

Training Title:

OFF-SHORE ENGINEERING

Training Duration

5 days

Training Date and Venue

Ref# OE014	Off- Shore Engineering	5	9 – 13 Dec '18	\$4,250	Dubai, UAE
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In any of the 5 star hotel. Exact venue will be informed later.

Training Fees

- 4,250 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

Language: English

TRAINING DESCRIPTION

The Oil and Gas industry have offshore design engineering and construction projects as well as maintenance services which are technically and commercially challenging therefore good knowledge and competency of the project team members throughout the different phases of works are keys to the successful execution of these projects.

This training seminar aims to provide the participants with comprehensive foundation knowledge of Offshore Engineering.

TRAINING OBJECTIVES

In this course you will learn & be able to:

- Understand what entails in Field Development Planning (FDP) and project management
- Understand the complexities of Offshore Engineering activities

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- Appreciate the complete metamorphosis of Offshore Engineering –from the Design phase till the Commissioning and Start-up phase
- Understand Fabrication, Erection, Loadout and sea-fastening implementation at Fabrication yards
- Understand the selection of the major support marine vessels and major installation equipment for offshore installation works
- Fully understand the structure and topsides installation techniques
- Understand what is involved in Pipe-laying and riser installation works & Subsea installation and diving support activities
- Fully understand what are involved in mobilisation of marine vessels, construction crew, marine crew and construction equipment
- Understand the scope of work for hook-up and commissioning activities

WHO SHOULD ATTEND?

- Field Engineers, CSRs, Construction Supervisors, Project Engineers
- Operations Engineers
- Work-pack Engineers
- Structural Engineers
- Metocean Engineers
- Pipeline Discipline Engineers
- Subsea Equipment Engineers
- Various Discipline Engineers (structural, piping, equipment, electrical, instrumentation)
- Maintenance Engineers
- Contract Admin, Buyers and Procurement Executives
- Cost Estimating, Project Control and Planning Engineers
- Diving and Diving Support Personnel
- Managers and Executives who are new to Offshore engineering projects

TRAINING METHODOLOGY

A combination of class lectures, case studies or examples and group discussion. The course will be intensive but practical and highly interactive. Participants are encouraged to participate actively and to ask questions especially pertaining to specific problems. At the end of the session there will be a question-and-answer session to allow participants

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enough time to seek answers to grey areas and to seek clarifications to any misconceptions or problems they may have regarding the subject concerned to the course. There will also be some indoor experiential activities to enhance learning.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

Course Outlines:

DAY 1

Field Development (FDP), Project Management and Design Engineering

- Pre-course Assessment Test
- Course Learning Objectives vs. Course Participants' Expectations
- Overview of Field Development Planning (FDP)
- Project Management Team (PMT), Roles and Responsibilities
- Contracting, Subcontracting and Procurement Activities
- Design Engineering Process, Deliverables and Flowchart
- Health, Safety, Environment and Security Requirements, including training requirements and qualifications of personnel
- Emergency Response Procedure (ERP)
- QAQC Requirements, Documentation and Drawings Controls

DAY 2

Fabrication and Onshore Construction

- Fabrication Yard Layout, Load-out Methods, Workshops and Major Equipment Types, Foundation Preparation and Preliminary Works
- Planning and Schedule, Fabrication Cost-Time-Resource (CTR) Estimating
- Fabrication, Erection and Assembly of Major Structures, Substructures: Topsides and Living Quarters
- Pipeline Procurement, Concrete Coatings, Pipeline Load-out and Transportation

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- **Welding and Welder Qualifications**
- **Blasting and Painting Activities: Testing and Inspection Requirements**
- **Typical Manpower and Fabrication Equipment Planning and Management**
- **Skid and Packaged Equipment Procurement, Factory Acceptance Testing (FAT), Delivery, Storage and Preservation and Installation**
- **Weight Control and Weighing of Structures in Fabrication**
- **Yard Pre-commissioning Activities**
- **Jacket Commissioning, Trial Fitting and Ship Loose Items Management**
- **Pile and Conductors Make-up and Fabrication, Transportation Arrangement Consideration and Load-out**
- **Load-out Planning, Engineering for Substructures and Topside; and Load-out Execution, Ballasting Techniques and Calculation**
- **Insurances, Commercial and Warranty Surveys**

DAY 3

Offshore Facilities, Pipe-laying and Subsea Installation I

- **Offshore Transportation and Installation Phases, including Planning and Scheduling**
- **Major and Support Marine Vessels, Major Equipment Types**
- **Offshore Installation Considerations, Engineering and Calculations**
- **Weight Control and Onshore Weighing Reports of Structures**
- **Transportation Analysis and Sea-fastening**
- **Launching, Lifting and Installation of Substructures**
- **Upending of Substructures**
- **On-bottom Stability, Pile and Conductor Make-up, Piling and Grouting of Substructures**
- **Lifting Analysis of Topsides and Modular Topsides Construction**
- **Float Over of Integrated Topside Deck**
- **Geotechnical and Geomatics Surveys**
- **Anchor-pattern Preparation and Approval**

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DAY 4

Offshore Facilities, Pipe-laying and Subsea Installation II

- Vessels Availability, Contracting and Procurement Activities and Considerations
- Cost-Time-Resource (CTR) estimating for Transportation and Installation
- IPOP and Pre-execution Reviews
- Mobilisation Preparations
- Insurances, Commercial and Warranty Surveys
- Metocean Activities and Installation Window Considerations
- Substructures Installation - launching, lifting, self installation & novel methods
- Topsides Installation - modular lifts, float-over and novel methods
- SIMOPS Considerations for Offshore Installations
- Pipeline and Riser Installation
- Reel Pipelines and Umbilicals Laying
- Subsea Equipment Installation and Diving Support Activities
- Insurances, Commercial and Warranty Surveys

DAY 5

Hook-up Construction and Commissioning (HuCC)

- HuCC Project Planning and Scheduling, Monitoring and Reporting
- Workpack Process and Execution
- Procurement - cost-plus and overheads
- Construction and Marine Crew Manpower Recruitment and Mobilisation
- Onshore Minor Fabrication
- Mobilisation of Major and Support Marine Vessels
- Overview of Marine Operations
- Onshore Supply Base and Load-out Activities
- Logistics Support Activities
- Hook-up Activities, namely blasting and painting, cutting, fitting and welding, piping and piping supports, platform appurtenances, electrical and instrumentation works
- Pre-commissioning Activities, Hydrotesting, NDT and Inspection

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- Commissioning Activities and Dossiers
- Start-up (first oil, first gas), Hand-over and Punch-list Items
- Post-project Activities, Final Documentation, Change-order and Variation Orders, Lesson Learnt Database and Dissemination
- Course Summary
- Post-course Assessment Test

NOTE:

Pre & Post Tests will be conducted

Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.

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