



Spring 2015 Relief Systems Design Course

Monday, May 4 - Tuesday, May 5, 2015

Location/Host:

Fauske & Associates, LLC
16W070 83rd Street
Burr Ridge, IL 60527

Course Description

Unlike other emergency vent sizing courses, this curriculum highlights "hand" calculation methods; capable of giving safe – but not overly conservative – relief system designs, with an emphasis on reactive systems and the role of two-phase flow.

Benchmarking of these methods will be illustrated with incidents and available plant data. Utilization of methods and equations will be demonstrated through practical design examples; covering condensed phase (vapor, gassy and hybrid systems), as well as gas phase (gas and dust deflagrations) reactions.

Featured Speaker

Hans K. Fauske, D.Sc., Emeritus President and Regent Advisor of Fauske & Associates, LLC, served as the principal investigator and leader of the DIERS research project team. He is widely known for having developed a simple and cost-effective approach to relief system sizing, including reactive systems and two-phase flow considerations.



Curriculum

Methodology Overview

- DIERS
- API
- ASME
- NFPA

Vent Sizing Models

- Condensed Phase Reactions (Vapor, Gassy and Hybrid Systems)
- Vapor Phase Reactions (Gas and Dust Deflagrations)

Capacity Certification of Pressure Relief Valves in Two-Phase Flow

- Sizing PRV Nozzles
- Sizing Inlet Piping (3% Rule)
- Sizing Outlet Piping (10% Rule)

Runaway Reaction Classification

- Condensed Phase Reactions & Adiabatic Calorimetry
- Vapor Phase Reactions

Single and Two-Phase Flow Overview

- Vessel Behavior and Flow Regimes
- Vessel Blowdown and Vent Line Behavior
- Subcritical and Critical Two-Phase Flows

Special Topics and Examples

- Non-Reactive Fire Sizing Models for Foamy and Non-Foamy Systems
- Discharge Reaction Forces
- Effluent Control / Containment Considerations

Learning Outcomes

After completing this course, attendees will:

- Understand the up-to-date DIERS vent sizing methodologies and models, as well as the role of single and two-phase flow in venting behavior
- Perform vent size calculations using the correct models and methodologies
- Apply adiabatic calorimetry data
- Be able to use hands-on techniques and "rules of thumb" to ensure that realistic vessel and vent size conditions are specified

Price: \$1,500.00 USD

- Fees must be received prior to course commencement
- Hotel accommodations and travel expenses are the responsibility of the participant
- Fees include course notes, continental breakfast and lunch for each day of attendance

Spring 2015 Relief Systems Design Course

Monday, May 4 - Tuesday, May 5

8 am - 4 pm

Course Location/Host:

Fauske & Associates, LLC
16W070 83rd Street
Burr Ridge, IL 60527
(630) 323-8750

REGISTRATION FORM

First Name: _____ Last Name: _____

Company Name: _____ Position: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Cell: _____ Fax: _____

Email: _____

Price:

\$1,500.00 USD

- Fee includes course notes, continental breakfast and lunch for each day of attendance
- All fees must be received prior to course commencement
- We accept Visa, Mastercard, American Express, purchase order or company check

Payment Method: Visa Mastercard AmEx Purchase Order Company Check

Name on Account: _____

Account Number: _____ Expiration Date: _____

Signature authorizing Fauske & Associates, LLC, to charge credit card:

Hotel accommodations* and travel expenses are the responsibility of the participant

*A list of area hotels will be provided upon receipt of completed registration form

Cancellation Policy: Cancellations will be accepted up to April 27, 2015

Contact Lisa Karcz: karcz@fauske.com, (630) 887-5232, Fax: (630) 986-5481



www.Fauske.com