MUX BOP Control System Training

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Office Hours: Monday – Friday
8:00 a.m. – 5:00 p.m. CST

Purpose

The training is designed to enable the operators and maintenance personnel in the theory of operation, and the safe and correct use of the functions on the BOP-stack and the Diverter by means of the Multiplex control system.*

MUX BOP Control System

The deepwater Multiplexed BOP & LMRP Drilling Control System is designed to operate all the specified functions. The Drilling Control System is capable of operating in water depths of up to 11,000 feet utilizing Axon Pressure Products Multiplexed technology.

Telemetry between the surface and subsea will be by means of fiber optic conductors in redundant electrical cables. Hydraulic fluid for subsea function operation will be supplied at 5000 PSI from the surface Hydraulic Power Unit.

The Multiplexed BOP and LMRP Drilling Control System presented in this course is a highly reliable, highly maintainable, state-of-the-art system. The system has been designed using field-proven components and where possible, uses standardized, readily available components to minimize system down-time.

Key system features include:

- Working depth up to 11,000 feet
- 5000 PSI hydraulic system
- Redundant (Blue and Yellow) Subsea Control Pods
- Modular, flexible subsea pod design
- Low current solenoid valves
- Well-proven SPM (Sub-Plate Mounted) hydraulic control valves
- Fiber optic surface and subsea communications

Course Description

The course will provide a system overview and a description and functional purpose for each of the major system components. Each major component will be broken down into routine maintenance requirements and troubleshooting instructions. Components of the system will be available for inspection and testing, including a remote panel console, Central Control Unit, subsea electronic modules, regulators and SPM valves. Course manuals and handouts will be provided as well as any diagrams requested specific to your system.

The course will include an overview of the following content, divided into two (2) sections.

System integration and operation will be covered:

• The BOP-stack and its function in brief
• The Diverter and its function in brief
• Introduction to relevant API Recommended Practices and Specifications
• Introduction to relevant practices for well control operations – BOP and Diverter operation
• Hydraulic systems, units and functions on the BOP stack

Monday - Friday
8:00 a.m. – 5:00 p.m.

Course Dates

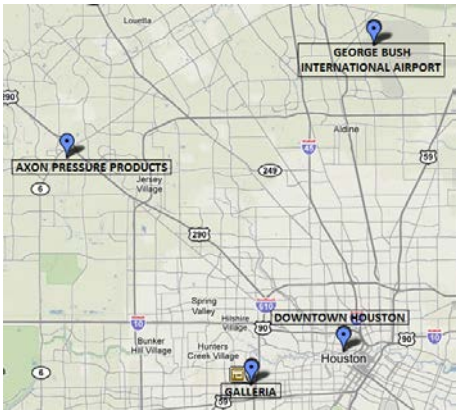
Please visit our website at http://www.axonep.com or contact the Axon Training Department

Materials

- 1x Course Book
- Daily Lunch at the facility
- Final Exam
- Certificate of Completion*

Training Location

Axon Pressure Products
8909 Jackrabbit Road
Houston, TX 77095



For registration information, please refer to the registration form, terms and conditions, and payment form.

MUX BOP Control System Training

- Hydraulic systems, units and functions on the Diverter
- Principle of redundancy for an electro hydraulic system - diagrams
- Principle of redundancy for the Multiplex control system - general
- Introduction to Multiplex BOP control system units and internal components
- Introduction to Multiplex Diverter control system units and internal components
- Operations overview and panel functions
- Maintenance and lifetime philosophy
- High Pressure Unit and accumulator banks
- Umbilical reels and fiber optical signal transmission
- Lower Marine Riser Package and Subsea Pods and pod components
- Subsea accumulators
- Pressure switches and pressure transducers
- Computer Control Unit (PLC)/General/practical
- Power Distribution Panel, UPS/Ground Fault Monitor/Autocap
- Drillers Control Panel/Tool Pushers Control Panel
- Inclinometers/Instrumentation J-box
- Acoustic Pod
- Dimensioning of accumulator cylinders
- American National Standard Institute (ANSI) symbols for fluid power diagrams
- Dimensioning of accumulators briefly – Boyles Law for gas

The Electronic Control System:

Overview will include hands-on operation, function and troubleshooting classroom simulation of the Remote Controls Panels. The Remote Control Panels serve as the Man/Machine Interface (MMI) to the Central Control Unit. The panel touch screens act as the pilot lights, meters, and pushbuttons for the MMI.

Panel features for classroom simulation include:

Two (2) personal computers
Two (2) touchscreens

Course content for the classroom simulation include:

Touchscreen system operation
Touchscreen activation
Touchscreen navigation
Touchscreen display flow chart
User “log on” screens
System screens

Requirements

Course assumes participants have a fundamental understanding of equipment associated with BOP controls and limited experience with BOP MUX control systems.

Evaluation

A certificate of completion is awarded upon completion of the course and the ability to pass a written test based on the course description by minimum 70% correct answers.