MERCURY

A Single-Point Mooring (SPM) Oil & Gas

6 – 10 June 2027
Dubai (UAE)



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Ref: 15657_319271 **Date:** 6 – 10 June 2027 **Location:** Dubai (UAE) **Fees:** 4900 Euro

Introduction to Single-Point Mooring SPM Oil & Gas Systems:

A Single-Point Mooring SPM system is crucial to offshore oil and gas infrastructure. This Single-Point Mooring SPM Oil and Gas course is designed to facilitate the safe and efficient transfer of hydrocarbons between tankers and offshore facilities. SPMs serve as a pivotal connection point, allowing for the loading and unloading crude oil and other petroleum products from vessels while anchored offshore.

This Single-Point Mooring SPM Oil and Gas system is essential in areas where traditional port facilities are not available or feasible, enabling continuous operations in deepwater and remote locations. The SPM technology is engineered to withstand harsh marine environments and varying sea conditions, ensuring the secure mooring of tankers and minimizing the risk of oil spills and environmental hazards.

By understanding the principles, design, and operational procedures of Single-Point Mooring SPM Oil and Gas systems, industry professionals can enhance their capabilities in managing offshore loading and unloading processes, ultimately contributing to the efficiency and safety of maritime operations in the petroleum sector.

Single-point mooring SPM oil and gas refers to a floating buoy or jetty anchored offshore that serves as a mooring point for tankers to offload or load liquids, gases, or bulk cargoes. SPMs are particularly beneficial for ports that cannot accommodate large vessels or where the seabed is unsuitable for conventional mooring systems.

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Targeted Groups:

- Offshore Operations Managers.
- Marine Engineers.
- Oil and Gas Industry Professionals.
- Safety and Environmental Managers.
- Tanker Fleet Managers.
- Maintenance Engineers.
- Port Facility Managers.
- Offshore Installation Supervisors.
- Maritime Logistics Coordinators.
- Engineering Consultants in Offshore Systems.
- Marine Surveyors.
- Pipeline Engineers.
- Subsea Engineers.
- Project Managers in Offshore Projects.
- Supply Chain Managers in the Oil and Gas Sector.
- Regulatory Compliance Officers.
- Marine Pilots and Navigators.
- Offshore Safety Officers.
- Environmental Protection Specialists.
- Technical Trainers in Marine and Offshore Operations.

Course Objectives:

At the end of this Single-Point Mooring SPM Oil and Gas course, the participants will be able to:

- Understand the fundamentals of SPM systems.
- Learn the design principles of SPM infrastructure.
- Gain knowledge of SPM installation techniques.
- Master maintenance procedures for SPM systems.
- Comprehend safety protocols specific to SPM operations.
- Analyze environmental impacts related to SPM use.
- Develop skills for efficient SPM operations.
- Understand regulatory requirements for SPMs.
- Learn troubleshooting methods for SPM issues.
- Enhance problem-solving skills in SPM contexts.
- Gain expertise in hydraulic and mechanical aspects of SPMs.
- Understand the logistics involved in SPM operations.
- Learn to conduct performance evaluations of SPM systems.
- Develop emergency response plans for SPM operations.
- Understand fluid dynamics affecting SPMs.
- Learn about the latest innovations in SPM technology.
- Gain proficiency in marine navigation related to SPMs.
- Understand SPM-related maritime laws and regulations.
- Develop technical reporting skills for SPM operations.
- Gain knowledge of environmental protection measures for SPMs.

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Targeted Competencies:

By the end of this Single-Point Mooring SPM Oil and Gas training, participants competencies will:

- Understand SPM Design and Engineering.
- Know SPM Installation Procedures.
- Proficiency in SPM Maintenance and Inspection.
- Awareness of Safety Protocols and Risk Management.
- Skills in Environmental Protection and Spill Response.
- Competence in SPM Operational Procedures.
- Ability to Conduct SPM Performance Analysis.
- Familiarity with Regulatory Compliance Requirements.
- Expertise in Marine Navigation and Mooring Systems.
- Capability in Troubleshooting and Problem Solving.
- Understand Hydraulic and Mechanical Systems.
- Proficiency in Offshore Logistics Management.
- Know SPM-related Environmental Impact Assessments.
- Competence in Marine Communications and Coordination.
- Skills in Emergency Response Planning and Execution.
- Understand Fluid Dynamics in Marine Environments.
- Familiar with Maritime Law and Regulations.
- Capability in Technical Reporting and Documentation.
- Proficiency in Project Management for SPM Installations.
- Know SPM System Upgrades and Innovations.

Course Content:

Unit 1: Introduction to Single-Point Mooring Systems:

- Definition and purpose of SPM systems.
- Historical development and evolution of SPM technology.
- Types of SPM systems and their applications.
- Critical components of an SPM system.
- Benefits and limitations of using SPM systems.
- Overview of SPM system manufacturers and providers.

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Unit 2: Design and Engineering of SPM Systems:

- Principles of SPM system design.
- Structural components and materials used in SPM systems.
- Engineering considerations for SPM installation.
- Environmental factors influencing SPM design.
- Load calculations and stress analysis for SPM systems.
- Design standards and industry regulations for SPM systems.

Unit 3: Installation and Commissioning of SPM Systems:

- Pre-installation site assessment and surveys.
- Planning and logistics for SPM installation.
- Step-by-step installation procedures.
- Equipment and tools required for SPM installation.
- Testing and commissioning of SPM systems.
- Case studies of successful SPM installations.

Unit 4: Operation and Maintenance of SPM Systems:

- Standard operating procedures for SPM systems.
- Routine maintenance tasks and schedules.
- Inspection techniques for SPM systems.
- Identifying and addressing common SPM issues.
- Safety protocols for SPM operations.
- Record-keeping and documentation for maintenance activities.

Unit 5: Environmental and Regulatory Considerations for SPM Systems:

- Environmental impact assessments for SPM installations.
- Mitigation measures for environmental protection.
- The regulatory framework governing SPM systems.
- Compliance with international maritime laws.
- Spill response and contingency planning.
- Case studies on environmental incidents and regulatory actions.