
- Critical Equipment Indicators
- **Exercise**

Module 5: AI Tools

- Safety Critical Elements (SCE's)
- Failure Modes & Effects Analysis (FMEA)
- Reliability Centered Maintenance (RCM)
- Risk Based Inspections (RBI)
- Preventative Maintenance (PM) / Predictive Maintenance (PdM)
- Management of Change (MOC)

DAY 3

Module 6: Work Management Process

- Identify & Prioritize
- Work Planning
- Scheduling
- Execution & Close Out
- Analysis / Root Cause Analysis (RCA)
- **Exercise**

Module 7: Root Cause Analysis (RCA)

- Phases
- Data Collection
- Assessment

Module 8: Tools & Reporting

- Types of Measures
- Key Performance Indicators (KPIs)
- Trends

Wrap Up

- Course Review
- Post Assessment
- Certificates & Evaluations

Course Format

This course will be held in a highly interactive workshop format with case studies and real-world examples. The material has been designed using Adult Learning Methodology that believes the ideal ratio for optimum learning and retention is 60%/40%:

60% - blended combination of discussion, practical exercises, simulations, & case studies
40% - material/slides

Participants will engage in interactive exercises and discussions throughout the course to ensure the material is not only taught but can also be applied. Limited class size (15-20 participants) is strictly enforced to enhance individual learning experiences and interaction with the instructor and other participants.

Pre & Post Course Assessments

Each participant will complete a pre-course assessment to gauge their current levels of knowledge and experience. At the conclusion of the course, participants will then complete a post-course assessment to ensure the material was presented effectively.

Testimonials

"This course provided assistance and guidance for improving maintenance and reliability and how it benefits the assets (long term). Improve communications between maintenance / operations groups, which will streamline the overall reliability and integrity of the assets."

- Hess Corporation

"Andy's explanations and illustrations are 100% relevant to our environment and he makes it so simple to understand."

Maintenance Manager – Food & Beverage Industry

"Andy's presentation skills and examples were rich in content and relatable."

Team Lead – Transportation Industry

"Learning from the most experienced instructor, delivering decades of not only theory but application was a joy!"

Director of Maintenance – Oil & Gas Industry

"Andy's presentation skills and relating it to real life examples was excellent and made the sessions enjoyable!"

Division Manager – Food & Beverage Industry

"If I have another opportunity to attend one of Andy's trainings, I will most definitely!"

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Operations Manager – Water Utility Industry