

TRAINING TITLE

TREATING AND SULPHUR RECOVERING OPERATION

Training Duration

5 days

Training Venue and Dates

RT112	Treating and Sulphur Recovering Operation	5	20-24 Jan. 2025	\$5,500	Dubai, UAE
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- \$5,550 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

This course focuses on the operation, optimization, and troubleshooting of sulfur recovery systems used in industrial processes, particularly in the oil and gas, petrochemical, and chemical industries. Participants will learn the fundamentals of sulfur recovery, including key technologies such as the Claus process, tail gas treatment units, and other sulfur recovery methods. The course covers the entire sulfur recovery cycle, from feed preparation to product sulfur handling and disposal. It also explores critical operational issues such as capacity optimization, emissions control, and safety management in sulfur recovery units (SRUs). The aim is to enhance the skills of engineers and operators, ensuring that sulfur recovery operations are efficient, environmentally compliant, and cost-effective.

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TRAINING OBJECTIVES

By end of course participants will be able to understand

- Understand the fundamental principles of sulfur recovery and sulfur recovery units (SRUs).
- Gain proficiency in the Claus process and other sulfur recovery technologies.
- Optimize the operational performance of sulfur recovery units.
- Identify and troubleshoot common operational problems in sulfur recovery operations.
- Improve efficiency and safety in sulfur recovery and sulfur handling operations.

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- Ensure compliance with environmental regulations and standards concerning sulfur emissions.
- Assess and implement best practices for managing sulfur waste and by-products.
- Understand the operation and maintenance of tail gas treatment units (TGTU) and other sulfur recovery auxiliary systems.

WHO SHOULD ATTEND?

- Process engineers
- Plant operators
- Sulfur recovery unit (SRU) engineers
- Maintenance engineers
- Environmental compliance officers
- Safety officers
- Project managers working in the oil, gas, petrochemical, and chemical industries
- Anyone responsible for the operation, maintenance, and optimization of sulfur recovery systems

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

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COURSE PROGRAM

Day 1: Introduction to Sulfur Recovery Systems

- **Module 1: Overview of Sulfur Recovery and the Claus Process**
 - Fundamentals of sulfur recovery
 - Importance of sulfur recovery in industrial processes
 - Overview of the Claus process
 - Variants of sulfur recovery technologies

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- **Module 2: Sulfur Recovery Unit (SRU) Design**
 - Key components of an SRU
 - Design considerations and capacity planning
 - SRU performance parameters
 - Typical configuration of sulfur recovery units

Day 2: Detailed Analysis of the Claus Process

- **Module 3: Reaction Chemistry and Thermodynamics**
 - Chemical reactions in the Claus process
 - Reaction mechanisms
 - Thermodynamic analysis of sulfur recovery
 - Heat management in the Claus process
- **Module 4: Claus Unit Operation**
 - Burner and reaction furnace operations
 - Sulfur condensers and reactors
 - The role of catalysts in sulfur recovery
 - Operational parameters and control

Day 3: Tail Gas Treatment and Advanced Sulfur Recovery Technologies

- **Module 5: Tail Gas Treatment Unit (TGTU)**
 - Importance of TGTUs in sulfur recovery
 - Types of TGTUs: SCOT, Beavon, etc.
 - Process steps and flow of tail gas treatment
 - Common challenges in TGTU operations
- **Module 6: Advanced Sulfur Recovery Technologies**
 - Post-Claus processes (e.g., SuperClaus, WSA, LO-CAT)
 - Comparison with traditional Claus process
 - Integration of advanced technologies into SRUs

Day 4: Operation, Troubleshooting, and Optimization

- **Module 7: SRU and TGTU Optimization**
 - Key operational challenges and how to overcome them
 - Operational tuning for capacity optimization
 - Managing sulfur recovery under variable feed conditions
 - Troubleshooting common issues (e.g., sulfur deposition, catalyst deactivation)
- **Module 8: Safety and Environmental Considerations**
 - Safety management in sulfur recovery operations

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- Emissions control and compliance
- Handling of sulfur waste and by-products
- Best practices for minimizing environmental impact

Day 5: Practical Considerations and Case Studies

- **Module 9: Case Studies and Real-World Applications**
 - Case studies of successful and failed SRU operations
 - Lessons learned from industry case studies
- **Module 10: Maintenance, Upgrades, and Life Cycle Management**
 - Preventive and corrective maintenance strategies
 - Predictive maintenance and performance monitoring
 - Upgrading SRUs for improved efficiency
 - Managing the lifecycle of sulfur recovery units

NOTE:

Pre-& Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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