



—TRAINING—
GALVESTON, TEXAS
APRIL 30 – MAY 1, 2012 \$1075

SULFUR RECOVERY INDUSTRY AND CLAUS PLANT FUNDAMENTALS

INTRODUCTION:

Sulfur Recovery training is a comprehensive core skills 5-day modular course designed for operators and engineers dealing with all aspects of the Sulfur recovery process. You can select this 2-day segment, or the 3-day segment or the combined course covering 5 full days. With the increasing demands for higher sulfur recoveries and lower refinery and gas plant emissions, this training becomes increasingly important. The course modules cover the entire spectrum of process fundamentals and mechanical systems used in the operation of the Sulfur Recovery Unit and Tail Gas Unit of the Plant. The course will also provide first hand experience using a number of examples of Claus Plant simulations.

LEARNING OBJECTIVES:

Upon completion of the course, attendees will have gained an overview of the many types of sulfur recovery units available and acquire a solid understanding of key elements associated with design, operation and control, with an emphasis on Claus configurations. This will include the impact of feed quality, different catalysts, operating conditions and unit design on sulfur recovery rates. In addition, they will have gained insight into how to optimize processes, handle shutdowns and startups, debottleneck, and troubleshoot their Claus unit.

WHO SHOULD ATTEND?

This course is for those involved in the management, process engineering, operations, and maintenance of the sulfur recovery unit. The course will be highly valuable to all engineers and operators involved in the day to day operation of the SRU, the tailgas treatment processes and incinerators. Additionally, the course will be useful for personnel having to make decisions about overall plant management and investments, and wishing to gain an overview of current processes and operational and environmental implications.

DESCRIPTION

Sulfur Recovery Units convert toxic H₂S, considered a byproduct of the refining and gas processing industries, into harmless elemental sulfur. This sulfur is then primarily sold to make fertilizer, a highly valuable and globally marketable product. The full sulfur recovery course is a weeklong seminar which is broken down into five days of progressive learning, starting with an overview of Sulfur chemistry and fundamentals, and ending in advanced SRU management and procedures. Attendees at all levels can participate in all or part of the program, in order to make best use of their time and focus on content specific to their interests.

Although the Claus process is easy and straight forward to understand, the real world operation of the SRU is impacted by many variables. Some of the discussion points included in the course are: the decline of acid

gas quality and the impact on recovery efficiencies, the signs and implications of hydrocarbon or BTEX poisoning of Claus catalysts, why proper shutdown and startup procedures are important to prevent catalyst sooting, and other items that are critical to the safe and efficient operation of the SRU. Most countries now require high recovery efficiencies to be maintained and reported on a consistent basis and acid gas flaring is frowned upon by regulatory authorities.

With recovery efficiencies regulated at higher levels, technologies to meet them become more costly and complex to maintain, and the SRU becomes more susceptible to upset and flaring, with emissions being the unacceptable result. The course material covers many of the causes of emergency shutdowns and their prevention, such as inadequate ammonia destruction in the reaction furnace resulting in ammonia plugging of condensers, or channeling in converters resulting in sulfur plugging of lines. This course will provide the tools necessary to effectively manage the SRU, optimizing performance and preventing emissions fines, repair costs, and lost production revenue.

WHAT YOU WILL LEARN

This class includes only the modules from the first 2 days of the 5 day course. The next three days are shown for your reference in grey.

Day 1: The Sulfur Recovery Industry and the Claus Plant

- Session 1: Overview of Sulfur Recovery
- Session 2: Claus Plant Fundamentals
- Session 3: Claus Plant Units – Process and Design
- Session 4: Claus Plant Instrumentation

Day 2: Claus Plant Operations and Procedures

- Session 5: Sulfur Plant Controls
- Session 6: The Gatekeepers (Operations)
- Session 7: Start-ups and Shutdowns

Day 3: Tail Gas Units and SRU Optimization

- Session 8: Tail Gas units
- Session 9: Degassing and Sulfur handling
- Session 10: SRU Optimization

Day 4: SRU Simulation

Simulation of YOUR plant operations

Students will be working with simulations on a laptop on this day. If you do not have a laptop, see if you can borrow a spare laptop from your company. If you cannot secure a laptop, then notify us.

Day 5: Engineering Responsibilities

- Session 11: Claus Plant Management
- Session 12: SRU Retrofits and Upgrades

YOUR INSTRUCTOR

Noel Vicente, President at Sulfur Recovery Engineering (SRE), is a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta and is a Professional Chemist with the Association of the Chemical Profession of Alberta. Noel brings together his sulfur plant design engineering and troubleshooting knowledge with his instrumentation and analytical experience in a unique blend of abilities to lead SRE in performing services to assist sulfur plants achieve optimal and reliable performance in meeting environmental requirements.

Noel is an experienced instructor, able to make difficult concepts easy to understand for all. He conducts onsite training for sulfur plant operators and key staff for refineries and sour gas processors worldwide.

Noel also teaches engineering theory review courses to foreign trained engineers in his spare time. An enthusiastic public speaker, Noel is passionate about protecting the environment and adding value to your bottom line.

COMPREHENSIVE TRAINING SCHEDULE

The schedule shows how your course fits in with the exhibition, discussion groups, workshops and other classes offered at this venue this week.

Galveston April 30 - May 4

<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
<i>Training</i>		<i>Conference (Seminar)</i>		
FCCU Operations Fundamentals		Coking & CatCracking Safety and Reliability Seminar		
Advanced Coker Process		Presentations	Presentations	Breakout Groups
Coker Fundamentals				
Pumps Basics		Breakout Groups	Demonstrations	
Integrity Management Cokedrums / FCCU				
Steam Fundamentals				
Exhibition starts Tuesday at 5:00pm, ends Thursday at 7:00pm				
Sulfur Recovery and Claus Plants		Sulfur Optimization, Simulators, Tailgas and Engineering		

Revised February 8

HOTEL

Moody Gardens Hotel
 7 Hope Boulevard
 Galveston, Texas 77554
 Phone (409) 741-8484
 Toll Free (888) 388-8484
 Hotel Website: www.MoodyGardensHotel.com

COURSE INFORMATION

April 30 – May 1, 2012
 Class starts at 8:00am and will finish at 5:00pm.
 The program includes lunch and coffee/cookie breaks. Attendees also receive a class manual that can serve as a valuable office reference. Dress is casual for all seminars.

PAYMENT AND CANCELLATIONS

Course Fee: Early \$1075 (Ends March 26) ~ Regular \$1175.

Payment: Due prior to the start of the training by Visa, Master Card, American Express, wire transfer or corporate check. Training fees will be charged to your credit card at the time of registration unless other arrangements have been made. Make checks payable to "SulfurUnit".

Refund Policy: Fees are fully refundable until April 9 (about three weeks before the event), after which a \$200 fee will be charged for cancellations. Registering for this course prior to April 9 will help maximize the probability that the course will proceed as planned. Cancellations after April 23 (1 week before class until 24 hours before class) are charged a 50% fee. All other cancellations and no-shows are non-refundable. Substitutions are allowed. All cancellations and transfers need to be submitted in writing, by email or by fax.

For more information on Refining Community policies please contact us.

CONTACT US

The Refining Community
1410 Lowe Ave
Bellingham, WA 98229 USA
Paul Orlovski, Info@SulfurUnit.com
USA 1.360.966.7251, Canada 403.668.7467

REGISTER

Website: www.SulfurUnit.com
More training website: www.RefiningCommunity.com
Register: www.Regonline.com/ChicagoTraining

SulfurUnit.com