Course goal

The goal of this course is to learn how to troubleshoot and maintain the ABB integrated drilling drives system. Rig project configuration will be loaded into the drilling simulator and demo drives. The tools and methods learned can be applied to the work in practice.

Learning objectives

Upon completion of this course, the participants will be able to explain the project configuration and function of different components. The participants could trace alarms from the process panel down to drives and control components. System backup and recovery are also discussed.

Contents

General topics
- System function of ABB drilling drive system
- Project configuration

Hardware operation
- System structure of drilling drive system
- Connect drive RDCU board
- Connect demo drive units
- AC800M controller and S800I/O
- AC800M communication modules
- Process panel
- Setting DP/DP couple

Operation
- Download project configuration to AC800M
- S800 I/O signal tracing
- Download DSU/BRU/LCU configuration
- Perform DW/MP/TD start/stop
- Create project backup

Software
- DriveWindow
- Compact control builder
- Panel builder

Fault-tracing and troubleshooting
- Transformer temperature alarm
- DSU/DBU/LCU alarm
- Torque limit
- Power limit
- Profibus communication failure
- Drivebus communication failure
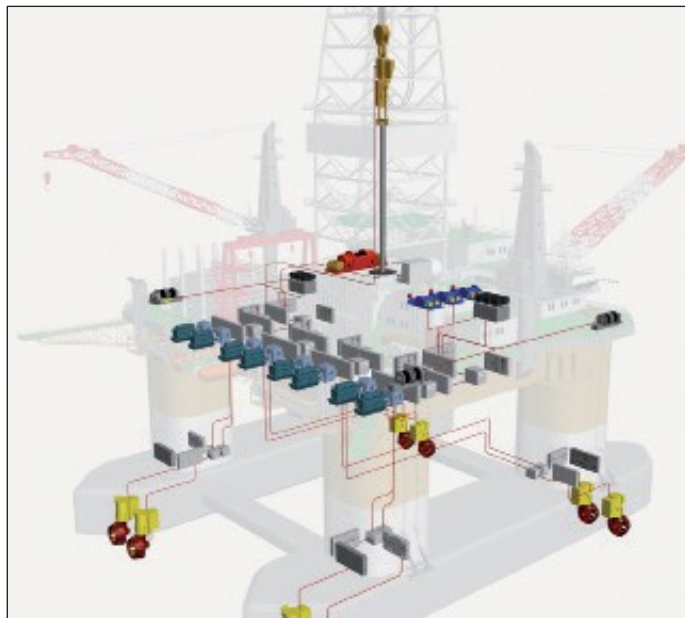
Methods

Classroom lectures
Practical lessons on our training drilling simulator system and ACS800LC demo units

Student profile

Marine engineers and electro-technical personnel at the operational and management level

Prerequisites

Drilling drive system course or similar knowledge is advisable

Duration

4 days

Venue

Singapore
Houston

Additional information

Minimum 4, maximum 6 participants
On-site training on request

H913 - Drilling system course (semi-submersible and drillships)
Course outline

Course outline

Day 1
- Introduction
- Drilling drives system overview
- Project configuration navigation
- Exercises: connect demo drive
- Exercises: download project configuration to simulator

Day 2
- Exercises: S800 I/O signal tracing
- Exercises: transformer temperature alarm
- Exercise: DSU / BRU / LCU alarm fault tracing

Day 3
- Exercise: DW / MP / TD start/stop
- Exercise: speed control
- Exercises: power limit and torque limit
- Exercise: AC800M maintenance

Day 4
- Exercise: communication fault tracing
- Exercises: system backup
- Exercise: system recover

ABB