Ammonia Refrigeration Series

Ammonia Refrigeration System Safety

April 17–19, 2013
Madison, Wisconsin

On-the-Job Benefits for You:

- Knowledge of ammonia safety best practices
- Measures to minimize operational risks
- Understanding of safety codes, standards, and new regulations
- Answers to your specific concerns

Practical, highly-rated course to help you

- Understand the safe use of ammonia
- Minimize operational risks
- Meet requirements in current codes and regulations

Please route this brochure to colleagues who would also benefit by attending.

Easy-enroll options: online or toll free, see inside!
Improve Your Safety Program!
Legislation to minimize the risk of catastrophic ammonia release has had a major impact on owners and operators of ammonia refrigeration systems. Many of the deadlines for compliance with these safety regulations have long since passed.
• Are you complying with OSHA 29 CFR 1910.119?
• Is your PSM program in place and functional?
• Are you RMP-compliant?
• Will you be ready for an audit?
Attend this course to learn what you must do to safely use ammonia as a refrigerant.

Focus on Practical Approaches
During three intensive, fast-paced days, you will explore all aspects of safety in ammonia refrigeration, from regulations to best practices:
• Focus on practical, proven approaches for the safe use of ammonia as a refrigerant
• Learn about recent codes, standards, and regulatory changes that impact designers, owners, and operators of ammonia refrigeration systems
• Gain valuable insights from our expert instructors, who are involved in developing new regulations for ammonia refrigeration safety
• Learn what the future may hold for ammonia refrigeration systems

Key Course Topics
• Health effects due to ammonia exposure
• Ammonia safety classifications
• OSHA and EPA regulations for ammonia refrigeration
• Emergency response overview
• Process Safety Management (PSM)
• Risk Management Planning (RMP)

On-the-Job Benefits for You!
• Knowledge of ammonia safety best practices
• Measures to minimize operational risks
• Understanding of safety codes, standards, and new regulations
• Answers to your specific concerns

Expert Instructors
Frederick T. Elder, PhD, PE
President
Frederick T. Elder and Associates

Michael L. Marshall, PSM
Program Coordinator
US Department of Labor–OSHA

Douglas T. Reindl, PhD, PE
Professor
College of Engineering
University of Wisconsin–Madison

James Peterson
US Environmental Protection Agency

George Yoksas
Area Director
US Department of Labor–OSHA

Attendees Say It Best...
“Opened my eyes and mind to all types of issues that our ammonia system could cause—and ways to prevent them.”
James Rogan, Rich Products

“A great course to get me up to speed in PSM and RMP.”
Patrick Abshier, Pinnacle Foods Group

“Everything that was discussed at this course will help me improve our current programs.”
George Pecenica, Gusto Packing Company

“Great class. I wish I could have had this class sooner!”
Scott Mason, Wells Dairy

Who Should Attend
This course will be of special benefit to:
• Refrigeration system operators
• PSM coordinators and other plant safety personnel
• Plant, process, facilities, and applications engineers
• Contractors and refrigeration service technicians
• EHS professionals

The course will stress the basics of safety as they relate to ammonia refrigeration systems. The course content will be ideal for those who wish to build their knowledge of safety in ammonia refrigeration and to obtain an update on the latest regulatory issues that affect ammonia refrigeration systems.

Continuing Education Credit
By participating in this course, you will earn 2.0 Continuing Education Units (CEU) or 20 Professional Development Hours (PDH).
Ammonia Refrigeration System Safety
April 17–19, 2013 in Madison, Wisconsin

Course Outline

Wednesday, April 17
8:00  Registration and Coffee
The Pyle Center
702 Langdon Street
Madison, WI
8:30  Course Introduction
Douglas T. Reindl
Professor, Engineering Professional Development
Director, Industrial Refrigeration Consortium (IRC)
University of Wisconsin–Madison
8:45  Characteristics of Ammonia, CFCs, HCFCs, HFCs, Hydrocarbons
• Physical properties
• Thermodynamic properties of ammonia
• Health effects
• Flammability issues
• Safety hotlines
Douglas T. Reindl
10:00  Break
10:15  Practical Overview of Systems
• System types
• High-side components
• Low-side components
Douglas T. Reindl
12:00  Lunch
1:00  Safety and Your Machinery Room
• Emergency ventilation
• Emergency showers/eyewash
• PRVs
• Other machinery room considerations
• Codes and standards
Douglas T. Reindl
2:30  Break
2:45  Safety and Your Machinery Room (Continued)
Douglas T. Reindl
4:30  Questions and Answers
Staff
4:45  Adjourn

Thursday, April 18
8:00  Coffee and Conversation
8:30  OSHA Process Safety Management (PSM): Key Elements for a Successful Program
• What is PSM?
• When is compliance mandatory?
• Flowcharting: the compliance process
• Permits: hot work, access, lock-outs, confined space, etc.
• Temporary change permits
• Opening and closing permits
• Assessing risks
• Planning for accidents
• Involving the operating and maintenance personnel
• Effective steps to be taken over and above compliance (an “active” PSM program)
George Yokas, Michael Marshall, Frederick T. Elder, Douglas T. Reindl
10:15  Break
10:30  OSHA PSM Program (Continued)
Staff
12:00  Lunch
1:00  OSHA PSM Program (Continued)
Staff
2:15  Break
2:30  OSHA PSM Program (Continued)
Staff
4:15  Questions and Answers
Staff
4:30  Adjourn

Friday, April 19
8:00  Coffee and Conversation
8:30  EPA Risk Management Program: Achieving Compliance and Operational Safety
• What is it?
• When is compliance mandatory?
General Applicability
• Applicability of program levels
• Five-year accident history
• Offsite consequence analysis
  – worst-case release scenario
  – alternative release scenario
• Estimating offsite receptors: population and environment
• Atmospheric dispersion variables
• A look at ALOHA computer program
• Management system
• Prevention program (program 2 and program 3)
• Risk management plan (documentation requirements)
• Review and update
James Peterson
10:15  Break
10:30  EPA Risk Management Plan (Continued)
James Peterson
12:00  Lunch
1:00  Changes to RMP, Post-September 11, 2001
Staff
2:00  Final Adjournment

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Four Easy Ways to Enroll

Internet: http://epd.engr.wisc.edu/webN215

Phone: 800-462-0876 or 608-262-1299 (TDD 265-2370)

Mail to: Engineering Registration
The Pyle Center, Dept. 108
702 Langdon Street
Madison, Wisconsin 53706

Fax: 800-442-4214 or 608-265-3448

Course Information

Please enroll me in Ammonia Refrigeration System Safety

- Course #N215 April 17–19, 2013 in Madison, WI Fee: $1095
- Course #N215 April 17–19, 2013 in Madison, WI Industrial Refrigeration Consortium Member Fee: $895
- I cannot attend at this time. Please send me brochures on future courses.

Personal Information (Please print clearly.)

Name ________________________________
Title ________________________________
Company ________________________________
Address ____________________________________________
City/State/Zip ____________________________________________
Phone (_____) __________ Fax (_____) __________
E-mail ____________________________________________

Additional Enrollees

Name ________________________________
Title ________________________________
E-mail ________________________________
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Billing Information

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Please check the box if you are a person with a disability and desire special accommodations. A customer service representative will contact you. Requests will be kept confidential.

Upcoming Ammonia Refrigeration Courses

Introduction to Ammonia Refrigeration Systems
March 6–8, 2013
Course #N213

October 9–11, 2013
Course #N216

Achieving Energy Cost Savings for Ammonia Refrigeration Systems
May 22–24, 2013
Course #N219

Design of Ammonia Refrigeration Systems for Peak Performance and Efficiency
September 9–13, 2013
Course #N220

Principles and Practices of Mechanical Integrity for Industrial Refrigeration Systems
November 6–8, 2013
Course #N221

Intermediate Ammonia Refrigeration Systems
December 4–6, 2013
Course #N222

To receive a brochure for any of these courses, please call 800-462-0876 or send an e-mail message to custserv@epd.engr.wisc.edu. You can also check out these courses on our Web site: epd.engr.wisc.edu/ammoniarefrigeration

Industrial Refrigeration Consortium (IRC)

The IRC, a collaborative effort between the University of Wisconsin–Madison and industry, offers its members practical refrigeration information and application-oriented research, a telephone hotline, Internet-based information resources, on-site technical assistance, and specialized publications. To learn more, check the IRC Web site at www.irc.wisc.edu, e-mail IRC director Douglas Reindl, dreindl@wisc.edu, or phone toll free 666-635-4721.

Need to Know More?

Call toll free 800-462-0876 and ask for
Program Director: Douglas Reindl
dreindl@wisc.edu
Program Associate: Mary Danielson
Or e-mail custserv@epd.engr.wisc.edu

General Information

Fee Covers Notebook, course materials, break refreshments, lunches, and certificate.

Cancellation If you cannot attend, please notify us seven days in advance, and we will refund your fee. Cancellations received after this date and no-shows are subject to a $150 administrative fee. You may enroll a substitute at any time before the course starts.

Location This course will be held at The Pyle Center, 702 Langdon Street, Madison, WI. Phone messages: 608-262-1122.

Accommodations We have reserved a block of guest rooms (rates starting at $89, including continental breakfast) at Lowell Center, 610 Langdon Street, Madison, WI. Reserve a room online at epd.engr.wisc.edu/bookingN215 or call 866-301-1753 or 608-256-2621. Room requests after March 19 will be subject to availability. Other fees and restrictions may apply. We have reserved a second block of guest rooms (rates starting at $89, including parking and Madison Taxi’s silver cab from airport) at Campus Inn, 601 Langdon Street, Madison. WI. Reserve a room online at epd.engr.wisc.edu/bookingN215 or call 800-589-6285 or 608-297-4391 and indicate that you will be attending this course under group code 128056. Room requests after March 26 will be subject to availability. Other fees and restrictions may apply.