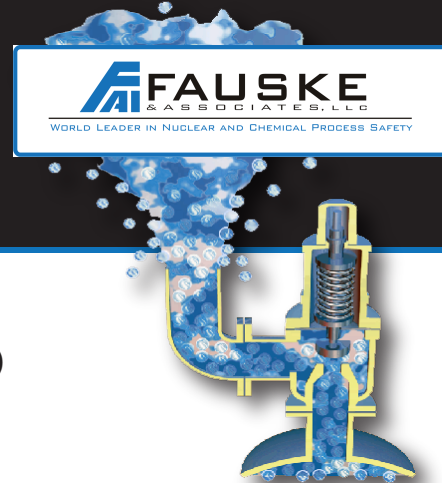


# Relief Systems Design Course



**Location:** Fauske & Associates, LLC, 16W070 83rd Street, Burr Ridge, IL

**Date:** October 16 - 18, 2019

**CEUs:** 2.0 (20 PDH)

**Time:** October 16 and 17 (8:00 am - 4:00 pm)  
October 18 (8:00 am - 12:00 pm)\*

**Price:** \$2,000

*\*A laboratory session demonstrating experimental techniques will be held the afternoon of October 18, but is optional.*

## Course Description

Unlike other emergency vent sizing courses, this curriculum highlights simplified calculation methods capable of giving safe - but not overly conservative - relief system designs, with an emphasis on reactive chemistries 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 vapor, gassy and hybrid systems.

Attendees will participate in group workshops and complete an independent quiz at the end of the course in order to ensure comprehension of the material.

*\*A laboratory session demonstrating experimental techniques will be held the afternoon of October 18, but is optional.*

## Course Topics - Day 1

- Introduction to Vent Sizing and Case Study
- Vent Sizing Fundamentals
- Codes and Standards Explanation
- History of DIERS
- Two-Phase Flow Considerations
- Experimental Considerations
- Vent Sizing Based on All Gas or Vapor Venting

## Course Topics - Day 2

- Vapor System Vent Sizing
- Gassy System Vent Sizing
- Hybrid System Vent Sizing
- Simplified Two-Phase Flow Methods for Vapor, Hybrid, and Gassy Systems
- Non-Reactive Fire Sizing

## Course Topics - Day 3

- Stable Relief Valve Operation
- Discharge Coefficient Evaluation
- Containment and Disposal Considerations
- Lab Demonstrations (optional)

## Learning Outcomes

- Understand 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 sizing 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



**For hotel information or to register, please contact:** [FAIUniversity@fauske.com](mailto:FAIUniversity@fauske.com)

**Please direct course related questions to the FAI Thermal Hazards team:** [thermalhazardsgroup@fauske.com](mailto:thermalhazardsgroup@fauske.com)

# Relief Systems Design Course



## REGISTRATION FORM

**Location:** Fauske & Associates, LLC, 16W070 83rd Street, Burr Ridge, IL

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**Date:** October 16 - 18, 2019

**Price:** \$2,000

**Time:** October 16 and 17 (8:00 am - 4:00 pm); October 18 (8:00 am - 12:00 pm)

*\*Please check the box to the right if you plan to attend the optional laboratory session the afternoon of October 18*

☐

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Company Name: \_\_\_\_\_ Position: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Cell: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

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: \_\_\_\_\_

- **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**

Technological/ Education Requirements:

Although there are no strict educational requirements for this course, a bachelor's degree in engineering is strongly recommended. The workshops and course assessment contain calculations so a scientific calculator or laptop is required for participation.

CEU Credit Eligibility: FAI is an IACET (International Association for Continuing Education & Training) Authorized Provider. In order to be eligible for CEU credit (2.0 per course), attendees must be present for the duration of the course, score 85% or higher on the course assessment and complete the course evaluation.

Privacy: Fauske & Associates, LLC has a written policy to ensure privacy and confidentiality of participant training records and information. Training records will only be released with the expressed written permission of the participant. The participant record will be released to the participant or designated third party within 14 business days of the request.

Cancellation Policy: Cancellations will be accepted up to one month prior to course date.

**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

**For hotel information or to register, please contact:** FAIUniversity@fauske.com

**Please direct course related questions to the FAI Thermal Hazards team:** thermalhazardsgroup@fauske.com