

# **X-MAS TREE & WELLHEAD OPERATIONS, MAINTENANCE & TESTING**

## **DRL036**

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### **COURSE DESCRIPTION**

Wellhead and Christmas tree is the main equipment for oil production, water injection and down hole operation. It is installed on the casing head to seal the annular space between casing and tubing, control wellhead pressure, adjust well flow rate and transport oil to pipeline. This course focuses on wellhead operation, maintenance and testing activities which provide the participants with the master level of these activities.

### **COURSE GOAL**

To enhance the participants' knowledge, skills, and ability necessary to operate, monitor, test and repair any failed component of the well, and boost production and keep the well out of the 'inactive wells' list.

### **COURSE OBJECTIVES**

By the end of this course, participant will be able to:

- Be knowledgeable on the following topics, x-mas tree- well head operations as well as well head testing.
- Understand the relationship between surface (Well Heads) and downhole.
- Investigate leaks and identify causes of leaks.
- Investigate SAP pressures based on well pressure monitoring using 2 and 3 pen recorders.
- Understand the operation of valves, actuators, control panels and other safety mechanisms to control the well.

### **WHO SHOULD ATTEND**

- Field services or operations foreman.
- Petroleum or production engineer.
- Drilling or completion engineer.
- Oil field technical staff.

### **COURSE DURATION**

5 Working Days

## **COURSE OUTLINES**

- 1. Introduction to maintenance operations**
- 2. Wellhead Equipment**
  - Purpose of the wellhead
  - Major components of the wellhead
  - Purpose, design and operation of each wellhead component
  - Safety, health and environmental concerns
- 3. Types of wellhead and its applications**
  - Normal Wellhead & X-mas Tree
  - Water Injection Wellhead & X-mas Tree
  - High Pressure and Anti-Sulfide Wellhead & X-mas Tree
  - Offshore Wellhead & X-mas Tree
  - Double-channel Thermal Recovery Wellhead Equipment
  - Off-center Rotation Wellhead & X-mas Tree
  - Thermal Recovery Wellhead & X-mas Tree
  - Theft Prevention Wellhead & X-mas Tree
- 4. Wellhead servicing**
  - Visual inspections
  - Function and pressure testing of valves, chokes and actuators
  - Inflow testing
  - Non-Destructive Test (NDT)
  - Gauge calibration and replacement
  - Seabed inspection
  - Lubrication
  - Part procurement and replacement

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