



*Training Course:  
Pumps, Compressors & Turbines*

*6 - 10 October 2024*

*Cairo (Egypt)*

*Holiday Inn & Suites Cairo Maadi, an IHG Hotel*

## Training Course: Pumps, Compressors & Turbines

Training Course code: EN234690 From: 6 - 10 October 2024 Venue: Cairo (Egypt) - Holiday Inn & Suites Cairo Maadi, an IHG Hotel Training Course Fees: 3900 € Euro

### Introduction

A complete understanding of construction details and functioning of pumps, compressors and turbines is a prerequisite for successful operation of plant and piping system. This is especially important nowadays when various models of this equipment still create in everyday operation various problems: mechanical, hydraulic, etc.

This training course will feature the importance of proper operation and maintenance of rotating machinery such as pumps, compressors and turbines of various designs and applications.

### Course Objectives

The online training course will feature:

- Principles of selection of right pump, compressor and turbine for the given application
- Practical issues related to trouble-free functioning of pumps, compressors and turbines
- Explanation of complex flow situations in pumps, compressors and turbines.
- Guidelines for installation, operation, maintenance and troubleshooting
- Maintenance and repair economic issues: cost and benefit analysis

### Course Benefits

By the end of this online training course, participants will be able to:

- Understand technical features of pumps, compressors and turbines
- Select optimal type and size of equipment for a given industrial application
- Use methods of estimating the degree of deterioration and inefficiency of equipment
- Apply best practices and techniques of pinpointing the root cause of problems
- Choose the most efficient remedies and troubleshooting techniques in operation

### TRAINING METHODOLOGY

This Petro Knowledge training course will utilize a variety of proven learning techniques to ensure maximum understanding, comprehension, retention of the information presented. The training course is conducted online via

an Advanced Virtual Learning Platform in the comfort of your choice location.

## Course Outlines

### DAY ONE

#### CENTRIFUGAL PUMPS

- Overview of various types of pumps based on design and application
- World standards and codes related to pump design
- Main elements of centrifugal pump construction
- Design of pump-suction piping
- Selection and sizing of centrifugal pump
- Solving problems in operation

### DAY TWO

#### POSITIVE DISPLACEMENT PUMPS

- Positive displacement pumps: reciprocating and rotary
- Pump requirements for chemical, process and oil industry, power generation
- Pumps for special applications
- Guidelines for pump installation and operation
- Pump inspection, control and performance testing
- Maintenance and troubleshooting of pumps

### DAY THREE

#### CENTRIFUGAL COMPRESSORS

- Overview of the main features of various types of compressors
- Classification of compressors based on design and application
- World standards and codes related to compressor design
- Main elements of centrifugal compressor construction
- Analysis of centrifugal compressor efficiency

- Guidelines for trouble-free centrifugal compressor operation

## DAY FOUR

### POSITIVE DISPLACEMENT COMPRESSORS

- Positive displacement compressors: Reciprocating and Rotary
- Basic criteria for selecting the optimum cost-effective compressor
- Compressor loadings and speeds; noise control and protection
- Compressors for special applications
- Guidelines for compressor installation and operation
- Compressor inspection, maintenance, control, performance testing and troubleshooting

## DAY FIVE

### INDUSTRIAL GAS TURBINES

- Main elements and technical characteristics of gas turbine design
- Radial and Axial-flow gas turbines
- Combustor performance - types of fuels, combustion and pollution control
- Gas turbine deterioration - corrosion and erosion prevention
- Mechanical vibrations - monitoring, measurements, diagnostics and analysis
- Installation, operation, maintenance and troubleshooting of gas turbines

## Registration form on the Training Course: Pumps, Compressors & Turbines

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

### Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
 Telephone / Mobile: .....  
 Personal E-Mail: .....  
 Official E-Mail: .....

### Company Information

Company Name: .....  
 Address: .....  
 City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
 Position: .....  
 Telephone / Mobile: .....  
 Personal E-Mail: .....  
 Official E-Mail: .....

### Payment Method

- Please find enclosed a cheque made payable to Global Horizon
- Please invoice me
- Please invoice my company

### 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  
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to: Global Horizon  
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