Engineering Safety Relief Systems Workshop

Intensive Workshop

This workshop is your opportunity to develop or improve your understanding of engineered safety relief systems. Our primary focus is industrial refrigeration systems but many of the principles we will discuss apply equally to other applications as well.

Building Your Capabilities

Whether you are an end-user, equipment manufacturer, design engineer, or contractor, this course will help you build your capabilities in the area of the principles and practices of engineering safety relief systems. Participate and develop your understanding of:

- Codes and Standards related to safety relief systems
- Key aspects of engineering code-compliant relief systems
- Capacity determination for non-standard equipment like heat exchangers
- Methods for proper sizing of relief vent piping, including headered vent systems

The IRC's Safety Relief Systems Vent Tool

The IRC has developed a web-based safety relief systems analysis tool. This powerful tool has a high degree of flexibility to analyze, engineer, and document safety relief systems for industrial refrigeration applications.

Tool Features

- Graphical user interface to configure relief system to be analyzed
- Ability to handle headered systems & multiple relief scenarios
- Quick and accurate algorithm to solve compressible flow equations
- Relief valve selection wizard
- Equivalent lengths for elbows & fittings included
- Detailed compliance checks for each system component
- One-click reports for easy printing

Access to this tool is provided free of charge to those completing this course.

How Can I Access The IRC's Safety Relief Systems Vent Tool?

In conjunction with this workshop, the IRC announces the availability of its web-based safety relief systems analysis tool to the industry. Access to our web-based tool is provided without charge to those individuals who successfully complete the Engineering Safety Relief Systems Workshop. Don't wait, enroll today and realize the benefits this tool provides.

How Do I Participate in the Engineering Safety Relief Systems Workshop?

This workshop will be delivered over the web in an instructor-led format. To participate, you will need a phone and a computer with internet access. The course will meet two hours daily for a one week period. See the attached course registration form for upcoming workshop dates as well as workshop costs.

Engineering Safety Relief Systems Workshop

December 14-18, 2009: 9:00-11:00 am (Central)

Day 1

Workshop Introduction

Safety Relief System Overview

- Terminology and definitions
- Relief device types
- Theory of operation

Douglas T. Reindl, Ph.D., P.E.
Director, IRC

- Codes and Standards
- Relief valves and sizing
- Relief vent piping

Day 2

Relief Valve Capacity Determination

- Pressure vessels
- Compressors
- Oil separators

Doug Reindl

- Heat exchangers
- Condensers
- Product silos

Day 3

Relief Piping Requirements

- Vent piping systems & losses
  - Single relief valve systems
  - Headered (multiple) relief valve systems

Todd B. Jekel, Ph.D., P.E.
Assistant Director, IRC

- Inlet piping losses
  - Connections
  - Manifolds

Day 4

IRC's Safety Relief Vent Tool

- Input data requirements
- Creating relief system structure
- Relief scenario analysis

Todd Jekel

- Report generation capability
- Code compliance checks

Day 5

IRC's Safety Relief Vent Tool - *Continued*

Relief System Design Strategies

- Internal vs. external
- Hydrostatic
- Oil pots

Doug Reindl

- Staggered relief valve set points
- Compressor packages

Engineering Safety Relief Systems
Enrollment Form

December 2009

		Cost	Total
Engineering Safety Relief Systems Workshop ***December 14-18, 2009: 9:00-11:00 am (Central Time)***			
Non-Member	❒	***$995†***	
IRC Member	❒	***$795†***	
		Course Sub-total	
Engineering Safety Relief Systems Guidebook			
	Qty.	***Price***	
Non-Member		***$195***	
IRC Member	***No cost***		
		Publications Total	
		Grand Total	

† Cost is per participant. Contact us for multiple participant discount pricing.

Name:

Title:

Company:

Address:

City:

State/Zip:

Phone:

Fax:

e-mail:

To Register:

Call: 866-635-4721
Fax: 608-262-6209
Web:
https://www.irc.wisc.edu/?/conf_registration

Mail: IRC Registration
IRC
1415 Engineering Dr
Room 2342
Madison, WI 53706
ATTN: Cheryl Sandeen

Any other questions?
Call the IRC at 866-635-4721 (toll free)
or e-mail us at: *info@IRC.wisc.edu*

Bill me **Purchase Order or Check Enclosed (*payable to IRC*)**

06/16/09