



*Training Course:  
Pipes and Piping Systems Optimisation*

*7 - 11 December 2026  
Cape Town (South Africa)  
DoubleTree by Hilton Cape Town - Upper Eastside*

## Training Course: Pipes and Piping Systems Optimisation

Training Course code: EN6048 From: 7 - 11 December 2026 Venue: Cape Town (South Africa) - DoubleTree by Hilton Cape Town - Upper Eastside Training Course Fees: 7500 € Euro

### Introduction

Piping systems are critical to the safe and efficient transport of fluids in industries such as oil & gas, petrochemicals, power generation, and manufacturing. Optimizing piping systems improves flow efficiency, reduces energy consumption, minimizes pressure losses, and enhances system reliability.

This program, designed by Global Horizon Training Center, equips participants with the technical knowledge and practical skills required to analyze, design, and optimize piping systems for improved performance, safety, and cost efficiency.

### Course Objectives

By the end of this program, participants will be able to:

- Understand piping system design principles and configurations
- Analyze fluid flow behavior and pressure losses
- Optimize pipe sizing and routing for efficiency
- Select appropriate materials and components
- Apply relevant codes and standards ASME, API
- Identify and resolve operational issues in piping systems
- Improve energy efficiency and reduce operational costs
- Ensure safety and system reliability

### Target Audience

This program is designed for:

- Mechanical and Piping Engineers
- Process Engineers
- Maintenance and Reliability Engineers
- Oil & Gas and Industrial Professionals
- Design and Project Engineers
- Technical staff involved in piping systems

### Outline

#### Day 1: Fundamentals of Piping Systems

- Overview of piping systems and applications
- Types of piping systems and layouts
- Pipes, fittings, valves, and supports
- Materials and specifications
- Codes and standards ASME B31

#### Day 2: Fluid Flow and Hydraulic Analysis

- Fluid properties and flow behavior
- Pressure drop and head loss calculations
- Flow regimes and Reynolds number
- Pump and system curves
- Hydraulic optimization

#### Day 3: Piping Design and Optimization Techniques

- Pipe sizing and routing strategies
- Minimizing pressure losses
- Energy efficiency considerations
- System balancing and control
- Design optimization methods

#### Day 4: Stress Analysis and Integrity Management

- Thermal expansion and flexibility analysis
- Stress analysis basics
- Corrosion and erosion management
- Inspection and maintenance strategies
- Risk-based inspection RBI

#### Day 5: Troubleshooting, Optimization, and Case Studies

- Identifying and resolving piping issues
- Root cause analysis
- Performance optimization techniques
- Cost reduction strategies
- Case studies and real-world applications

## Registration form on the Training Course: Pipes and Piping Systems Optimisation

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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:  
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provisionally reserve your  
place.

Fax your completed  
registration  
form to: +20233379764

E-mail to us :  
info@gh4t.com  
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Complete & return the  
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to: Global Horizon  
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