

OFFSHORE AWARENESS PROGRAM

Introduction

The course has been specially designed for Graduate Trainees of a company doing business in the area of Oil and Gas production facility **offshore**. It is also beneficial for experienced engineers who are new to the offshore production industry, to orient themselves towards offshore platform facilities.

It briefly covers description, definitions, terminologies, concepts, standards, special features and some important practices in the offshore oil and gas industry.



Course Content

No.	TOPIC	DESCRIPTION
1.	Introduction, Definitions and Terminologies	<ul style="list-style-type: none"> • Hydrocarbon Reservoir • Characteristics of Well Fluid, Petroleum, Crude Oil and Natural Gas • Oil Field, Gas Field and Condensate Field • Onshore Field and Offshore Field • Exploration and Production Techniques • Fixed Production Facilities - Fixed Platform • Mobile Production Facilities -Floating Production and Storage Facilities
2.	Typical Offshore Production Complex Configuration	<ul style="list-style-type: none"> • Typical Offshore Configuration <ul style="list-style-type: none"> • Fixed Platforms • FPSO Configuration • Deep Sea Production Configuration • Type of Fixed Platforms <ul style="list-style-type: none"> • Well Platform • Production Platform • Central Processing Platform • Living Quarters Platform • Flare Tripod • Personnel and Utilities Bridge • Flare Bridge • Platform Descriptions <ul style="list-style-type: none"> ▪ Topside Superstructure ▪ Jacket ▪ Foundation ▪ Piling ▪ Decks ▪ Modular Configuration of Topside Facilities

No.	TOPIC	DESCRIPTION
3.	Topside Facilities of Well Platform	<ul style="list-style-type: none"> • Wellheads and Manifold • Test Manifold and Test Separator • Emergency Well Shutdown System • Fire Fighting System with Diesel Engine Driven Water Pump • Electrical Generator(Duel Fuel Engine) with Associated Switchgear • Telemetry, Telecontrol and Communication Facilities • Pedestal Crane • Navigational Aids • Temporary Shelter for Operators
4.	Topside Facilities in a Central Processing Platform – Process System	<ul style="list-style-type: none"> • Flow Lines • Test Manifold and Test Separator • Production Manifold • Three Phase Production Separators- 2 Stage,/3 Stage • Crude Oil Pumping and Metering System • Gas Compression • Gas Dehydration System • Glycol Regeneration • Gas Metering • Oil and Gas Export
5.	Topside Facilities in a Central Processing Platform - Utility Systems	<ul style="list-style-type: none"> • Fuel Gas • Diesel Fuel, Jet Fuel System • Closed Drains, Open Drains • Flare and Relief System • Utility Air System, Instrument Air System, Nitrogen System • Utility Seawater, Firewater System • Seawater Cooling • Fire and Gas Detection System • Potable Water • Cooling Medium • Chemical Injection • Sewage • Power Generation and Distribution • Navigational Aids • Produced Water Treatment and Disposal • Process Control System • Communication System
6.	Requirement for Water Injection and Gas Lift	<ul style="list-style-type: none"> • Configuration • Terminologies • System and Equipment Required
7.	Codes and Standards	<ul style="list-style-type: none"> • List and overview of codes and standards used

No.	TOPIC	DESCRIPTION
8.	Safety and Shutdown System	<ul style="list-style-type: none"> • API RP 14-C • Emergency Shutdown System (ESD) • Process Shutdown System (PSD) • Other Shutdown Systems • Area Classification • Fire and Gas System • Platform Safety Standards – an Overview
9.	Transportation and Installation of Jacket and Topside	<ul style="list-style-type: none"> • Installation Methods • Topside • Jacket • Loadout and Transportation • Piling • Stabbing • Engineering Aspects of Installation
10.	Submarine Pipeline	<ul style="list-style-type: none"> • Determination of Size and Thickness • Stability Consideration • Concrete Coating • Riser • PLEM • Engineering Aspects of Installation

Methodology of Presentation

- Microsoft Power Point with colorful slides packed with information
- Real life P&ID exercises
- Highly interactive with total involvement of the participants.
- Interesting and Interactive Quiz Sessions, Group Tasks for better assimilation.