



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

MECHANICAL INTEGRITY MANAGEMENT OF COKE DRUMS AND FCCU VESSELS

This course provides participants with the knowledge and skills needed to understand mechanical and structural failure modes in coke drums and FCCU vessels and manage their integrity in an efficient manner.

AUDIENCE

This course is tailored for refinery engineers and inspectors who are involved in the operation, reliability, and maintenance of delayed cokers and FCCU. This training is also useful to managers who are involved in making decisions regarding vessel replacement in these two units.

Priority for registration will be given to refinery personnel.

AGENDA

DAY 1

Fitness-for-service assessment of fixed equipment

- API 579/ ASME FFS
 - Introduction
 - Damage mechanisms common to coke drums and FCCU vessels
 - Bulging
 - Crack-like flaws
 - Metal loss
 - Fatigue
 - Creep
 - Examples of Level 1 assessments
 - Requirements for Level 2 and 3 assessment
- Finite element analysis – a primer

FCCU vessels

- FFS assessment of common mechanical damage
 - Erosion
 - hot spots
 - flow-induced vibration
- Repairs

Discussion forum

DAY 2

Coke drums

- Conventional design of coke drums
- Operational loads
- Typical coke drum failures
- Assessment techniques
 - Bulging
 - Cracking
 - Banana-effect
 - Vibrations
 - Baseplate bolt failures
- Repair techniques
 - Bulging
 - Cracking
 - Banana-effect
 - Vibrations
 - Baseplate bolt failures
- Inspection and monitoring
 - Laser scanning
 - Acoustic emission testing
 - Temperature measurements
 - Strain measurements
 - Nondestructive testing methods
- Operational optimization and life extension
- Remaining life and drum replacement
- Modern design of coke drums

Discussion Forum

PREREQUISITES

Familiarity with delayed cokers and/or FCCU.

YOUR INSTRUCTOR

Dr. Mahmod Samman is the president of Houston Engineering Solutions. He has over twenty years of experience in the design, analysis, assessment, and repair of fixed plant equipment especially coke drums. His work on coke drums has resulted in a better understanding of their complex failure mechanisms and helped make a dramatic change in the design methodology of these refinery vessels. In addition, he developed techniques for assessment of drum bulging which are widely used around the world. In addition to his consulting practice, he taught graduate level courses in computational mechanics at the University of Houston.

A member of the Joint ASME/API Fitness-For-Service Standard Committee that writes the API-579 / ASME FFS-1 standard, he conducted numerous FFS assessments for various types of defects in a variety of fixed equipment in refineries and chemical plants. This includes reverse engineering of undocumented pressure

vessels with unknown defects to determine proper operating conditions and provide certification to regulatory agencies.

Dr. Samman earned a Ph.D. in Engineering Mechanics from Duke University in 1991 and is a licensed professional engineer in Texas. He has one patent, over 30 publications, and numerous industry reports.

A Fellow of the American Society of Mechanical Engineers (ASME), he received many awards including the Herbert Allen Award for "outstanding technical achievement by a young engineer" from the South Texas Section of ASME, a Fulbright Scholarship from the U.S. Department of State, and the Young Engineer of the Year Award from the City of Houston.

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

Monday	Tuesday	Wednesday	Thursday	Friday
<i>Training</i>		<i>Conference & Exhibition</i>		
FCCU Operations Fundamentals		Coking & CatCracking Safety and Reliability Seminar		
Process Support of FCC Operations		Presentations	Presentations	Workshops and
Coker Fundamentals				Breakout Groups
Pumps Basics				
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 November 15

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 "RefiningCommunity.com".

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 Orłowski, training@RefiningCommunity.com
USA 1.360.966.7251 Canada 403.668.7467

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