

Agenda

Presented by Daniel Karpen

Pipe and Boiler Insulation

Cost of fuels, oil, gas, electric
Heat losses from uninsulated piping
Heat losses from insulated piping
Case study – cost of insulation
Payback periods

The Low Pressure Steam Heating System

High pressure goes to low pressure - always
Water seeks its own level - sometimes
Near boiler piping – the place where problems are born
What you should know about the Hartford Loop
How to size replacement steam boilers
One-pipe steam – a matter of detail
It's all in the venting
Two-pipe steam – a matter of control
A steam heating trap primer
What you need to know about condensate and boiler feed pumps
Vacuum: friend or foe?
Controlling the boiler water level
Water hammer – know thy enemy
Vapor systems
Cleaning the internals of a steam heating system

Improving the Energy Efficiency of Steam Heating Systems

Secaucus, NJ - Thursday, February 7, 2019

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PO Box 278
Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Evaluate cost savings of boiler and pipe insulation.

Learn about one-pipe and two-pipe steam heating.

Resolve problems in near boiler piping.

Discuss condensate and boiler feed pumps.

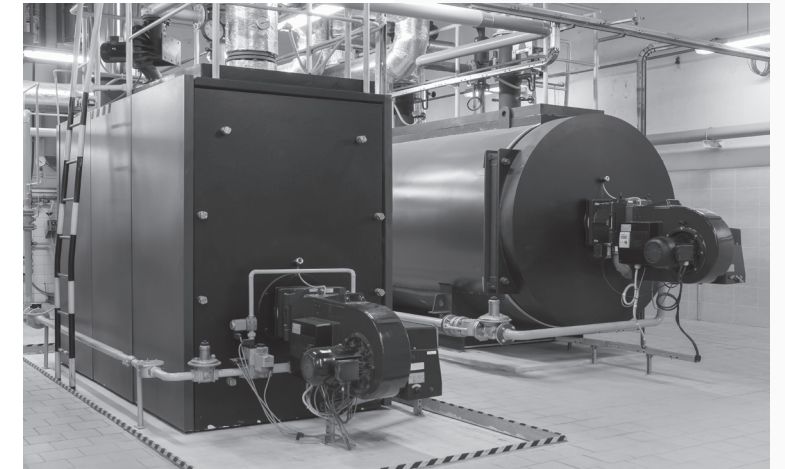
Get tips on sizing replacement boilers.

Learn about cleaning steam heating system internals.



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Examine cost savings from boiler and pipe insulation

Get a primer on steam heating traps

Solve water hammer problems

Learn how to size replacement steam boilers

Diagnose problems with steam system venting

Continuing Education Credits

Professional Engineers

6.0 CPC Credits/PDHs

Architects

6.0 HSW Continuing Ed. Hours

6.0 AIA HSW Learning Units

Contractors

Non-Credit Continuing Ed.



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Faculty

Daniel Karpen *Professional engineer and consultant in Huntington, NY*

Mr. Karpen is a licensed professional engineer in New York. He has more than 20 years of experience in HVAC and energy conservation consulting. His strong background in the physical sciences and technology, combined with a knowledge of government procedures, provides a foundation for getting practical results quickly. Mr. Karpen is recognized nationally for his innovations in a wide range of energy conservation areas. Much of his work has been in the development of energy conservation management plans in both the public and private sectors. Mr. Karpen has a B.S. degree from the University of Washington, an M.A. degree from the State University of New York at Stony Brook and an M.B.A. degree from Adelphi University. He has eight U.S. patents and two Canadian patents relating to lighting and energy conservation. Mr. Karpen is an experienced energy conservation engineer, and he has worked on making changes to engineered plans and specifications for both residential and commercial work to make structures and their systems more energy efficient.

Attendee comments from earlier presentations of this seminar taught by Mr. Karpen:

“Very interesting and informative.”

“Excellent content and speaker. He knows this topic very well. Highly recommended.”

“Very good for problem solving.”

“He was very bright and informative.”

“Excellent case histories.”

Seminar Information

Holiday Inn Secaucus Meadowlands
300 Plaza Drive
Secaucus, NJ 07094
(201) 348-2000

Registration
8:30 - 9:00 am
Morning Session
9:00 am - 12:15 pm
Lunch (On your own)
12:15 - 1:15 pm
Afternoon Session
1:15 - 4:30 pm

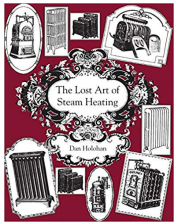
Tuition
\$299 for individual registration
\$279 for three or more registrations.
Each registration includes a complimentary continental breakfast and printed seminar manual.

Receive a reduced tuition rate of \$101 by registering to be our on-site coordinator for the day. For availability and job description, please visit www.halfmoonseminars.org.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the self-study package. You may also send another person to take your place.



Included with your regsitration:
The Lost Art of Steam Heating
by Dan Holohan, 290 pages

The classic, practical steam heating reference: a \$40 value

Continuing Education Credit Information

This seminar is open to the public and offers up to 6.0 CPC credits/PDHs to professional engineers and 6.0 HSW continuing education hours to architects in all states. HalfMoon Education is an approved continuing education provider for New Jersey engineers (Approval No. 24GP00000700).

This event has been approved by the American Institute of Architects for 6.0 Learning Units (Sponsor No. J885). Courses approved by the AIA qualify for New Jersey architects. Only full attendance can be reported to the AIA/CES.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York architects.

This seminar offers a non-credit continuing education opportunity to contractors; it has not been approved in any state that has a contractor continuing education requirement.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Additional Learning

- Webinar Series**
- NFPA 70E Series**
- **NFPA 70E, Part I**
Weds., Dec. 26, 2018, 11:00 AM - 3:30 PM CST
 - **NFPA 70E, Part II**
Thurs., Dec. 27, 2018, 11:00 AM - 3:30 PM CST

- Seismic Design and Construction**
- **Seismology and Building Codes**
Thurs., Dec. 27, 2018, 11:00 AM - 3:30 PM CST
 - **Seismic Design of Building Structures**
Fri., Dec. 28, 2018, 11:00 AM - 3:30 PM CST

- Commercial Solar Peaker Batteries**
- **Commercial Solar Peaker Batteries, Part I**
Wed., Jan. 9, 2019, 11:00 AM - 3:15 PM CST
 - **Commercial Solar Peaker Batteries, Part II**
Thurs., Jan. 10, 2019, 11:00 AM - 2:15 PM CST

Proposal Writing
Fri., Jan. 11, 2019, 11:00 AM - 3:30 PM CDT

- Technical Writing**
- **Technical Writing Basics**
Mon., Jan. 14, 2019, 11:00 AM - 1:00 PM CST
 - **Planning Documents**
Mon., Jan. 14, 2019, 1:30 - 3:30 PM CST
 - **Writing Documents**
Tues., Jan. 15, 2019, 11:00 AM - 1:00 PM CST
 - **Revising and Editing Documents**
Tues., Jan. 15, 2019, 1:30 - 3:30 PM CST

- Fiber-Reinforced Composites**
- **Portland Cement and Masonry**
Thurs., Jan. 17, 2019, 11:00 AM - 1:00 PM CST
 - **Fiber-Reinforced Composites**
Thurs., Jan. 17, 2019, 1:30 - 3:30 PM CST
 - **Fiber-Reinforced Polymer (FRP) Composites Reinforcement**
Fri., Jan. 18, 2019, 11:00 AM - 1:00 PM CST
 - **Overview of Sandwich Materials and Structures**
Fri., Jan. 18, 2019, 1:30 - 3:30 PM CST

For more information visit:
www.halfmoonseminars.org/webinars/

Can't Attend? Order the Manual and the Audio from the Live Seminar as a Self-Study Package!

An audio recording of this seminar is available for \$289. Allow four weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

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How to Register		Registrant Information
Online: www.halfmoonseminars.org		Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip _____ Occupation: _____ Email: _____ Phone: _____
Phone: 715-835-5900		Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____
Fax: 715-835-6066	Code:	
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		
Complete the entire form. Attach duplicates if necessary.		Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.

()  I need special accommodations. Please contact me.

Tuition

() **I will be attending the live seminar.** Single Registrant - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.

() **I am not attending.** Please send me the self-study package for **\$289.00**.

☐ Downloadable MP3 Audio/PDF Manual
☐ CD/Manual Package
(Please allow four weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.

Credit Card: *Mastercard, Visa, American Express, or Discover*

Credit Card Number: _____
Expiration Date: _____ CVV2 Code: _____
Cardholder Name: _____
Billing Address: _____
City: _____ State: _____ Zip: _____
Signature: _____
Email: _____