



Instrument Air and Utilities in Oil & gas Plants

Duration: 5 Days

Course Introduction:

The Course will provide an overview of the various utility systems, key selection consideration and how they are integrated into oil & gas plants facilities. The course will specifically focus on the instrument Air packages then passing through other different utility systems.

Individual will develop a basic understanding of the wide variety of utility systems & components, as well as how they integrate with process facilities and overall unit operations.

System Selection, relative costs and other decisions affects the utility & instrument air operations are covered. Exercises will be used to identify the utility air consumers, summarize utility requirements, consider high level utility systems options and select the most energy efficient alternatives from facilities perspective. In this program you will learn about:

- Identify the instrument air systems & their major individual parts.
- Understand the concepts of Air drying and compression.
- Identify different utility units in oil & gas plants.
- Understand basic operation of fuel gas, hot oil and chemical injection systems
- List the various options in selecting the utility systems how to evaluate the based on operational key criteria.

Who Should Attend?

This program addresses the needs of a diverse audience with an interest in Plant Start-up and Commission, including:

- Operation Engineers who have oversight responsibility for Utility units Operations.
- Maintenance Engineers with direct line responsibility as well as staff support responsibility for instrument air & utility units.
- Technical personnel & supervisors involved in supporting instrument air & utility units.

Course Contents:

Day 1:

- Purpose Of Instrument Air Supply.
- Instrument Air Quality.
- Dew Point Definition.
- Moisture Removal From Compressed Air.
- Air Supply Pressure Levels.
- Major components of the system.



- Instrument Air System Description.
- Instrument Air Compressors.

Day 2:

- Instrument Air Compressor Safety & Controls.
- Instrument Air System Control And Instrumentation.
- Instrument Air Compressor Control Panel.
- Instrument Air Receiver Function & Operation.
- Instrument Air Dryer Cycle.
- Instrument Air Start-up & Shut down Procedures

Day 3:

- Fuel Gas system Operation.
- Major components of the fuel gas units.
- Fuel Gas usage in the oil & gas plant facilities.
- Hot Oil System Operation description.
- Major element of the hot oil systems.

Day 4:

- Hot Oil System usage in oil & gas facilities.
- Start-up & shutdown procedure for the hot oil systems.
- Chemical injection units.
- Chemicals hazards.
- Effect of over and under dosage chemicals.

Day 5:

- Fire water System function.
- Fire Water system description & major components.
- Fire water Pump Selection & Operation.
- Fire Hydrant & fusible plug Operations.

Questions.