FPSO Anomaly Management Training Course

Professional Development Training Course Outline

Category	Oil and Gas	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Floating Production Storage and Offloading (FPSO) systems are critical assets in offshore oil and gas production. However, the complexity of their operations makes them vulnerable to a wide range of anomalies and failures that can lead to costly downtime, safety risks, and environmental incidents. FPSO Anomaly Management Training Course is designed to equip professionals with practical tools, techniques, and real-world knowledge for identifying, analyzing, reporting, and mitigating anomalies across FPSO systems. Leveraging the latest trends in predictive analytics, digital twin technologies, and integrated safety systems, the course provides hands-on approaches to improving asset integrity, uptime, and compliance.

This course integrates industry best practices, real-time monitoring, and root cause analysis techniques to enhance anomaly detection and management. Participants will gain a comprehensive understanding of FPSO operations, critical failure points, anomaly classification, reporting protocols, and performance optimization strategies. Through engaging case studies, participants will also explore real-life incidents and recovery solutions, fostering decision-making skills under high-risk offshore conditions.

Programme Curriculum

FPSO Anomaly Management Training Course

Introduction

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Course Objectives

1. Understand the fundamentals of FPSO systems and anomaly types.
2. Apply anomaly detection methods using data-driven tools and technologies.
3. Identify critical failure modes in FPSO operations.
4. Conduct effective root cause analysis for offshore anomalies.
5. Enhance risk-based inspection (RBI) and reliability-centered maintenance (RCM) practices.
6. Use digital twins and AI for predictive anomaly identification.
7. Interpret anomaly trends through condition monitoring systems.
8. Design mitigation strategies for both functional and structural anomalies.
9. Develop comprehensive anomaly reporting and escalation protocols.
10. Evaluate operational and safety impacts of unaddressed anomalies.
11. Integrate anomaly management into asset integrity and HSE frameworks.
12. Improve incident response planning based on anomaly history.
13. Leverage case-based learning for real-world anomaly resolution.

Target Audience

1. Offshore Engineers
2. FPSO Operations Supervisors
3. Maintenance & Reliability Engineers
4. Safety and Risk Managers
5. Asset Integrity Engineers
6. Process Engineers
7. Marine Engineers
8. Oil & Gas Project Managers

Course Duration: 5 days

Course Modules

Module 1: Overview of FPSO Systems & Anomaly Fundamentals

- Introduction to FPSO architecture and operational scope
- Types of anomalies: mechanical, process, structural, and safety-related
- Classification frameworks for anomalies
- Lifecycle perspectives of anomaly emergence
- Early signs and data patterns of anomalies
- **Case Study**: Hull crack detection and response timeline

Module 2: Anomaly Detection Tools & Techniques

- Condition monitoring and sensor-based diagnostics
- Predictive maintenance with AI and ML
- Acoustic emission and vibration analysis
- Digital twin applications for FPSO systems
- KPI tracking for anomaly prediction
- **Case Study**: Compressor vibration anomaly forecasting

Module 3: Root Cause Analysis & Fault Investigation

- FMEA and fishbone diagram applications
- 5 Whys and cause-effect mapping
- Systematic troubleshooting procedures
- Linking anomalies to process and design flaws
- Role of human factors in anomalies
- **Case Study**: Subsea valve failure root cause analysis

Module 4: Anomaly Risk Assessment and Prioritization

- Risk-based prioritization models
- Integration with safety and risk registers
- Probability and consequence modeling
- Emergency preparedness for critical anomalies
- Risk escalation protocols and decision matrices
- **Case Study**: Power blackout anomaly risk analysis

Module 5: FPSO Maintenance Strategy Integration

- Linking anomalies to maintenance KPIs
- Maintenance scheduling for anomaly mitigation
- Predictive vs. preventive maintenance
- Data-driven optimization of MRO (Maintenance, Repair & Overhaul)
- Cross-functional maintenance planning
- **Case Study**: Turret bearing anomaly and maintenance planning

Module 6: Regulatory Compliance & HSE Alignment

- Compliance with industry anomaly reporting standards
- Environmental and safety reporting protocols
- Role of anomaly logs in audits and inspections
- HSE risk assessment related to anomalies
- Regulatory case law on unmitigated anomalies
- **Case Study**: Gas leak and non-compliance investigation

Module 7: Anomaly Reporting Systems and Communication

- Digital platforms for real-time anomaly reporting
- Creating structured anomaly reports and dashboards
- Escalation matrix for urgent anomaly events
- Communication with cross-disciplinary teams
- Documentation and historical data value
- **Case Study**: Production shutdown linked to poor anomaly reporting

Module 8: Strategic Anomaly Management Framework

- Integrated anomaly lifecycle management
- Organizational culture for anomaly accountability
- Continuous improvement and feedback loops
- Strategy alignment with performance and safety
- Developing anomaly mitigation policies
- **Case Study**: Framework redesign after repetitive mooring failure

Training Methodology

- Instructor-led presentations with visual simulations

- Hands-on group exercises and diagnostic toolkits
- Interactive sessions for risk modeling and RCA
- Real-world case study analysis and solution mapping
- Practical assignments with scenario-based evaluation
- Pre- and post-training assessments to measure learning outcomes

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com