



Process Utilities & Axillary Support Systems Operation

Course Introduction:

This course is designed to provide professionals in the industrial and manufacturing sectors with a comprehensive understanding of the operation and management of process utilities and auxiliary systems. These systems, which include steam, cooling water, compressed air, and electrical utilities, play a crucial role in supporting core manufacturing processes. This five-day theoretical course will cover the fundamental principles, operational practices, and maintenance strategies necessary for optimizing these essential systems.

Participants will learn about the design, operation, and troubleshooting of various utilities and support systems, emphasizing efficiency, reliability, and safety. The course will also address the integration of these systems within broader manufacturing operations, highlighting best practices for resource management and energy conservation. By the end of the course, attendees will be equipped with the knowledge and skills needed to effectively operate and maintain process utilities and auxiliary support systems in their organizations

Course Objectives:

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

- Understand the principles and importance of process utilities and auxiliary support systems in manufacturing.
- Operate and maintain steam and heating systems effectively.
- Manage water and cooling systems with a focus on efficiency and safety.
- Implement and troubleshoot compressed air systems in industrial settings.
- Integrate auxiliary support systems for optimal manufacturing performance

Who Should Attend?

This course is intended for:-

- Engineers and technicians involved in utilities management.
- Operations and maintenance personnel in manufacturing facilities.
- Facility managers and energy coordinators.
- Safety and compliance officers in industrial environments.

Course Outline:

Day 1: Introduction to Process Utilities

- Overview of process utilities and their importance in manufacturing
- Key types of process utilities: steam, water, air, and electrical systems
- Understanding the role of auxiliary support systems
- Basic principles of utility generation and distribution

Day 2: Steam and Heating Systems

- Fundamentals of steam generation and distribution
- Operation and maintenance of boilers and steam traps
- Heat exchangers: types, function, and maintenance
- Safety considerations in steam and heating operations

Day 3: Water and Cooling Systems

- Types of water systems: process water, cooling water, and wastewater
- Operation and maintenance of cooling towers and chillers
- Water treatment processes and management
- Best practices for water conservation and efficiency

Day 4: Compressed Air Systems

- Principles of compressed air generation and distribution
- Components of compressed air systems: compressors, dryers, and filters
- Troubleshooting common issues in compressed air systems
- Efficiency improvements and energy management strategies

Day 5: Auxiliary Support Systems and Integration

- Overview of auxiliary support systems: electrical, HVAC, and control systems
- Integrating utilities with core manufacturing processes
- Monitoring and control technologies for process utilities
- Developing a maintenance and operational excellence plan

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session