



## Asset Integrity Management for Purpose-Built - FPSO's and Subsea System Facilities

Date	Venues	(\$)Fees	Book your seat
30 Jun -04 Jul 2024	Salalah	2900	<a href="#">Register Now</a>

### Introduction

This interactive, applications-driven 5-day training course offers a professional approach providing access to support tools in Asset Integrity management decision making. It will show how the use of real-time condition based monitoring can support strategic initiatives; to inform on asset management data information; and to direct subsea & marine operational decision making in a more proactive and efficient manner. In today's globally challenged Oil & Gas Upstream Business Sector to reduce Operating Expenditure (OPEX) costs this course will add value to your own development as an operations or asset maintenance engineer and support your Asset Management goals and objectives over the Life of Field Operations.

This course is aimed at addressing the following criteria:

- Providing operations and maintenance personnel and asset-operations managers with ability to draw down the critical information on any reported anomalies, inspection or planned maintenance, repair activities across your assets.

Obviously, operations teams have busy day-to-day lives and they do not need to be getting bogged down with too many unnecessary administrative duties or tasks that distract you from other more critical tasks. So this course will enable you to plan your work load and teach your teams on how to improve the production assurance efficiencies of your marine assets.

#### This training course will feature:

- Detailed discussions and workshops on the use and application of the latest subsea inspection technologies and operational maintenance recommended best practices for marine assets of this nature
- The importance of using more predictive maintenance modelling tools that align to your assets reliability centered maintenance data historian records, basis of design philosophy
- How to develop more robust asset integrity maintenance and repair philosophy
- Introduction you to latest condition performance monitoring (CPM) processes, that provide real time asset surveillance records, predictive inspection monitoring techniques and data of your Marine – Subsea Assets
- Focusing on detailed asset management interpretation of statistical evidence and more focused Asset Management leadership decision making capability
- How to use this real time data monitoring in the day to day work domain these tools provide important asset health condition warning indicators that need to be acted upon in a timely manner
- Maintaining your Computerised Maintenance Management Systems (CMMS) records more frequently and understands the application of links to SAP planned maintenance (PM) modules or other business enterprise software systems that your company may be using such as IBM or Oracle.
- Workshops presentations on practical risk + Integrity management tools, procedures
- Teaching you on how to provide improved Integrity based recommendations and how these tools and processes are evolving and can enable you and your teams to reduce both Capital Expenditure (CAPEX) on spare holding levels and improve the efficiency of Operating Expenditure (OPEX) costs. Reducing spare parts inventory management levels and ultimately having a safer offshore operation
- This course will provide you access to latest updates in Oil & Gas Producers Guidelines for Managing Risks to

## Objectives

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

- Improve the utilisation of these various tools and have the awareness, and a better understanding of how to make improved quality and timely decisions for your operational and asset management roles
- Apply and improve Asset Integrity planning, skill sets over a cross-section of subsea or marine asset inspections, periodic preventative planned maintenance routines or subsea intervention operations. E.g.[ Detailed worked examples will be used]
- Interpret meaningfully and critically assess statistical or predictive asset database evidence and recorded anomalies from the periodic traffic light indicators that appear on your asset integrity, risk based inspection management systems
- Improve your knowledge and understanding of recommended best practices, regulatory and increasing mandatory global reporting regimes
- How to prepare and develop detailed operations and asset management integrity reports, budgets and develop mandatory safety case regime periodic reporting

### Intended Skill Outcomes

- **IDENTIFY** how to improve the operability and integrity of subsea developments- marine assets over the life of field operations
- **LEARN** how to improve your daily planning on asset integrity monitoring and reporting requirements
- **GET BETTER UNDERSTANDING** of the key International Standards (IS) which are most important to your asset and region across asset management issues through discussing and reviewing a number of case studies
- **UNDERSTAND** in detail the system maintenance, safeguarding measure and environmental compliance and industry growing concerns across inconsistent regulatory regimes, safety case responsibilities
- **GAIN INSIGHT INTO** DNVGL-RP-0002 and how to apply these guidelines within the management the uncertainty of reliability/ availability and improve your assets integrity, operability throughout the life of field operations
- **INCREASE KNOWLEDGE ON** the use and application of condition performance monitoring technologies and predictable modeling tools in order tools, processes to increase the maintenance free operating periods of your assets
- **RECOGNIZE** the requirements, the various International Standards (IS) of subsea systems and marine assets as a Asset Integrity Lead subject matter expert
- **DISCOVER** simple root cause analysis (RCA) best practices and other practical risk management techniques from experienced industry professionals/ Asset Integrity Leaders
- **REVIEW** a number of examples of asset integrity failures that could have been avoided by more proactive asset management

## Training Methodology

This training course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented.

- PowerPoint presentations, operational video's, training manuals with practical user examples. Competency assurance tests, continuous professional development measures

The daily workshops will be highly interactive and participative. This involves regular discussion of applications as well as hands-on exposure to techniques using examples from the offshore work place environment. Delegates are strongly encouraged to bring and share their own experiences, lessons learnt from the work domain.

## Who Should Attend?

**This training course is suitable to a wide range of professionals but will greatly benefit:**

- Professionals in both operations onshore to offshore asset management support roles with 3 to 4 years and 10+ years of experience levels respectively
- Reliability or Operations+ Maintenance Engineers, Field Supervisors, Asset Integrity Engineers who typically encounter operational support data / analytical information regularly in their work environment
- Those who seek to derive greater decision making values and develop their experience across applying asset integrity management tools, and reporting practices across subsea and marine operations as well as increasing ones industry knowledge and awareness in this sector

## **SEMINAR OUTLINE**

### **DAY 1**

#### **Operational and Life Cycle Asset Integrity Management Best Practices**

- Managing various Data Sets: Handling and retaining the important raw material of data analytics (types, quality and data preparation) across safety performance, inspections, and maintenance and repair programs. Improved use of business enterprise management systems on asset integrity processes
- Understanding how to interpret effectively updates in HSES regulatory reporting and Asset Integrity Management recommended practices, guidelines and put these into effective practice in order to mitigate and manage the life cycle risks of your existing and new assets
- How to put in place a Ageing Asset Life Extension Business Plan that protects and maintains all of your safety critical elements (SCE), performance standards(PS) such as subsea well system barriers, pipeline integrity and subsea structural integrity environmental protection requirements
- Overview of latest autonomous underwater vehicles AUV's and autonomous inspection vehicles AIV's and laser scanning tools that can improve the efficiency and costs associated with periodic subsea inspections, and vessel hull structural inspections

### **DAY 2**

#### **Subsea Operations from Commissioning a Subsea well System to Developing Operational Subsea Inspection and Maintenance Budgets for Offshore Assets**

- Various Work Shop Session on subsea and marine vessel surveillance inspection processes and condition performance monitoring tools being applied to FPSO mooring lines, production risers, etc.
- Gain more experience in reliability analysis techniques including equipment criticality analysis, review outputs from Failure Modes Effects Criticality Analysis (FMECA) and calculation of equipment reliability/availability by understanding the parameters of various equipment ranges in Mean Time Between Failures(MTBF/MTTR Mean Time to Repair) or the determine the ultimate probability of various Maintenance Free Operating Periods (MFOP).

### **DAY 3**

#### **Maximizing Marine Performance of FPSO's by providing the Full Picture on Asset Management Reporting Tools**

- Remote Diagnostics, Logging and Reporting
- Cargo Monitoring & Control
- Power Management + Propulsion Control Monitoring
- Thruster Controls
- Alarm and Monitoring of Safety Critical Elements and Key Areas

## DAY 4

### Marine Facility Inspections, Maintenance & Repair and & Asset Integrity

- Maintaining a stable Integrity Performance for your assets
- Managing the risks of life of field
- Detailed Workshop discussions on the use and application of various Remote Operated Vehicles [ROV—ROT Remote Operational Tooling] intervention presentations on different tasks
- Workshop examples will be discussed: New Concepts to secure access to any type of subsea reservoir with a Mobile Redeloyable Floating Production Facility

## DAY 5

### Various Asset Integrity and Condition Performance Monitoring Tools


- The key operational requirements and advantages to be gained from condition based maintenance and improved asset integrity performance reporting
- An indication of degraded performance or technical condition in plant equipment
- Provide the operations engineer an efficient tool to enable drill down capability, triggers further investigations and analysis of the real time diagnostics, either through manual condition maintenance on Topsides plant and interventions by remotely operated vehicle (ROV) on the subsea facility
- Condition Monitoring (CM)
- Performance Monitoring (PM)
- Condition Based Maintenance (CBM)

### *Operation & Maintenance Costs (O&M)*

- Day-to-Day Safety Improvements in Operation and Maintenance responsibilities will improve the more real time data reporting and onshore to offshore access to information updates are incorporated globally to your marine assets.
- Understanding of the periodic Marine Warranty Surveillance and Owner-Operator Asset Insurance Requirements

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