

March 2019
Volume 54, Issue 7

INSIDE THIS ISSUE:

President's Message	2
2018-2019 Programs	3
March Meeting Info	3
Feb Meeting Photos	4
Healthcare Forum	5
Future City Award	5
CTTC Article	6
Golf Outing	6
Membership	7

COSTS

Fees are based on online reservations and prepayment.

Philadelphia Chapter Members:

\$30

ASHRAE Society Members -

Non-Chapter Members:

\$40

ASHRAE Life Members:

No Charge

Non- ASHRAE Member:

\$50

YEA Member (35 & under):

\$25

Students:

\$10



QUAKER CITY CLIMATE

Thursday, March 14, 2019

“Air-Water HVAC Systems”

presented by

Ken Loudermilk, PE

Senior Chief Engineer at Titus

(see [page 3](#) for more information)

11:50 AM to 12:20 PM

Registration

12:20 PM to 12:45 PM

Lunch

12:45 PM to 1:50 PM

Presentation

The theme for this meeting is YEA!

[Click here](#) to Register

LOCATION

Ocean Prime

124 South 15th Street

Philadelphia PA 19102

215-563-0163

Click [here](#) for their website.

Click [here](#) for directions.

2018-2019

President

Mike Radio, PE, CEM, BEMP, LEED AP

President-Elect

Michael Calabrese, PE, CEM, LEED AP

Vice President

Tim Reinking

Treasurer

Eric Feinschil

Secretary

Judd Vail

Senior Governor

Jeff Crozier, PE, CEM, LEED AP

Governors

Dan Brown

Sean Hughes, PE

Mike Magee

Electronic Communications

James Piscopo, PE, LEED AP

Chapter Technology

Transfer Committee Chair

Henry Hoffman

Research Promotion Chair

Gary Debes

Basic School Coordinator

James Lill, PE

Refrigeration

Chris Moore

Membership Promotion Chair

Kevin Clare

Student Activities Chair

Mike Magee

Program Committee Chair

Michael Calabrese

Chapter Historian

Sean Hughes

Young Engineers in ASHRAE

Dan Brown

Publicity

Mike Radio

Grassroot Government Activities

Anthony Scaccia

Special Events

Tim Reinking

Honors and Awards Committee

Jeff Crozier

PRESIDENT'S MESSAGE

At last month's chapter meeting, Dr. Stephanie Taylor presented some compelling strategies on improving the health of building occupants with humidification. I would like to thank her for making it to Philadelphia from Vermont during a snowstorm. I would also like to thank the Department of Licenses and Inspections for providing the chapter with an overview of the updates for the Philadelphia Building Codes. This topic will be further explored at our May 9th session.

Congratulations to following students for being recognized with student scholarship awards:

Otto Gessner Award from the Philadelphia ASHRAE Chapter:
Jessica Joseph (Widener University)

The Sheet Metal Contractors Association (SMCA) Award:
Ryan Sauer (Widener University)
Yu Shaokuan (Temple University)
Saad Alabduljader (Temple University)

We will return to our lunch meeting schedule for the March chapter meeting. The meeting will be held at Ocean Prime. Ken Loudermilk, PE, Senior Chief Engineer at Titus will be presenting "Air-Water HVAC Systems". This presentation will provide the background and applications for designing Air-Water HVAC Systems. Energy savings and transport methods will be discussed. Multiple use and applications including Offices, Labs, Healthcare and patient suites will be reviewed.

Registration for the 2019 ASHRAE Annual Conference is open on the ASHRAE website. The conference will be held in Kansas City, MO from June 22-26. The technical program is comprised of eight tracks, selected to represent areas of focus common among ASHRAE membership. The track focus areas include HVAC&R fundamentals and applications, systems and equipment, professional development, research, occupant health and safety and more specific topics of interest (such as radiant heating and cooling and understanding design intent of complicated HVAC systems). "With the global movement towards sustainable energy, the HVAC&R industry is ever-changing," said Carrie Anne Monplaisir, chair of the 2019 Annual Conference. "We continue to face new challenges as we adapt our designs, codes, and technology to fit this constantly changing criteria. The 2019 ASHRAE Annual Conference aims to address these challenges, and offer best practices, lessons learned, and innovative design strategies to be applied in a wide range of topics."

Looking forward to seeing everyone at the lunch meeting !

Mike Radio, PE
Philadelphia Chapter President
c021@ashrae.net

PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2018-2019

<u>Date</u>	Time	Venue	Session Topic	Theme
Thursday, March 14, 2019	12pm - 2pm	Ocean Prime	"Air-Water HVAC Systems"	YEA
Thursday, April 11, 2019	12pm - 2pm	Del Frisco's	"The (un)Ethical Engineer" Devin Abellon, PE <i>ASHRAE Distinguished Lecturer Series</i>	Membership Promotion
Thursday, May 09, 2019	12pm - 2pm	TBD	"Building Codes" Elizabeth Baldwin, PE	Women in ASHRAE Government Affairs Past Presidents Research Promotion
Monday, May 13, 2019	11am - 7pm	DuPont CC	Annual Golf Outing	Social Event

Program calendar is tentative and subject to change. Please refer to [ASHRAE Philadelphia Website](#) for up to date information.

Advance registration and pre-payment are required before the meetings.

We need your attendance!

If we are below our guaranteed level for attendees at our meetings, our treasury could be negatively effected.

Our programs are designed around the membership's input and we all need to support these meetings to maintain a strong/informed association. We hope to see you at our next meeting. Please come out and support our Chapter!

March Meeting Info

Thursday, March 14, 2019

"Air-Water HVAC Systems"

This presentation will provide the background and applications for designing "Air-Water HVAC Systems". Energy savings and transport methods will be discussed. Multiple use and applications including Offices, Labs, Healthcare and Patient Suites will be reviewed.

Ken Loudermilk, PE, is Senior Chief Engineer at Titus. He has over 40 years of HVAC experience, including 20 with air-water systems. He holds a BSME from the University of Arkansas (Fayetteville) and an MBA from Mercer University. He is the co-author of the ASHRAE Chilled Beam Application and Design Guide and the ASHRAE UFAD Design Guide. Ken has written numerous articles published in the *ASHRAE Journal* as well as presentations at ASHRAE national and chapter levels. He worked closely with design teams on some of the nation's largest chilled beam projects, including the Constitution Center in Washington, DC. He is an instructor for ASHRAE Learning Institute on "Understanding and Designing Chilled Beam Systems."

February Meeting Photos



“Engineers are the Physicians of the Future”
presented by
Stephanie Taylor, MD, MArch, FRSPH(UK)

at the
Mummers Museum
February 21, 2019





**March 5 and 6, 2019
State College, PA**

**The Penn Stater Hotel
& Conference Center**

www.eeindustryforum.org

Join healthcare industry leaders, architects, engineers, and energy professionals at the premiere event for energy efficiency and healthcare!

The healthcare industry is hard to beat: it's the country's largest employer and its facilities rack up an annual energy bill of \$6.5 billion. To take a closer look at this sector, which employs 600,000 Pennsylvanians and plays an enormous role in the state's energy landscape, KEEA has invited some of the most innovative facilities managers, utility representatives, and industry executives to share their insights at a Healthcare Industry Forum on Energy Efficiency (eeindustryforum.org), slated for March 5 and 6 at the Penn Stater Hotel and Conference Center in State College.

This two-day event kicks off with accredited workshops on LEED for Healthcare, Building Operator Certification, and Building System Commissioning, followed by a VIP dinner and keynote address from the Cleveland Clinic's Jon Utech. The second day features keynote addresses from Michael Savage of PSE&G and Michael Pavelsky of the Sheward Partnership, plus four breakout sessions with three panels each and an all-day exhibitor hall.

Be sure to check out the website (eeindustryforum.org) for the full agenda, links to register and sponsor, and information about the sessions and speakers!

The event features three accredited workshops, three keynote addresses, twelve breakout sessions, a VIP dinner, an exhibitors hall. and a cocktail reception! See the full agenda on the website [www.eeindustryforum.org].



The Philadelphia Chapter of ASHRAE was proud to sponsor the “Best Indoor Environment Award” at Future City Philadelphia in January. The award was presented to the team from St. Mary Interparochial School in Philadelphia, pictured at the left.

Note from the CTT Committee

In the spirit of our February ASHRAE meeting, we'd like to talk about Humidification. Specifically, load sizing for humidifiers.

It's common practice to size humidifiers in according to the coldest design day OA temperatures used for heating, and minimum ventilation airflow rate. Surprisingly however, for systems equipped with an airside economizer, the coldest day may not represent the highest humidification demand; rather, this will occur during economizer operation because of the greater proportion of OA to Supply Air.

For example, assuming a system design with 10,000 CFM, 20% minimum outside air, 55°F DAT setpoint and a space design condition of 70°F and 40% RH. A common winter design OA condition might be 10°F DB and 8°F WB. Under these conditions with 20% minimum outside air, your required humidification load would be 50 lbs/hr (assuming a simplified system with minimal natural exchange losses or internal gains).

Let's look at potential economizer day, however. Let's assume a 33°F day in February with 66% RH: your mixed air ratio would be 41% outside air and 59% return air. Under these conditions, your mixed air condition would be 55°F and 51% RH. In order to meet your design condition of 70°F and 40% RH, you would actually require 66 lbs/hr of humidification – that's a 32% increase.

Especially with new energy code requirements prescribing heat recovery for even small percentages of outside air, a designer may find themselves in a position where the two cases above diverge dramatically.

You'll find a humidification load sizing handbook in the link below for further reading.

Brian N. Stehman
CTTC Refrigeration Subcommittee Chairman
bstehman@tristatehvac.com

Henry Hoffman, PE
CTTC Chairman
c021cttc@ashrae.net

Humidification Load Calculation Engineering Manual

Walter Meier Inc.

Includes What is Humidity, Affects of Relative Humidity, Calculating Relative Humidity, Requirements to Calculate Humidifier Load, and Load Calculations

[Click Here to View/Download the Manual](#)



Save the Date !!

Philadelphia Chapter ASHRAE Golf Outing

Monday, May 13, 2019

DuPont Country Club, Wilmington, DE

Shotgun start will be at 12:30 pm.

Online registration and full outing details to follow.



The Philadelphia Chapter
of the
American Society of Heating,
Refrigerating and Air
Conditioning Engineers, Inc.

994 Old Eagle School Road
Suite 1019
Wayne, PA 19087-1866
P 610-971-2169
F 610-971-4859

Visit
our web site at:

www.ashraephilly.org

Republication of material
contained herein is expressly
forbidden without official Chapter
authorization. The Chapter does
not speak or act for the Society.
Any member with material to
submit for inclusion in the
Climate can send the information
to:

Hope Silverman
P 610-971-2169
hope@mmco1.com

Material can include letters to the
editor, member news, upcoming
events, comments on chapter
programs or issues, etc.

New Philadelphia Chapter Members

New Members:

Lou Abruzzese, Jr

New Associates:

Robert McKenzie

Eric Hodge

Membership Advancement

If you are currently an ASHRAE Associate Member, becoming a full Member is easier than you think! The following count toward the required **12 points** to advance to full membership status. You must update your ASHRAE online biography and send an email to membership@ashrae.org to advance.

Non-accredited degree = 4 points

Accredited degree = 6 points

PE = 4 points

Industry experience = 1 point/year

The 2018-2019 Directory is Available!

The latest edition of the Directory of Associations, Consulting Firms, and Manufacturers' Representatives in the Philadelphia Area is now available.
It sells for \$23 each.

Send your check to:

ASHRAE, 994 Old Eagle School Road, Suite 1019, Wayne, PA 19087.

If you prefer to pay by credit card, please call Hope at 610-971-2169
or email her at hope@mmco1.com.

Advertise in the 2019-2020 Directory!

Are you interested in advertising in the 2019-2020 Directory of Associations, Consulting Firms, and Manufacturers' Representatives in the Philadelphia Area?

Email hope@mmco1.com before March 15, 2019.