Global Horizon
TRAINING CENTER

Training Course:
Industrial Electrical Systems and Advanced ESP Maintenance

21 December 2025 - 1 January 2026
Manama (Bahrain)
Fraser Suites

Training Course:
Industrial Electrical Systems and Advanced ESP Maintenance

Training Course code: SC235653 From: 21 December 2025 - 1 January 2026 Venue: Manama (Bahrain) - Fraser Suites
Training Course Fees: 7700 Euro

Introduction

Industrial plants rely heavily on electrical systems and equipment to maintain seamless operations, efficiency, and productivity. Electric Submersible Pumps ESPs are critical components of these systems, particularly in industries such as oil and gas, water treatment, and manufacturing. Proper maintenance and troubleshooting of these systems are essential to avoid costly downtime and ensure operational excellence.

This 10-day intensive training program provides a comprehensive understanding of electrical maintenance for industrial plants and the advanced technology, operation, and troubleshooting of Electric Submersible Pumps. Participants will gain both theoretical knowledge and practical skills to maintain plant-wide electrical systems and optimize ESP performance. The program incorporates real-world case studies, hands-on exercises, and advanced diagnostic techniques to ensure participants leave with actionable skills to enhance their organization's electrical and pumping systems.

Target Audience

- Electrical engineers and maintenance technicians
- Plant managers and supervisors responsible for electrical systems
- Maintenance professionals working with industrial equipment and ESPs
- Professionals in the oil and gas, water management, and manufacturing sectors
- Anyone involved in ensuring the reliability of industrial electrical systems and pumps

Objectives

- Understand the principles and practices of electrical maintenance for industrial plants.
- Learn the operational features and maintenance needs of Electric Submersible Pumps ESPs.
- Master advanced troubleshooting techniques for industrial electrical systems and ESPs.
- Develop preventive and predictive maintenance strategies for improved reliability.
- Gain hands-on experience with diagnostic tools and maintenance planning.
- Address operational challenges through case studies and interactive problem-solving.

Outlines

Day 1:

Fundamentals of Electrical Maintenance in Industrial Plants

- Introduction to electrical systems in industrial environments
- Overview of maintenance strategies: Preventive, predictive, and corrective
- Safety protocols for electrical maintenance
- Key components of plant electrical systems: Switchgear, motors, transformers

Day 2:

Troubleshooting Electrical Systems in Industrial Plants

- Identifying common faults in industrial electrical systems
- Diagnostic tools: Multimeters, thermal imaging cameras, and insulation testers
- Hands-on session: Troubleshooting electrical faults in plant equipment
- Case studies: Effective troubleshooting practices

Day 3:

Maintenance of Switchgear and Circuit Breakers

- Types of switchgear and circuit breakers: Air, oil, vacuum, and SF6
- Inspection and maintenance procedures for switchgear
- Troubleshooting and repairing circuit breakers
- Practical workshop: Diagnosing and maintaining switchgear

Day 4:

Maintenance and Troubleshooting of Transformers

- Transformer operation and key components
- Identifying faults: Overheating, oil leaks, and winding issues
- Maintenance practices for power and distribution transformers
- Hands-on session: Testing transformer insulation and functionality

Day 5:

Introduction to Electric Submersible Pumps ESPs

- Overview of ESP technology and applications
- Key components: Motors, protectors, and pumps
- Understanding ESP operational principles and performance characteristics
- Common applications of ESPs in industrial plants

Day 6:

Advanced Troubleshooting of Electric Submersible Pumps

- Diagnosing ESP issues: Mechanical, electrical, and operational faults
- Tools and techniques for troubleshooting ESPs
- Hands-on session: Simulating fault conditions and resolutions
- Interactive discussion: Challenges in ESP operations

Day 7:

Maintenance Practices for Electric Submersible Pumps

- Best practices for ESP inspection and maintenance
- Developing preventive and predictive maintenance schedules for ESPs
- Practical workshop: Maintenance procedures for ESP systems
- Group activity: Creating maintenance plans for ESP operations

Day 8:

Integration of ESPs into Industrial Systems

- Designing and optimizing ESP systems for industrial applications
- Monitoring and control systems for ESPs
- IoT and smart monitoring technologies in ESP systems
- Case study: Successful integration of ESPs in industrial plants

Day 9:

Energy Efficiency and Performance Optimization

- Strategies for improving energy efficiency in electrical systems and ESPs
- Variable frequency drives VFDs and their role in optimizing ESP performance
- Practical session: Analyzing and optimizing ESP energy consumption
- Workshop: Developing energy-saving strategies for industrial electrical systems

Day 10:

Comprehensive Review and Practical Applications

- Recap of electrical maintenance and ESP best practices
- Practical troubleshooting and maintenance exercises
- Final assessment: Applying learned skills to real-world scenarios
- Certification ceremony and participant feedback

Registration form on the Training Course: Industrial Electrical Systems and Advanced ESP Maintenance

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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Full Name (Mr / Ms / Dr / Eng): .....
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Person Responsible for Training and Development

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Payment Method

☐ Please find enclosed a cheque made payable to Global Horizon

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Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.