ASHRAE Philadelphia Chapter

March 2018
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QUAKER CITY CLIMATE

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COSTS

Fees are based on online reservations and prepayment.

Philadelphia Chapter Members:
$10

ASHRAE Society Members - Non-Chapter Members:
$10

ASHRAE Life Members:
No Charge

Non- ASHRAE Member:
$10

Young Engineers (35 & under):
$10

Students:
$10

Registration includes 2 drink tickets.

Thursday, March 15, 2018

5:00 PM to 8:00 PM

Product Show

There will be a light dinner buffet and heavy hors d'oeuvres.

We encourage members to register if they plan on attending to assist the chapter with planning food and drinks. Registration is $10 and includes 2 free drink tickets.

Please join us and see the latest advancements in technology displayed by local vendors.

See the list of vendors on page 7.

Click here to Register

LOCATION

Fisher's Tudor House
1858 Street Road
Bensalem, PA 19020

For directions, click here.

2017-2018

President
Jeff Crozier, PE, CEM, LEED AP

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President's Message

First off, thank you to SMCA Chapter Executive William Reardon, CAE and Chapter President Robert Johnston for continuing to join the ASHRAE Philadelphia Chapter in offering scholarships to local college students at our February meeting. Together, we were able to award six $1,000 checks to students from our local colleges. See page 8 for more information and a photo.

The February after-dinner topic was on Fuel Cells and was presented by Geoff Slevin. It was an interesting topic that was followed by a lengthy discussion.

Our next meeting will be the ASHRAE Product Showcase at Fisher's Tudor House on March 15, 2018. We will have several local manufacturer's representatives and companies available to discuss their products and service. This is a great opportunity to find out about new equipment and meet with application experts.

The ASHRAE board is also excited to offer the ASHRAE 90.1-2007 Technical Seminar on March 27th and March 28th. Please see the seminar flyer on page 3 for additional information to determine if you want to attend one day or both days since each day will cover different topics. Make sure you sign up for each day separately if you are planning on attending both days.

Jeff Crozier, PE, CEM, LEED AP
Philadelphia Chapter President
c021@ashrae.net

Save these Dates !!



Philadelphia Chapter ASHRAE
Golf Outing

Monday, May 14, 2018
DuPont Country Club
Wilmington, DE

Shotgun start will be at 12:30 pm.

YEA Social
Philadelphia Union Game

Talen Energy Stadium
End of May

Online registration and full details to follow.

SCHEDULE

Tuesday, March 27, 2018

7:30 AM -8:00 AM	Registration
8:00 AM -8:30 AM	**Intro, IECC, User's Manual, Scope:** Larry Spielvogel, PE, Past 90.1 Chair
8:30 AM - Noon	**Building Envelope:** Joseph Deringer, AIA, SuPerB, Past 90.1 Envelope Chair
12:45 PM -1:30 PM	**Building Envelope:** Joseph Deringer, AIA
1:30 PM - 3:45 PM	**Lighting:** Carl Watson, PE, Consulting Engineer & Code Official
3:45 PM - 5:00 PM	**Energy Modeling & App G:** Michael Tillou, PE, Atelier Ten, 90.1 ECB Committee

Wednesday, March 28, 2018

7:30 AM - 8:00 AM	Registration
8:00 AM - 8:30 AM	**Intro, IECC, User's Manual, Scope:** Larry Spielvogel, PE, Past 90.1 Chair
8:30 AM - Noon	**HVAC Systems:** Mack Wallace, PE, Jacobs/WiseWatt LLC, 90.1 Mechanical Committee
12:45 PM - 3:00 PM	**HVAC Equipment:** Dick Lord, UTC Carrier, 90.1 Vice-Chair, 90.1 Mechanical Committee
3:15 PM - 4:00 PM	**Service Water Heating:** Mack Wallace, PE
4:00 PM - 5:00 PM	**Compliance:** Ernie Conrad, PE, Consulting Engineer, 90.1 Compliance Committee

Nearby Hotels

Courtyard Philadelphia South
at Navy Yard
Use Promo Code: CJ9

Residence Inn Philadelphia Airport
Use Promo Code: CJ9



The Philadelphia Chapter of ASHRAE is offering a comprehensive, in-depth and unique two-day program covering ANSI / ASHRAE / IES Standard 90.1 (2007) Energy Standard for Building (except Low-Rise Residential Buildings). A program of this magnitude and depth is not available anywhere else. Registration is open to everyone interested, and especially members of AIA, IES, IALD, USGBC, and CSI.

All presenters are the people who write and enforce the 90.1 standard. This is the only current energy option to the 2009 IECC in Pennsylvania and is the foundation for all later versions. Do not confuse this with presentations by other groups on later versions not adopted or required.

Location Penn State at The Navy Yard
Building 661
4960 S. 12th Street
Philadelphia, Pa 19112
Parking is FREE

Public transportation is available via the Broad Street Subway Line and a free shuttle bus from the last subway station, AT&T Station. The Courtyard by Marriott Philadelphia South at the Navy Yard is a few blocks away.

Cost $155.00 per person, per day
Lunch, snacks, refreshments and handouts are included.

Full time students and full time code officials are eligible for a discounted rate of $100 per day.

Standard and Users manuals for requested years are available for purchase at the discounted rate of $70.00 per book. The books are available at this drastically reduced price only if paid in advance with the conference registration.

PDH Credits Eight (8) PDH credits are offered per day.

Register Register and make your book selections at
http://ashraephilly.org/meetinginfo.php?id=69&ts=1517883031

ASHRAE Philadelphia Chapter

For more information, contact
Judd Vail at jvail@csande.net or 484-873-3974
or Hope Silverman at hope@mmco1.com or 610-971-2169.

PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2017-2018

Date	Location	Topic	Theme
3/15/2018	Fisher's Tudor House	Product Show	
3/27& 28	Penn State at The Navy Yard	ASHRAE 90.1 Technical Seminar	
4/12/2018	Wyndham Hotel	Impacts of Climate Change and Urbanization on Future Building Performance By Dr. Dru Crawley	Students and Membership
5/14/2018	DuPont Country Club	Annual Golf Outing	
5/17/2018	Center for Architecture & Design	AIA - Passive House Institution	Past President's Night

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!

The 2017-2018 Directory is Still 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 Hope Silverman, 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.

Please submit articles highlighting novel HVAC technologies to Chapter Technology Transfer Committee Chair Judd Vail (c021cttc@ashrae.net) for consideration in future newsletters.

Issues and Improvements in Commercial Kitchen Exhaust Ducts

By Doug Horton, MS, CFSP

For many years, duct products have often involved significant on-site measurement and construction, bringing certain advantages and risks. Here, that practice is compared to the use of listed ductwork, with an eye on duct integrity, hood connections, clearance to combustibles, fire ratings, and more.

Applicable codes and standards provide requirements for exhaust ducts connected to Type I (grease and smoke emitting) exhaust hoods. For many years, legacy and existing duct products have been predominantly 16-gauge carbon steel and mostly rectangular in shape. These ducts are usually planned, measured, fitted, and welded on-site, to comply with applicable codes and standards for materials, welding, connections, slope, drains, cleaning access, and other provisions.

Despite the good intentions of fabricators and installers, visits to operating food service facilities and fire scenes suggest there are challenges with unlisted, welded-on-site ducts, including:

- Integrity – welds not continuously liquid tight;
- Stability – not holding up to exposure of high temperatures (caused by internal grease fires);
- Poor connections between exhaust ducts and hoods, and also ducts and exhaust fans;
- Insufficient duct clearance to combustible construction or noncompliant duct wrapping;
- Improper penetrations of fire-rated barriers;
- Non-compliance with required slope and drainage means; and
- Lack of required access panels for cleaning.

Welded-on-site ducts that are not tested and listed to national consensus standards are hereafter referred to as "unlisted ducts." In contrast, codes and standards provide many exceptions for round, stainless, factory-built ducts and accessories that are tested and listed to the requirements in UL Standard 1978 on Grease Ducts — hereafter called "listed ducts." This article describes the relative challenges and benefits of using unlisted and listed grease ducts in construction of commercial kitchens.

DUCT INTEGRITY

Codes and standards require continuous, liquid-tight welds, regardless of duct dimensions and shape, on-site welding access, work lighting, and other factors. To validate liquid-tight integrity, the International Mechanical Code (IMC) requires a grease duct leakage test in Section 506.3.2. The test involves passage of a light with not less than 100 watts through "the entire section of ductwork to be tested." Listed ducts are exempt from this requirement.

The Minnesota Mechanical Code, in Section 506.4.2, requires evaluation of duct leakage by means of an air pressure test. Ducts must hold positive air pressure of 1.0 inch water column for a minimum of 20 minutes unless an equivalent alternate test is specified by the building official. However, because this test is frequently conducted before access doors are installed and duct closure applied, the air pressure test has not been accepted in consensus codes and standards.

(click here to read the entire article)

Student Activities

This past fall, the Chapter committed to sponsor four First Robotics teams: two First Lego League Junior Teams and two First Lego League Teams. Both program promote STEM concepts and team work. This year's project was Aqua Adventures. Chapter member Mike Witkowski was Lead Mentor for the two First Lego League Junior Teams. One team consisted of six 1st grade girls and the second team consisted of six 3rd grade girls. The teams were required to create a model with at least one motor and programmable part. The two First Lego League Teams were a mix of boys and girls ranging from 3rd grade to 5th grade. The First Lego League teams were required to build a robot that they can program to accomplish several tasks on a playing surface. In addition to completing the program requirements, all four teams will present their projects / robots at their school's Science Fair this winter.

Refer to the following link for more information about the program https://www.firstinspires.org/ . If any member has questions about the program, feel free to reach out to Mike Witkowski at mwitkowski@mchugheng.com





Advertise Now in the 2018-2019 Directory!

Are you interested in advertising in the 2018-2019
Philadelphia Area Directory of Associations, Consulting Firms, and Manufacturers' Representatives?

This directory is published annually by the Philadelphia Chapter of ASHRAE.

Email hope@mmco1.com if you would like more information!

Current directory circulation exceeds 1,400 copies and is growing. Users include engineers, contractors, purchasing agents, suppliers and over 900 ASHRAE members.

Now is the time to have your firm receive the exposure that only the ASHRAE Directory can offer.

The deadline for submission is March 12, 2018.

Philadelphia Chapter ASHRAE
Product Show Vendors
March 15, 2018

Please join us and see the latest advancements in technology displayed by several local vendors. Vendors are still signing up, but so far this year will include:

BJ Terroni Company

Blankin Equipment

Broudy Precision

CaptiveAire Systems

Chase & Associates

Clapp Associates Inc.

Combustion Service & Equipment Co.

Cooney Coil and Energy

Coward Environmental Systems, Inc.

Delval Equipment

DVL Group

Energy Transfer Solutions

General Aire Systems

JC Mottinger Associates, Inc.

Keller Equipment Sales

N.H. Yates & Co., Inc.

PECO Smart Ideas

Peirce-Phelps, Inc.

RD Bitzer Co. Inc.

Sass, Moore & Associates, Inc.

Siemens Industry, Inc. Bldg Technologies

Suppression Systems, Inc.

UEP Northeast

United Refrigeration

Victaulic

Interested in exhibiting but not on the list? Email hope@mmco1.com.
A few tables are still available.

February Meeting Photo

Congratulations to this year's scholarship winners!
ASHRAE's Otto Gessner Scholarship and SMCA's Student Scholarship

Widener University:

- OTTO GESSNER AWARD: John Petrongolo
- SMCA: Christian Stabelli

Temple University:

- OTTO GESSNER AWARD: Joshua Lee Robison
- SMCA: Timothy McMullen

Drexel University:

- OTTO GESSNER AWARD: Jaymes Bailey
- SMCA: Liang Zhang



Front row (left to right): John Petrongolo, Joshua Robinson, and ASHRAE Student Activities Chair Mike Magee

Second row (left to right): Timothy McMullen, Christian Stabelli, Liang Zhang, and SMCA's Bob Johnston

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

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Wayne, PA 19087-1866
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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:

John R Sharpe

New Associates:

Darryl John Leach
Chodapaneedi S Kumar

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