MERCURY

Gas Conditioning & Processing Training Course

23 - 27 Dec 2024
Munich (Germany)

Istanbul - Turkey: +90 539 599 12 06
Amman - Jordan: +962 785 666 966
London - UK: +44 748 136 28 02

MERCURY

Gas Conditioning & Processing Training Course

Ref.: 9398_310969 **Date:** 23 - 27 Dec 2024 **Location:** Munich (Germany) **Fees:** 5200 **Euro**

Introduction:

This gas conditioning and processing training course covers the basic concepts and techniques for designing, specifying, and managing gas field production facilities. It includes a complete and up-to-date overview of gas conditioning and processing technology. It explains the equipment and processes used in joint separation and gas treatment systems.

This gas conditioning and processing course will also cover gas dehydration, sweetening, and gas processing operations, and the integration between the individual processing operations will be clarified. The gathering, separation, and final treatment systems for natural gas will be discussed, as well as the concepts of export quality natural gas, field, and fiscal measurement error.

The specifications of the products Natural Gas, Condensate, Commercial Propane, and Butane and the processes available to condition the gas to meet these requirements will also be covered. Hydrocarbon reconciliation and allocation of produced fluids to the contributing reservoirs are explained and supported by exercises to cement the learning of the various topics treated.

This gas conditioning and processing training course will enable the participants to develop a "feel" for the critical parameters of designing and operating a production facility. The participants will understand the uncertainties and assumptions inherent in designing and using the equipment in these systems and the limitations, advantages, and disadvantages associated with their use.

Targeted Groups:

- Process engineers, along with petroleum and production engineers.
- Field operators and technicians.
- Other company staff are involved in gas treatment and processing.
- Process engineers who are new to the profession.
- Managers, government officials, and others supervise gas processing operations.
- Managers are involved in planning and developing new gas processing facilities or modifying existing ones.

Istanbul - Turkey: +90 539 599 12 06
Amman - Jordan: +962 785 666 966
London - UK: +44 748 136 28 02

MERCURY

Course Objectives:

At the end of this gas conditioning and processing course, the participants will be able to:

- Understand the inflow and outflow performance and the system analysis in subsurface production operations.
- Understand the gas treatment process.
- Understand gas dehydration, processing, absorption, refrigeration, fractionation, cryogenics, and LNG production.
- Understanding the normal operating conditions of the plant
- To have a good background in oil and gas processing and understand the scope of LNG NGL gas processing.
- Become familiar with the transfer operations in the gas field and be able to carry out the measurement techniques.
- Understand the conversion factors and learn data analysis.
- Acquire an in-depth understanding of gas compression, natural gas, slug catcher, and NGL recovery.
- Define abnormal conditions such as high liquid levels, heat loss, tanks getting dry, foams, and plugged outlets.
- Learn about instrumentation, measurement, and control of natural gas and gas liquids and gas facility maintenance.
- Handle abnormal conditions such as loss of power, loss of control, loss of air, shortage of manpower, foam, and hydrate formation; Troubleshoot the problems.
- Emphasize the importance of water content in the gas field operations and be able to review and improve gas treatment.
- Know the procedure of condensate stabilization.
- Apply troubleshooting and safety considerations.

Targeted Competencies:

By the end of this gas conditioning and processing training, the target competencies will be able to improve:

- Gas Conditioning and Processing Principles and Systems.
- Gas-liquid separation systems.
- Mercury removal units.
- Type of Dehydration Processes: Absorption and Alternative Operating Conditions.
- TEG Equipment: Gas Scrubbers, Glycol Contactors, Flash Tank, Filters, Glycol Cooler, Re-generator and Stripping Gas.
- Gas sweetening technologies.
- Operation of conditioning systems.
- Troubleshooting of Equipment Used in Gas Conditioning.
- Basics on Dew Point Depression Units.

Istanbul - Turkey: +90 539 599 12 06
Amman - Jordan: +962 785 666 966
London - UK: +44 748 136 28 02

MERCURY

Understanding Gas Conditioning and Processing:

Gas conditioning and processing are critical aspects of the natural gas processing industry. To gain expertise in this field, enroll in a natural gas processing training course that covers various topics, including gas processing systems, equipment, and facilities. Participants will learn about gas conditioning systems, which are crucial for optimizing natural gas quality.

The curriculum delves into the fundamentals of gas conditioning, emphasizing the role of gas conditioning equipment such as skids and systems. Students will understand the fuel gas conditioning process, which is essential for ensuring gas processing facilities' efficient and safe operation.

The training explores the specifics of seal gas conditioning and fuel gas conditioning systems, preparing individuals to manage these critical components effectively. Gas conditioning and processing volumes 1 and 2 are also part of the course, providing comprehensive insights into the industry's nuances.

This natural gas processing course is designed to equip participants with the knowledge and skills required to excel in the gas processing industry. It is a vital foundation for those seeking a deeper understanding of gas conditioning and processing operations.

Course Content:

Unit 1: Introduction to Natural Gas Processing:

- Fundamentals of Natural Gas Engineering.
- Physical Properties of Natural Gas.
- Natural Gas Production.
- Impurities in the Gas.
- Contract Terms.
- Heating Value / BTU British Thermal Unit Importance.
- Plant Normal and Abnormal Conditions.
- Startup and Initial Operation.
- Natural Gas Liquid NGL, Gas-to-Liquid GTL, Liquefied Petroleum Gas LPG.

Unit 2: Gas-Liquid Separation Systems:

- Gas-liquid Separation System.
- Separators Types of Separators and Separator Sizing.
- Standard Variables Such as Pressure, Temperature, Flow, and Level.
- Instrumentation, Control, and Measurement of Natural Gas and Gas Liquids.
- Control Valves and Actuators.
- Pressure, Temperature, and Level Controls.
- Field Application of Instruments.
- Structured Approach to the Process Operation.
- Contaminants Removal.
- Process Plant Machinery Specific Plant Issues.
- Management, Planning, and Control.
- Startup and Shutdown Planning and Control.

Istanbul - Turkey: +90 539 599 12 06
Amman - Jordan: +962 785 666 966
London - UK: +44 748 136 28 02

Unit 3: Mercury Removal Systems/Hydrate Problems/Dehydration of Natural Gas:

- Mercury Problem in Natural Gas.
- Process Description of the Mercury Removal Units.
- Hydrate Formation Conditions.
- Hydrate Prevention and Mitigation Methods.
- Water Content Estimation.
- Water Dew Point Control.
- Dehydration Systems and Methods.

Unit 4: Dehydration of Natural Gas/NGL Recovery and Removal of Heavy Hydrocarbon:

- Glycol Dehydration Unit.
- Process Description of the TEG Triethylene Glycol Dehydration Unit.
- The Factors Affect the TEG Dehydration Unit Performance.
- Troubleshooting of the TEG Dehydration Unit.
- The Nature of Process Problems Affecting Performance.
- Removal of Heavy Hydrocarbons LTS and Turbo Expanders Systems.
- Condensate Stabilization - Refrigeration System - Cryogenics Applications - Turbo-expanders.

Unit 5: Sweetening Systems:

- Removal of Acid Gases H2S, CO2.
- Sweetening Systems: Membrane System.
- Troubleshooting and Problem-Solving.
- Risk Management.
- Introduction to the Theory of Inventive Problem-Solving.
- Effect of Maintenance on Operation.
- Managing Environment, Safety and Quality Concerns.

Istanbul - Turkey: +90 539 599 12 06
Amman - Jordan: +962 785 666 966
London - UK: +44 748 136 28 02

MERCURY

Registration form on the :
Gas Conditioning & Processing Training Course

code: 9398 **From:** 23 - 27 Dec 2024 **Venue:** Munich (Germany) **Fees:** 5200 **Euro**

Complete & Mail or fax to Mercury Training Center at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng):
.....
Position:
.....
Telephone / Mobile:
.....
Personal E-Mail:
.....
Official E-Mail:
.....

Company Information

Company Name:
.....
Address:
.....
City / Country:
.....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
.....
Position:
.....
Telephone / Mobile:
.....
Personal E-Mail:
.....
Official E-Mail:
.....

Payment Method

☐ Please invoice me

☐ Please invoice my company