

A Successful 5-Day In-house Training Course

Fundamentals of FPSO



ISO 29990:2010 Certified



ISO 9001:2015 Certified



This course is Designed, Developed, and Delivered under
ISO 29990:2010 Standards & ISO 9001:2015

Fundamentals of FPSO

This course provides a comprehensive overview of Floating Production Storage and Offloading (FPSO) facilities and will include key strategic and technical considerations when considering FPSO developments.

WHY CHOOSE THIS TRAINING COURSE?

Participants will gain a solid foundation in all aspects of FPSO development. It is valuable to those based onshore or offshore involved in the design, construction, inspection and maintenance of FPSOs. Critical components of an FPSO development will be covered ranging from hull design and construction, offshore loading, turrets, mooring and the SURF (subsea, umbilical, risers and flowline) equipment associated with these developments.

Permanently moored, FPSOs are viable development solutions for a number of different offshore field situations. Because FPSOs can be disconnected from their moorings, these offshore production vessels are optimal for areas that experience adverse weather conditions, such as cyclones and hurricanes. Additionally, because FPSOs can be moved, they are a more economical solution for more marginal fields, in that the vessel can be moved to another development and redeployed once the original field has been depleted. Also, FPSOs are an optimal choice for development when there are no existing pipelines or infrastructure to transfer production to shore. Adding to the economic advantages of FPSOs, existing tankers are frequently converted into FPSOs.

This Course will feature:

- FPSO structure, design and technology
- Key elements of FPSOs including regional differences
- How Do FPSOs work
- Selecting and designing mooring and riser systems for different environments
- Oil and Gas Processing facilities on FPSOs
- Operations environment
- Regulations, classification and verification considerations

WHAT ARE THE GOALS?

By the end of this Course, participants will be able to:

- Understand different types of Offshore Exploration, Production, Field Development and Floating Production Hosts
- Identify various Field Options and FPSO Considerations
- Explain the Station Keeping on FPSOs and Stability
- Critically understand the Oil and Gas Production, Processing Facilities, Exportation on FPSOs
- Understand the FPSO Design and Integrated Systems: Hull, Mooring, Turrets and Risers
- Explore the Risk, Regulatory Requirements, Safety and Environmental Challenges of FPSO

WHO IS THIS TRAINING COURSE FOR?

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

- Any FPSO Project, installation, subsea, vessel operations and maintenance personnel
- FPSO Engineering managers
- Offshore Installation Manager (OIM)
- Production Superintendent (FPSO)
- Production (Process) Operators/Technicians
- Marine Superintendent/Supervisor/Operator/Technician
- Maintenance Superintendent/Technician
- New employees needing a comprehensive FPSO understanding based onshore or offshore

HOW WILL THIS TRAINING COURSE BE PRESENTED?

This Course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This includes series of highly interactive instructor and student led discussions, critical observations and evaluations, videos, case studies, best practices, participatory and engaging class and reflective exercises.

QUALITY CERTIFICATIONS



Daily Topics

DAY ONE

Floating Production, Storage and Offloading (FPSO) Facilities

- History of Floating Production Systems
- Introduction to Field Layouts
- What is an FPSO – Define Floating, Production, Storage and Offloading Vessel
- The basic Physical Structure of an FPSO
- Advantages, Disadvantages, Benefits and Value of FPSO
- Types of Processing Unit
- Major milestones affecting FPSO Use
- Demand for FPSOs
- Different types of FPSOs used today - Examples of FPSO records: largest, smallest, longest, etc.

DAY TWO

Floating Production Hosts

- Different types of FPSOs Hosts
- Semisubmersibles
- Spars
- Tension Leg Platforms (TLPs)
- Station Keeping on FPSOs
- Maintaining Stability on FPSOs
- Storage Capacity
- Fundamental Metocean (Meteorological and Oceanographic) parameters

DAY THREE

The Hull

- The Concept
- Construction: The Hull and Topsides
- Design affirmative and validation
- Tanker Conversion versus New build
- Hull Layout and Regulations
- Topside Layout, Hull Layout and SOLAS Regulations

DAY FOUR

Integrated Gathering Systems

- Mooring Systems and Components
- Installing the Mooring Systems
- Fluid Transfer Systems – Turrets and Swivels
- Different types of Turrets used on FPSOs
- CALM (Catenary Anchor Leg Mooring) Buoy
- SALM (Single Anchor Leg Mooring)
- Pipeline Systems and Risers

DAY FIVE

Enabling Operational Excellence in FPSO




- FPSO Challenges/FPSO Project Trends
- SMART FPSO - New Generation of highly complex vessels/plants
- End User and Customer Requirements
- Meeting the Challenges in Offshore Production
- FPSO Engine Room Integrated Monitoring and Control
- FPSO Modules Arrangement, a challenge for Automation, Safety and Instrumentation
- Type Approved Systems and fit for Offshore environments



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