



ELECTRICAL INSTALLATIONS in Petroleum Industry

Course Introduction:

This course covers electrical installations in petroleum industry according to NEC regulations. It covers classification of hazardous atmospheres, prevention of external ignition and explosion, equipment for hazardous areas (switchgears, lighting fixtures & motors and generators), wiring methods and materials, testing and inspection, earthing and bonding in hazardous areas, monitoring and protective equipment

Electrical installation teaches the candidates about the proper use, maintenance, inspection and installation of electrical equipment. Safety is usually a key feature to electrical installation courses. This includes instructions for handling electrical circuits, hazard analysis and interpretation and unsafe working conditions. The specific dangers of electrical blast, short circuits, ground faults, lifting injuries, fire spread, electrocution and overloads are explained. Courses might also examine maintenance procedures, related work permits, personal protective equipment and locking and tagging devices.

This course teaches the participants how to select, identify and become comfortable with power tools used in installation and electrical measuring. The important issue of health and safety in the workplace will also be addressed. You'll learn wiring techniques, and study the regulatory framework that applies to the inspection and testing of various types of installation. You will learn how to comply with building regulations and how to ensure that health and safety guidelines are met at all times. When your course is complete, you'll have the knowledge you need to more sharpen your skills and experience.

Course Objectives:

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

- Classify hazardous atmospheres.
- Understand procedures of prevention of external ignition and explosion.
- Be familiar with equipment for hazardous areas
- Understand wiring methods and materials.
- Understand testing and inspection procedures
- Determine earthing and bonding in hazardous areas.
- Be familiar with monitoring and protective equipment.

Who Should Attend?

This course is aimed at personnel who would like to expand their knowledge of the safety and functional design of an electrical installation and is aimed at:

- Electrical Engineers

- Electrical Supervisors
- Electrical Technicians
- Maintenance personnel with responsibility for an electrical installation

Course Outline:

Classification of Hazardous Atmospheres

- Definitions
- Class I, Class II & Class III atmospheric hazards

Prevention of External Ignition and Explosion

- Combustion principles & sources of ignition
- Intrinsically safe equipment
- Enclosures
- Purging and pressurization systems

Equipment for Hazardous Areas (Switchgears, Lighting fixtures & Motors and generators)

Wiring Methods and Materials

- Conduit, Cables and cable sealing

Testing and Inspection

- Electrical apparatus
- Low power electrical apparatus
- Inspection of petroleum facility electrical systems
- Working with high-voltage equipment

Earthing and Bonding in Hazardous Areas

Monitoring and Protective Equipment

- Emergency generator checks
- UPS checks
- Types of power outages
- Protective equipment for electrical circuits
- Contractor control
- Safe practices for handling energized circuit breakers, and motor starters

Personal protection items (Insulated gloves, H. voltage detectors (hot sticks), Other items)

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Fees:

To be advised as per course locations. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

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International Centre For Training & Development

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session