

Learning Topic: Technical (Plant Processes & Operations).

Course Name: Utilities (II) – DM Water, Steam, Condensate, Hot Water Systems

Reference Code: PLOP 125

Course Overview:

This course is one of the basic training courses for any operation staff member.

This program is specially designed to teach the basics of utility systems in chemical, petrochemical, oil & gas plants. The program is in two parts.

Part 1 course will cover process (potable) water system, fire water system & network, cooling water system mainly cooling tower water, chilled water system using compressors, chilled brine system where cooling water temperatures could be as low as – 25 deg C.

Part I also includes plant air system where compressors are used with excessive cooling & drying, instrument air systems where some humidity could be tolerated, Nitrogen system.

Part II course will cover de-ionization (demineralization) of water which is a treatment aimed at upgrading its purity to be suitable for use in the process in the plant and for steam generation.

Part II also includes steam generation systems, condensate systems & cycles, hot water systems
All the information in these two programs are necessary and very important and basic for all operation and maintenance staff to be able to operate and maintain these services safely and efficiently.

Course Objectives:

By the end of Utilities (I) program participants are expected to:

1. Understand the Demineralized Water Treatment & Distribution System.
2. Understand the Steam Deaeration & BFW System, and Steam Generation Systems.
3. Understand the Chemical Treatment System which keeps all equipment & piping systems intact.
4. Understand the Steam & Condensate Distribution Systems.
5. Understand the Condensate Return & Treatment Systems.
6. Understand the Hot Water System, Generation, Distribution & Return.

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Training Methodologies:

The training methodology is interactive and is suitable for all employees involved in maintenance and operations management enhancing the following:

- Pre-test and Post-test
- Variety of Learning Methods & examples
- Presentation
- Lectures
- Group Work

Who should attend?

Operation engineers

Operations technicians

Operators

Maintenance technicians

Any interested plant personnel in maintenance, stores, warehouse, safety, procurement, logistics...etc.

Training Outline:

Day 1:

Course Introduction

Lesson 1: Demineralized Water Treatment & Distribution System

Day 2:

Lesson 1: Demineralized Water Treatment & Distribution System

Lesson 2: Steam Deaeration & BFW System, and Steam Generation System

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Day 3:

Lesson 2: Steam Deaeration & BFW System, and Steam Generation System

Lesson 3: Chemical Treatment System

Day 4:

Lesson 4: Steam & Condensate Distribution System. Condensate return & treatment systems

Day 5:

Lesson 5: Hot Water System, distribution, flow and return

Course Conclusion

Duration: 5 Days

Venue:

Numbers of hours: 30 Hours

Time: 08:00 AM -02:00 PM

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