XCELERATE TRAINING INSTITUTE

your learning & development partner

MECHANICAL ENGINEERING

Process Plant Optimization Technology and Continual Improvement Training Course

DURATION	LANGUAGE	FORMAT
5 days	**English**	**Classroom / Online**

Upcoming dates

Dates	Venue	Format	Fee
22 – 26 Feb 2027	Live online	Online (live)	**€1,200**
2 – 6 Aug 2027	Live online	Online (live)	**€1,200**
6 – 10 Sep 2027	Bahrain	Classroom	**€4,800**

Register or ask a question

Online: staging.x8ti.com/course/process-plant-optimization-technology-and-co…

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Process Plant Optimization Technology and Continual Improvement Training Course

Introduction

Introduction

Process Plant Optimization requires effective management of maintenance operations and optimization of equipment, along with plant reliability and availability.

The vital aspects of process plant optimization are related to system energy management and the reduction of energy consumption. Many industrial processes and systems currently offer significant potentials for savings. However, bringing significant process changes such as modern controls and newer technologies can also enhance the opportunities for plant optimization. This course will discuss the importance of monitoring and adjusting process plant operations to sustain optimum levels of efficiency while maintaining consistently safe and reliable operational procedures.

Operational reliability and consistency are the bases of process plant optimization, so any disruptions must be kept to a minimum for the plant operations to be sustainable. This requires the effective management of the degradation processes that affect the equipment and systems. It also requires competent resources to implement effective inspection and maintenance strategies, plans, and methods.

Optimizing an existing plant is an effective method of achieving higher profitability without bearing any large investment costs associated with building a new plant from scratch.

This Xcelerate Training Institute course will provide you with a comprehensive view of the various aspects of process plant integrity and the essential foundation for sustainable plant profitability and optimization.

Learning Objectives

- Understand plant optimization and energy conservation in detail
- Describe and practice the managerial tools needed to effectively optimize plant operations
- Consider the most cost-effective process for energy-saving
- Be acquainted with and understand overall plant effectiveness (OPE)
- Employ business focus to ensure sustainable plant profitability
- Establish and measure Key Performance Indicators (KPIs) for a plant
- Recognize and apply operational procedures to improve KPIs
- Execute the most suitable operation and maintenance strategies

Training Methodology

- Lectures
- Video demonstrations
- Quizzes & Evaluations
- Seminars & Presentations

- Group Discussions
- Assignments
- Case Studies & Functional Exercises

Benefits for Your Organization

- Benefit from building your employee capability plant optimization
- Learn about different roles played within the Process Plant Optimization Technology
- Follow Continual Improvement guidelines
- Learn and apply standards in equipment identification, equipment design features analysis and equipment performance calculations
- Become involved in safe operation and monitoring of equipment, and equipment maintenance
- Delegates will be able to apply the gained knowledge and practice skills that will help their respective companies
- Maintain better organizational safety records

Benefits for You

- Advance your career opportunities
- Work across worldwide industries like oil and gas, automobile, production, construction, aeronautics, etc.
- Secure a relevant job anywhere in the world with the right knowledge in Process Plant Optimization Technology and Continual Improvement
- Get promoted in your current job in the Process Plant Optimization Technology and Continual Improvement field
- Acquire the professional skills and knowledge required to accomplish your tasks with optimal competence and accuracy
- Master the knowledge and techniques to see the future of an effective Process Plant Optimization Technology and Continual Improvement process
- Discover how to work well with your machines and the risks of not being able to operate them accurately
- Contribute to your organization by being knowledgeable enough to determine the need for a program/process at your workplace or understand an existing program better
- Get an opportunity to work through hands-on exercises in detail to gain the skills needed to facilitate a Process Plant Optimization Technology and Continual Improvement study
- Gain the skills to plan, manage, facilitate, and scribe for a Process Plant Optimization Technology and Continual Improvement project

Target Audience

- Process plant technical professionals
- Engineers, technicians, and operators
- Supervisors and maintenance personnel
- Project engineers
- Engineering and technical personnel responsible for improving process and petrochemical plant, and refinery profitability

- Those who are involved in planning, managing, and ensuring energy efficiency

Course Outline

Overview of Process Plant Operation, Integrity, and Reliability

- Process Plant Operation, Integrity, and Reliability
- Asset Integrity Management (AIM)
- Plant Integrity and Reliability
- Risk-Based Integrity (RBI) Approach
- Operational Impact on Plant Integrity
- Maintenance Impact Integrity and Reliability
- Asset Management
- Maintenance Management
- Process Improvement
- Process Plant Economics

Process Plant Optimization Basics

- Process Plant Optimization
- Process Control Basics
- Elements of Process Plant Optimization
- Components to Optimize Industrial Processes
- Mathematical Model of Process
- Process Variables
- Simulation Technology to Plant and Control
- The Basics of Heat Integration

Energy Management for Businesses & The Environment

- Industrial Energy Management
- Energy Efficiency for Businesses and the Environment
- Energy Use and in Process Industry
- Energy Management Standard: Details
- Energy Management Standard: Features
- Obstacles for Energy Management Programs

Energy Conservation

- World Standards and Bench marking Guidelines
- Useful Practices in Process Plant Energy Management
- Energy Conservation Check List for Industrial Plants
- Energy Conservation Opportunities
- Energy Audit
- Energy Audit Types
- Bench marking Energy Intensity and Usage
- New Energy Efficient Technologies

- Technical Evaluation of Potential Opportunities
- Economic Evaluation of Renewable Energy

Plant Optimization Activities

- Implications of Plant Optimization Activities
- Technological Modifications to the Plant
- Technology Licenses
- Impact on Human Resources
- Good Safety - Good Business
- Safety Costs: Costs of Injuries

Minimization of Equipment Failure

- Risk-Based Inspection (RBI
- Procedures for Minimizing Risk of Equipment Failure
- Fitness for Service (FFS) Analysis
- Estimating the Remaining Life of Equipment
- Optimization of Plant Economy through Planned Equipment Replacement

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Registration Form

Process Plant Optimization Technology and Continual Improvement Training Course

Preferred dates: ..... Venue or online: .....

Duration: 5 days Language: .....

Please complete and email this form to us, or register online. We confirm your place and send the invoice within one working day.

Delegate information

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Official email: ..... Personal email: .....

Company information

Company name: .....

Address: .....

City / country: ..... VAT / tax number: .....

Person responsible for training & development

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

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Payment

☐ Please invoice me ☐ Please invoice my company

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