

What Went Wrong? Learning from Chemical Plant Incidents

1-Day Course

Instructor: Mr. Roy Sanders

Program Content:

Awareness of chemical and petroleum process safety fundamentals is vital to the success of all that work in chemical plants and refineries. Get a real life look at case histories of process accidents in the chemical industry. Heighten your awareness, understanding, and appreciation of the fundamentals which create chemical plant accidents. Participate in an interactive review and exchange covering numerous actual process incidents reinforced by hundreds of vivid images of plant sites in peril, fires, or damaged equipment. These exercises examine the management system needs for safe operations.

Enjoy a practical, fast-paced, interactive exchange on Process Safety details between you, other attendees, and the presenter.

- Improve safety awareness within facilities when employees have failed to notice the high potential for safety related incidents.
- Increase awareness level of proper Management of Change policies.
- Understand the basics of fires and explosions and understand “Tales Tanks Tell” about process safety (Tanks are often the victims of chemical process and reveal mistakes), as illustrated through case histories.
- Understand the fundamental of process safety to protect people, ensure the integrity of the equipment and preserve the viability of the organization.
- Gain an appreciation of a “situation response” teaching technique that the attendee can use in their own companies to spread knowledge and understand some of the basics of “human error”.
- Learn of resources to use at your workplace while witnessing fires, explosions, or damaged equipment to determine the approach to shape your process safety programs.

Course Outline:

- Introductions & Expectations
- Risk & Perceptions of Risk—Risk are not always as they appear. This introductory module examines risks of industry and ordinary life factors.
- Accidental Fires & Explosions—This module looks at the fundamentals of fires and explosions. It also reviews cases of incomplete hot work permits and process maintenance flaws which lead to massive leaks.
- Plant Modifications: Troubles & Treatment—This portion of the program looks at how many small, seemingly helpful, well-intentioned changes can lead to unintended troublesome consequences. This reinforces the need for effective Management of Change programs.

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What Went Wrong? Learning from Chemical Plant Incidents (Cont.) 1-Day Course Instructor: Mr. Roy Sanders

- Incident Investigations—How Far Should We Go? This is a classic look at accident investigations developed by Dr. Trevor A. Kletz, in which five different investigators reviewed the same case and came up with five drastically different causes.
- Pump Explosions—Dangers of dead heading pumps
- Tales Tanks Tell—A look at a wide array of process safety incidents in which various elements of process safety were not considered and tanks suffered.
- Human Error—Why some people act as they do within chemical plants.
- Layers of Protection—A look at many of the within-the-fence training, hardware, and procedures that enhance process safety
- Wrap Up, Evaluations, and Quiz

The majority of incidents discussed are well documented in Roy Sander's Book (2005) Chemical Process Safety—Learning from Case Histories. Third Edition (ISBN 0-7506-7749-X).

Who Should Attend?

Chemical Process Safety must be second nature to all who design, operate, and maintain refineries and chemical plants. The material is best suited to operations supervisors, lead operators of chemical manufacturing units or petroleum refining units, maintenance foremen, plant related managers, process engineers, design engineers, plant safety engineers, property insurance professionals, and other professionals interested in Chemical Process Safety awareness.

Dates:

October 6, 2015

Location:

Eaton Technology Center; Houston, TX

0.7 CEUs	7 PDHs
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