



Treating and Sulphur Recovering Operation

Course Introduction:

The Treating and Sulfur Recovery Operations training program is designed to provide a comprehensive understanding of the critical processes involved in gas treating and sulfur recovery. The course covers key principles, process design, operation challenges, and optimization strategies to ensure safe and efficient operations. Participants will gain insights into gas purification techniques, sulfur recovery unit (SRU) processes, amine treating, and tail gas treatment methods. This training aims to enhance knowledge of the chemical reactions, equipment functionality, and troubleshooting techniques necessary for effective operation.

With the growing emphasis on environmental compliance and emission control, mastering sulfur recovery operations has become essential in the oil and gas industry. This course provides a detailed theoretical foundation, enabling participants to grasp the operational complexities of treating and sulfur recovery systems. By the end of the training, attendees will be well-versed in the best practices for reducing sulfur emissions, improving process efficiency, and ensuring regulatory compliance in treating operations.

Course Objectives:

Upon completion of this course, participants will:

- Understand the fundamental principles of gas treating and sulfur recovery processes.
- Identify the key components and functions of gas treating and SRU systems.
- Explain the chemical reactions involved in acid gas removal and sulfur recovery.
- Recognize common operational challenges and strategies for troubleshooting.
- Discuss environmental regulations and emission control measures.
- Analyze process optimization techniques to enhance efficiency and reliability.

Who Should Attend?

This course is designed for professionals involved in gas treating and sulfur recovery operations within the oil and gas, refining, and petrochemical industries. It is ideal for process engineers, operations personnel, plant supervisors, and environmental specialists seeking to enhance their theoretical knowledge of treating and sulfur recovery systems. Additionally, professionals involved in process optimization, compliance, and troubleshooting will benefit from the detailed discussions on system performance and environmental regulations.

Course Outline:

Day 1: Introduction to Gas Treating and Sulfur Recovery

- Overview of gas treating in oil and gas operations
- Importance of sulfur removal and environmental compliance
- Common contaminants in natural gas and refining processes
- Introduction to acid gas removal technologies (Amine Treating, Physical Solvents)

Day 2: Amine Treating Process in Gas Processing

- Amine treating fundamentals: chemistry and selection of solvents
- Process flow and key equipment in an amine treating unit
- Factors affecting amine system performance
- Common operational challenges and mitigation strategies

Day 3: Sulfur Recovery Unit (SRU) – Claus Process

- Overview of the Claus process and reaction chemistry
- Key equipment in an SRU: reaction furnace, catalytic converters, condensers
- Process control and efficiency considerations
- Sulfur product handling and storage

Day 4: Tail Gas Treatment and Emission Control

- Importance of tail gas treatment for emission reduction
- Overview of tail gas treatment processes (SCOT, CBA, etc.)
- Regulatory standards and environmental compliance
- Troubleshooting common tail gas treatment issues

Day 5: Process Optimization and Troubleshooting

- Strategies for improving amine treating and sulfur recovery efficiency
- Case studies on operational challenges and best practices
- Review of key safety considerations in treating and sulfur recovery
- Course summary and Q&A session

Course Methodology:

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

- (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
- Discussion
- Presentation

Course Certificate:

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

Course Fees:

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

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