Ethylene Furnace Training Course for Plant/Process Engineers

A five-day course on the design and operation of ethylene cracking furnaces

Kuala Lumpur
June 20 - June 24, 2011

Lummus Technology in cooperation with KLM Technology Group

Features

Attendees will learn how a furnace is designed and how to operate it to the fullest advantage of their plant.

The instructors are experts in their respective fields. Class size is limited to 35 attendees to maximize participation. In addition to the group sessions, students can meet with the instructors one-on-one to discuss specific issues regarding their plants.

Attendees will receive manuals with course notes and valuable reference material such as operating tips, charts, and tables of useful information.

Who Should Attend?

The course is targeted to plant process engineers who are responsible for the operation and efficiency of ethylene cracking furnaces.

The course provides a knowledge base for the novice engineer while offering a good review and new insights for the experienced engineer.

For Additional Information Contact:

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Visit us on the web: www.lummus.cbi.com
Course Outline

Process Variables
The relationship between operating variables and their effect on yields, conversion, run-length, furnace constraints and methods of alleviation are covered.

Feeds, Yields and Economics
The cracking process is viewed from the feed inlet through the quench fitting. This session covers the impact of feed and furnace design on yield. Overall plant economic trade-offs are discussed.

Kinetic Theory
Characteristics of the cracking reactions and coking for gaseous and liquid feeds as well as special considerations for co-cracking are covered.

Coking and Fouling
The mechanisms of radiant coil coking and TLE fouling for gas and liquid feedstocks are reviewed. Methods of prevention through operating policy are discussed.

Coke Inhibition
Technology, products, and economics are discussed as well as guidelines for making decisions in this area.

Coil and TLE System
How coil design achieves a given yield profile while maintaining an adequate run-length and comparison of different coil designs, including a discussion of coil revamps is covered.

Mechanical Considerations
This session covers the coil support system, TLE design, and transfer line valves.

Firing and Heat Recovery
The impact of combustion, burners and refractory on firebox operation, convection section design philosophy and the maximization of energy efficiency within the context of the overall heat balance are covered.

Burners
Basics for hearth and wall burners, low NOx designs, firebox heat profile, diagnosing firing problems - symptoms, causes, coil damage, draft and the impact of fuel composition is discussed along with draft and excess air. Burner fouling is also a topic.

Decoking
Decoking criteria and decoking techniques are discussed.

Start-Up and Shut-Down
The philosophy behind each step in the start-up and shut-down procedure are discussed.

Instrumentation and Control
Design considerations for both regulatory and advanced control strategies, and key instrumentation are discussed.

Emergency Operation
Problems requiring an emergency response and the consequences of a furnace shut-down are covered.

(New) Furnace Troubleshooting and Operating Strategies
Troubleshooting issues, such as excess fuel consumption and short run lengths, will be discussed. Operating strategies discussed will include turndown, run-length scheduling, and run-length optimization.

General Information

The course is offered at:

Hotel Istana Kuala Lumpur City Centre
73, Jalan Raja Chulan, 50200 Kuala Lumpur, Malaysia
T : +603.2141.9988 F : +603.2144.0111

The course instructors are engineers from Lummus Technology with extensive experience in their areas of expertise.

The cost per person is US $3,500. Invoices are issued upon receipt of registration and must be paid prior to the start of the course.

Registration must be received by May 1, 2011. Refunds cannot be made for cancellations after May 15, 2011.

Course may be cancelled if a sufficient number of registrations are not received by May 1.