



Workshop in Asset Integrity  
Management for the Petroleum Industry



# Workshop in Asset Integrity Management for the Petroleum Industry

## Introduction:

An Asset Integrity Management AIM program provides a backbone and incorporates design, maintenance, inspection, process, operations, and management concepts, making optimal return on investments.

This workshop focuses on the concept of AIM i.e. design, technical, and operation integrity in the safeguarding of the operational system. The approaches to reliability-centered maintenance RCM, failure mode effect and criticality analysis FMECA, risk-based maintenance RBI, inspection of static process equipment, maintenance planning of rotating equipment, mitigate the challenges due to human factor, effective project management strategies, etc.

## Targeted Groups:

Engineering Asset Management & Asset Integrity Management personnel  
Technical Safety personnel  
Engineers involved in maintenance and modification projects  
Inspection and maintenance analysis and planning personnel  
Project managers and project engineers  
Technical discipline responsible personnel

## Workshop Objectives:

At the end of this workshop the participants will be able to:

- Manage assets in the petroleum industry in a sustainable and safe manner
- Assess & control Asset Integrity of operational assets in production & process systems
- Perform integrity management on the topside and subsea systems
- Realize overall asset process in a systems engineering perspective
- Use of adaptive technologies and techniques in engineering projects
- Targeted Competencies:
  - Guidelines of asset integrity management
  - Subsea and risk assessment framework
  - Deepwater Riser and Subsea Integrity Management Strategy
  - How to develop more robust asset integrity maintenance and repair philosophy
  - Learning about asset management interpretation
  - AIM for FPSOs and offshore floating facilities
  - Riser and subsea asset field life extension case studies
  - Risk-based inspection for FPSOs and subsea facilities

## Workshop Content:

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

- Introduction to the concept of Asset Management& Asset Integrity Management
- Asset Management Landscape process model
- The Asset Management System - Asset Management Policy - Asset Management Strategy - Strategic Asset Management Plans - line of sight
- Asset Management roles
- International standard on Asset Management: ISO 55000
- Certification

## **Day 2: Risk & Risk Assessment:**

- Approaches Used for Asset Integrity Management
- Identification & assessment of risk
- Risk management: using the risk matrix, risk register & hazard log
- Risk on the business level, system-level and asset level
- Several methodologies on different levels
- Contingency planning

## **Day 3: Risk-Based Maintenance:**

- Deterioration: the way assets could fail
- The seven steps of Risk-Based Maintenance RBM / Reliability Centred Maintenance RCM incl. Failure Mode Effects &Criticality Analysis
- Failure behavior of onshore & offshore systems
- Choosing the right maintenance task
- Risk-Based Inspection
- Practical application

## **Day 4: Life Cycle Management Aspects:**

- Life cycle of an asset
- Systems Engineering & RAMS specification
- Operational workflow
- Lifetime extension
- Performance measurement / KPI's

## **Day 5: The Way Forward: Improvement Plan:**

- Assessment of current Asset Management performance specific aspects
- Drawing up an improvement plan / individual improvement plans to optimize the cost/benefits