



Oil, Gas and Chemical

Rig Inspection

Course Introduction

This course is designed to provide better understanding, enhance knowledge, ensure optimum performance, reduce downtime of the rig and maintain safety of personnel. Planned maintenance and accurate inspections are essential. Consequently, this course concentrate on the rig equipment and functions, inspection and maintenance procedures required to ensure equipment integrity by implementing relevant standards and understand industry requirements so that rig's equipment condition can be verified and safety can be improved, consequently, reduce number of accidents and protect assets.

Accordingly, efforts will be exerted at the early phase of the course to understand nature of drilling and work-over operations in vertical, horizontal and multilateral wells prior to developing the basic concepts of the course. Moreover, the course includes engagement with the possible problems which might encounter equipment during drilling operations as well as the latest development in drilling techniques such as Managed Pressure Drilling (MPD). A vital part of the course is class teamwork whereby attendee's teams exercise and discuss various inspection and maintenance procedures and possible problems and solutions as well.

In order to ensure optimum performance of your rig, reduce downtime and maintain safety of your personnel, planned maintenance and accurate inspections are essential. Drilling's Rig Inspection course teaches inspection and maintenance procedures required to ensure equipment integrity on land rigs, platform rigs and jack-up rigs. Candidates learn to implement the relevant standards and understand industry requirements so that they can verify condition of a rig's equipment and improve safety, thus reducing the number of accidents and protecting the asset.

Target Audience

- Process design
- Unit Operator

- Environmental
- Process safety engineer
- Gasoline blender engineer
- Lab supervisor
- Supply chain engineer
- Distillates analyst
- Models engineer
- Chemical Operator
- Chemical Plant Operator
- Chemical Process Technician
- Control Room Supervisor
- Gas Plant Process Operator
- Gas Production Operator
- Gas Terminal Operations and Storage
- Gathering Pipeline engineer
- Oil Terminal / Storage engineer
- Pipeline Maintenance / Equipment / Compliance / Repair
- Pipeline Testing / Technician / Supervisor / Safety
- Plant Equipment Operator
- Plant Operations Technician
- Plant Shutdown
- Plant Supervisor
- Power Distribution
- Power Plant Manager
- Process Supervisor
- Refinery Operations Technician / Manager
- Terminal Operator / Manager
- Utilities Operator

Learning Objectives

- Understand Nature of the Drilling and work-over Operations
- Understand the Functions and Operational Problems Relevant to each of the Rig Equipment.
- Understand the basic rig inspection concept
- Describe the main inspection criteria for major equipment

- Understand the maintenance procedures of the rig equipment
- Independently carry out basic visual rig inspection
- Identify major items which have impact on safety of Rig
- Identify performance indicators of drilling Rig condition
- List relevant API Standards ,Impact on Drilling Equipment
- Understand the relationbetween Equipment Selection and identified I hazardous areas
- Evaluate the Basic Maintenance and Inspection Proceduresof the rig in conjunction with the compliance with the bestworking condition and industrial Standards.
- Understand the Well Control Concept and Procedures andEquipment Operations

Course Outline

• 01 Day One

Module (01) Drilling & Work-over Operations

- 1.1 Drilling Operations
- 1.2 Vertical / Horizontal Wells
- 1.3 Extended Reach
- 1.4 Deviated Holes
- 1.5 Under-Balance Drilling Operations
- 1.6 Rig Types/ Classifications/ Functions

Module (02) Wellhead & Downhole Equipment

- 2.1 Well Types
- 2.2 Well Casing System
- 2.3 Well Cementing
- 2.4 Well Completion Types /Functions
- 2.5 X-mas Tree Types/ Functions
- 2.6 Wellhead Types/ Functions
- 2.7 Oil & Gas Platform

• 02 Day Two

Module (03) Rig Components

- 3.1 Introduction to Rigs Components

- 3.2 Drill String Components
- 3.3 Marine Riser and Riser Tensioner
- 3.4 BHA
- 3.5 BOP Types, Functions and Components
- 3.6 BOP Mounted Gate Valves & Lifting Equipment
- 3.7 BOP Hydraulic Power Unit
- 3.8 Drilling Fluids System Components
- 3.9 Mud Gas Separator
- 3.10 Choke Manifold
- 3.11 Entry Test
- 3.12 Draw-works
- 3.13 Crown Block, Travelling Block and Swivel
- 3.14 Lifting and Handling Equipment
- 3.15 Mud Pumps
- 3.16 Diesel Engines, Emergency Engines and Air Compressors

Module (04) Drilling Fluids

- 4.1 Drilling Fluids (types, classification, calculations)
- 4.2 Drilling Fluids Circulation System
- 4.3 Main Factors Influencing Drilling Fluids Performance
- 4.4 Drilling Fluids Programs
- 4.5 Loss Circulation Problem

• 03 Day Three

Module (05) Downhole Fundamentals

- 5.1 Loss Circulation Material
- 5.2 Drilling Fluids System Components
- 5.3 Well Killing & Securing Methodologies
- 5.4 Formation Damage impact on Well Killing and Prevention
- 5.5 Pressure Basics and Basis
- 5.6 Case Study

Module (06) Managed Pressure Drilling (MPD)

- 6.1 Definition of MPD
- 6.2 Objectives and Variations
- 6.3 MPD Components
- 6.4 Process & Procedures
- 6.5 Conventional and MPD Well Control Practices

Module (07) Rig Inspection

- 7.1 Inspection Concept and Objectives
- 7.2 Inspection Practices, Standards and Principles
- 7.3 API Inspection Standards
- 7.4 Inspection Procedures
- 7.5 Inspection Checklists
- 7.6 Types of Rig Inspection
- 7.7 Qualifications Required for Rig Inspection
- 7.8 Existing Practices Compared to Industrial Standards

• 04 Day Four

Module (08) Rig Maintenance

- 8.1 Maintenance Concept and Objectives
- 8.2 Maintenance Practices and Standards
- 8.3 Maintenance Procedures
- 8.4 Maintenance Checklists
- 8.5 Types of Rig Maintenance
- 8.6 Existing Practices Compared to Industrial Standards

Module (09) Basics of Well Intervention

- 9.1 Drilling Fluids Circulation System/Components
- 9.2 Well Control Theory
- 9.3 Well Intervention Operations
- 9.4 Barrier requirements for Well Intervention Operations
- 9.5 Examples of Barrier Envelopes
- 9.6 Barrier Types
- 9.7 Well Killing & Securing Methodologies

• 05 Day Five

Module (10) Drilling Operational Problems & Troubleshooting

- 10.1 Well Kick
- 10.2 Well Kick Control Methodologies
- 10.3 Work-over Operations
- 10.4 Production Platform
- 10.5 Types of Blowouts/ Causes of Blowouts
- 10.6 Offshore Blowouts

Module (11) Well Control Basics

- 11.1 Well Control Operations

- 11.2 Factors Governing Well Control Success
- 11.3 Oil Spill Types
- 11.4 Oil Classes
- 11.5 Calculating the amount of Spilled Oil

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 13, 2025	April 17, 2025	5 days	4250.00 \$	KSA - Jeddah
July 7, 2025	July 11, 2025	5 days	4250.00 \$	UAE - Dubai
Dec. 22, 2025	Dec. 26, 2025	5 days	4950.00 \$	Thailand - Bangkok
Feb. 23, 2025	Feb. 27, 2025	5 days	4250.00 \$	Morocco - Casablanca