

Drawworks

Two-Day Course Description



Overview

This course focuses on the operation and configuration of the AC motor driven LEWCO™ drawworks.

Who Should Attend?

Personnel who will operate the equipment or personnel designated to oversee operation of the equipment should attend this course.

Prerequisites

Before participating in this course, each student should have basic product knowledge.

Organization

This is an instructor-led (lecture-based) course, in which discussions are highly encouraged. Short quizzes are given throughout the course as well as at the end of each module. Instructors are available at the beginning and end of each class to answer questions and/or review information. In order to receive credit for satisfactorily completing this course, students are required to pass the comprehensive final exam with a score of at least 70%. Certificates of Completion are awarded to all students who successfully receive credit for the course.

COURSE CONTENT

Learning Objectives

Explain the purpose and function of the drawworks • Know how to interpret product drawings and symbols
• Explain how to trace communications and power through the drawworks • Understand how to navigate through various Digital Drilling Control System™ (DDCS) screens and commands to operate the drawworks

Course Outline

1. Pre-Test and Welcome

- Test initial knowledge level of students to help prepare instructor
- Explain class times, lunch times, bathroom locations, etc.

2. Overview

- Hoisting system overview
- Introduction to drawworks
- LEWCO™ specifications

3. Major Assemblies

- Power flow
- Electric motors and mounts
- Gear box configuration
- Main drum assembly

4. Lubrication System

- System components
- Lubrication manifold system
- Grease ports

5. System Control

- Cameron's DDCS driller's chair configuration
- Network configuration to drawworks
- Drawworks commands and feedback
- Cameron's DDCS driller's chair screen navigation

6. Braking System

- System components
- Air flow
- System operations
- Monitoring devices
- Recommended inspection schedules

7. Auxiliary Braking System

- System components
- Brake engagement
- Air and coolant flow path
- Wear adjustments
- Part replacement procedures

8. Maintenance

- Safety measures
- Bearing replacement procedures
- Inspecting shaft tolerances
- Recommended greases, oils, and lubricants
- Recommended schedules and procedures

9. Post-Test/Evaluations

- Post-test grading
- Student course evaluation
- Additional wrap-up