

Training
Course

**Process Plant Optimization,
Revamping & Debottlenecking**



Course Plan

Introduction

Process plant optimization, revamping, and debottlenecking are essential to improving the performance, efficiency, and profitability of industrial facilities. As market demands and technologies evolve, optimizing operations, upgrading equipment, and addressing bottlenecks become crucial for maintaining competitiveness. This course will provide participants with the tools, strategies, and insights required to enhance the productivity of process plants through effective optimization and revamping techniques.

Course Objectives:

- ✓ Equip participants with the knowledge to identify and analyze performance bottlenecks in process plants.
- ✓ Provide practical strategies for optimizing plant operations and improving efficiency.
- ✓ Develop skills in planning and executing revamping projects to upgrade existing infrastructure.
- ✓ Introduce methods for debottlenecking that enhance plant capacity without major capital investment.
- ✓ Emphasize safety, sustainability, and cost-effectiveness in optimization and revamping efforts.

Who Should Attend?

- Process engineers and plant managers.
- Project engineers and technical consultants.
- Operations and maintenance personnel.
- Industrial planners and system analysts.
- Professionals involved in plant design and performance evaluation.
- Consultants and contractors specializing in plant upgrades and optimization.

Training Methods:

- ✓ Online Video material.
- ✓ Presentation.
- ✓ Live Interactive sessions.
- ✓ Course presenter will make extensive use of all tools that will be needed for the virtual environment.
- ✓ Questions & Answers

Course Outline:

Day One

- Introduction to Process Plant Optimization: Overview of optimization techniques and their importance in industrial operations.
- Key Performance Indicators (KPIs) for Plant Optimization: Identifying and measuring KPIs to evaluate plant performance.
- Understanding Plant Bottlenecks: Definition, identification, and classification of bottlenecks in process plants.
- Debottlenecking Fundamentals: Techniques to remove bottlenecks and increase plant throughput.

Day Two

- Capacity and Efficiency Enhancement: Methods to enhance production capacity while improving energy efficiency.
- Process Flow Analysis: Tools for analyzing and improving process flows within plants.
- Data Analysis for Optimization: Utilizing data analytics and process monitoring systems to drive optimization.
- Energy Optimization Techniques: Strategies to reduce energy consumption and enhance energy efficiency.

Day Three

- Optimization of Utilities Systems: Enhancing the efficiency of utilities such as steam, cooling water, and compressed air.
- Revamping and Upgrading Existing Equipment: Best practices for upgrading equipment and systems without major shutdowns.
- Cost-Benefit Analysis in Revamping Projects: Evaluating the financial implications of plant revamping and optimization efforts.
- Sustainability in Plant Optimization: Balancing optimization efforts with environmental and sustainability goals.

Day Four

- Risk Assessment in Debottlenecking: Managing operational risks during debottlenecking projects.
- Optimizing Control Systems: Role of advanced process control (APC) and automation in plant optimization.
- Process Simulation for Optimization: Using simulation software to model plant operations and identify optimization opportunities.
- Maintenance Strategies for Optimized Plants: Aligning maintenance with optimization goals to ensure continuous improvement.

Day Five

- Case Studies on Plant Optimization: Real-world examples of successful plant optimization and debottlenecking projects.
- Planning and Execution of Revamping Projects: Steps and considerations for planning and executing revamping projects.

- Economic Impact of Plant Optimization: Understanding the financial benefits and cost savings associated with optimization.
- Future Trends in Process Plant Optimization: Emerging technologies and innovate

Training Details

Course Duration	5 Days
Pre-Schedule	3 – 7 Nov 2024
Venue	U A E – Dubai – The H hotel
Training Fees Per Person	KWD 1250 (One Thousand Two Hundred Fifty)
Course Fees Include	<ul style="list-style-type: none"> ✓ Tuition documentation ✓ Curriculum and Training Handout ✓ Five Star Lunch ✓ Completion Certificates