

Drilling Rig Electrical Safety & Awareness

Cost: \$995.00

This four day program is designed for drilling rig managers who need to manage basic electrical problems in remote locations.

By providing a solid understanding of single and three phase electrical systems it will enable them to avoid death, injury, equipment damage or extensive downtime from unauthorized and unqualified repairs. This program can also be customized for other industries.

Who Should Attend:

Drilling Rig Managers and other rig workers responsible for the safe and efficient operation of their rigs electrical systems.

UNDERSTAND ELECTRICAL CIRCUITS

Objective: Form a working and practical knowledge of electrical theory and it's applications to electrical circuits.

SUBTOPICS:

- Measure Power
- Measure Current
- Measure Voltage
- Use Digital Multimeters

UNDERSTAND ELECTRICAL COMPONENTS

Objective: Form a working and practical knowledge of electrical theory and it's applications to electrical components.

SUBTOPICS:

- Test Conductors
- Measure Circuit Resistance
- Test Insulation

APPLY ELECTRICAL FUNDAMENTALS

Objective: Learn the properties of electrical current and voltage by learning and applying and thus proving the basic laws of electricity.

SUBTOPICS:

- Apply Ohms Law
- Apply Watts Law
- Apply Direct Current Theory
- Apply Alternating Current Theory
- Troubleshoot Electrical Circuits

IDENTIFY ELECTRICAL FAULTS

Objective: Learn the application of electrical testing equipment and how to use a systematic troubleshooting approach.

SUBTOPICS:

- Identify System Problems
- Identify Maintenance Problems
- Identify Operating Problems
- Troubleshoot Circuit Problems

OPERATE ELECTRICAL SYSTEMS

Objective: Learn the safe and efficient manner of running large industrial power systems and motors.

SUBTOPICS:

- Read Electrical Diagrams
- Identify Colour Coding
- Plan Circuit Device Installations
- Understand 120 Volt Circuit Installations
- Plan 120/240 Volt Circuit Installations
- Evaluate Transformer Applications
- Compare Three Phase Systems

UNDERSTAND SINGLE PHASE EQUIPMENT

Objective: :Form a working and practical knowledge of single phase equipment.

SUBTOPICS:

- Inspect Circuit Simulator Boards
- Connect Wires
- Connect Cables
- Connect Cord Ends
- Connect Lights
- Connect Receptacles
- Connect Single Phase Motors
- Connect Single Phase Panels

IDENTIFY ELECTRICAL HAZARDS

Objective: :Learn the application of the proper PPE selection and how to follow and carefully adhere to safe work procedures.

SUBTOPICS:

- Avoid Equipment Damage
- Avoid High Voltage Burns
- Avoid High Line Contacts
- Avoid Low Voltage Burns
- Follow Safe Work Procedures
- Follow Safe Work Practices

UNDERSTAND SINGLE PHASE SYSTEMS

Objective: Form a working and practical knowledge of single phase systems.

SUBTOPICS:

- Understand Open Circuits
- Understand Short Circuits

- Understand Intermittent Faults

TOPIC 9: MAINTAIN PROTECTIVE SYSTEMS

Objective: :Learn the maintenance skills necessary to adequately keep protective systems online.

SUBTOPICS:

- Describe Power Company Grounding
- Ground Electrical Systems
- Bond Electrical Equipment
- Ground Electrical Equipment
- Maintain Double Insulation
- Test Fuses
- Test Breakers
- Test GFCI's

UNDERSTAND CIRCUIT SAFETY AND CONTROL DEVICES

Objective: Form a working and practical knowledge of circuit safety and control.

SUBTOPICS:

- Test Magnetic Devices
- Test Safety Devices
- Test Control Devices

UNDERSTAND THREE PHASE EQUIPMENT

Objective: Form a working and practical knowledge of three phase equipment.

SUBTOPICS:

- Mount System Simulator Boards
- Connect Three Phase Panel Boards
- Connect Three Phase Cables
- Connect Three Phase Manual Starters
- Connect Three Phase AC Motors
- Identify Three Phase Motor Failures
- Connect Three Phase Magnetic Starters
- Protect Three Phase Motors

MANAGE THREE PHASE SYSTEMS

Objective: Learn the maintenance skills necessary to adequately keep three phase systems online.

SUBTOPICS:

- Manage Power Circuit Faults
- Manage Control Circuit Faults

"Gave a true awareness of power systems on a rig and just how instantaneous an electrical accident is. 5 out of 5"

- **D. Grasby, Field Superintendent, Horizon Drilling**

"Very good, I think all rig managers and drillers should attend"

- **J. Wildboer, Field Superintendent, Trinidad Drilling**

"The Instructor was excellent, understanding and patient with very good teaching skills"

- **D. Villumsen, Driller, Trinidad Drilling**

"Go to this course, lots of useful information"

- **R. Higgins, Rig Manager, Precision Drilling**

"Excellent presentation, clear and helpful"

- **S. Grewel, Maintenance Coordinator, Ensign Drilling**

"The instructor was very informative and quick to answer questions in an understandable way. Awesome. Practical."

- **P. Butts, Precision Well Servicing**

"The course was very good, both in practice and theory."

- **Ted Tschetter, Rig Manager, Nabors Drilling**