January 2015

# THE LONG ISLAND SOUNDER

ASHRAE Long Island Chapter, Region 1...*Founded in 1957* www.ashraeli.org

American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

## Inside this issue:



## President's Message

Welcome to the January issue of the "Long Island Sounder" and a Happy New Year to all! We thank all those who attended last month's Holiday party; it was great to see so many of you on such a poor weather evening. We were blessed with the presence of our fantastic Sounder Editor Liset Cordero and a small token of our appreciation was presented. Our webmaster Anthony Bikowski was also thanked but was not able to attend the event.

We have plenty going on for 2015 and a great team of board and committee members. If you haven't contacted Andy Manos and placed your ad in the 2015 Product Directory hurry before it is too late as he is going to press soon. We collected $310 for the Wounded Warriors Project and Andrew Dubel is taking care of making the presentation where we hope to have a picture for next month's newsletter. We signed up a new student member, Rob Tschoke and he is going off to help Habitat for Humanity for 9 days to build houses for those in need. He promises us pictures and a log of the events. We have established several committees looking for projects such as our Refrigeration, Sustainability and our Modeling user group and are always looking for ideas from members or for additional volunteers for the groups. We will be joining with the EJCLI, Engineers joint committee of Long Island, and will be supporting their engineer's week seminar day, the 2nd week in February, and Don Kane and myself will even be making a presentation. On the fun side we will be having a chapter night out at an Islander's game. They will be playing the Predators, on Thursday Feb 19th at 7:00 PM and all are invited. Contact a board member for reservations and tickets, $50 each, for you or your group. Tickets must be paid for by Jan 21st. We will have to see if the Ice Girls remember us from the Golf Outing last year. Don't forget the ASHRAE Winter meeting in Chicago as well as the AHR Expo the 24th through 28th of January.

Meanwhile our January meeting will be business as usual as we will enjoy a lecture on "How NOT to Design a Steam System" which will certainly show us that steam is not dead and has its place in space heating and processing. Also Evans Lizardos will hold his 2nd back-to-basics seminar; this time on Pipe designs for Control of Temperature and Flow in Water Systems. Please check out our website www.ashraeli.org and take a look at the latest program that Tom Fields, our Programs Chair, has scheduled for the chapter monthly meetings. Pencil in those dates on your calendar so you won't miss out on these great topics and events.

When looking up two members this month I found they were assigned to the NYC chapter instead of the LI Chapter where they wanted to be. If you could check online at https://www.ashrae.org/membership--conferences/my-membership?Site=ASHRAE and see if you are listed correctly we would appreciate it. If you are listed incorrectly your chapter dues money will go to the wrong chapter! If you didn't select a chapter, it defaults to no chapter, so please check your status.

I wish you all a safe and joyous holiday season and a happy and healthy new year. Thank you to all the volunteers and board members, I appreciate all your time and dedication to our chapter and community. We look forward to seeing everyone at the January Meeting and thank you for your continued support of the Long Island Chapter of ASHRAE.

***Richard L. Rosner, P.E.***
***President - Long Island Chapter***

### CHAPTER MONTHLY MEETING

| | |
|---|---|
| **DATE:** | **Tuesday, January 13, 2015** |
| **TIME:** | 6:00 PM - Cocktails/Dinner<br>6:30 PM - Back to Basics #2<br>6:45 PM - Dinner Presentation<br>8:45 PM - Conclusion |
| **LOCATION:** | Westbury Manor<br>South Side of Jericho Tpke. 25<br>Westbury, NY 11590 |
| **FEES:**<br>Members -<br>Guest -<br>Student - | <br>$40.00<br>$45.00<br>$15.00 |

***Reservations requested, but not required.***

***Call (516) 333-7117***

# Long Island Chapter Officers & Committees

## ASHRAE 2014/2015 OFFICERS

| POSITION | NAME | PHONE | FAX | EMAIL |
|---|---|---|---|---|
| President | **Richard Rosner, P.E.** | 631.737.9170 | 631.737.9171 | president@ashraeli.org |
| President-Elect | **Thomas Fields, P.E., LEED AP** | 212.643.9055 | 212.643.0503 | president_elect@ashraeli.org |
| Vice President | **Charles Lesniak, P.E** | 516.484.1020 | 516.484.0926 | vice_president@ashraeli.org |
| Financial Secretary | **Don Kane, P.E.** | 631.737.9170 | 631.737.9171 | finsec@ashraeli.org |
| Treasurer | **Andrew B. Dubel, P.E.** | 212.967.7651 | 212.967.7654 | treasurer@ashraeli.org |
| Secretary | **Richard Halley** | 718.269.3809 | 718.269.3725 | secretary@ashraeli.org |
| Board of Governors | **Lee Feigenbaum, LEED AP BD+C** | 212.243.2555 | 212.924.7148 | bog1@ashraeli.org |
| Board of Governors | **Frank Paradiso** | 631.632.2791 | 631.632.1473 | bog2@ashraeli.org |
| Board of Governors | **Ken Mueller** | 201.395.3761 | 763.231.6924 | bog3@ashraeli.org |
| Board of Governors | **Andrew Manos, LEED AP** | 631.632.2791 | 631.632.1473 | bog4@ashraeli.org |

## ASHRAE 2014/2015 COMMITTEES

| COMMITTEE | NAME | PHONE | FAX | EMAIL |
|---|---|---|---|---|
| Programs & Special Events | **Thomas Fields, P.E., LEED AP** | 212.643.9055 | 212.643.0503 | programs@ashraeli.org |
| Membership | **Lee Feigenbaum, LEED AP BD+C** | 212.243.2555 | 212.924.7148 | membership@ashraeli.org |
| Chapter Technology Transfer (CTTC) | **Don Kane, P.E.** | 631.737.9170 | 631.737.9171 | cttc@ashraeli.org |
| Grassroots Government Activities Committee | **Charles Lesniak, P.E** | 516.484.1020 | 516.484.0926 | ggac@ashraeli.org |
| Newsletter Editor | **Liset Cordero** | 212.643.9055 | 212.643.0503 | editor@ashraeli.org |
| Research Promotion | **Andrew Manos, LEED AP** | 631.632.2791 | 631.632.1473 | rp@ashraeli.org |
| Historian | **Andrew B. Dubel, P.E.** | 212.967.7651 | 212.967.7654 | historian@ashraeli.org |
| Student Activities | **Richard Halley** | 718.269.3809 | 718.269.3725 | sa@ashraeli.org |
| Young Engineers in Training | **Frank Paradiso** | 631.632.2791 | 631.632.1473 | yea@ashraeli.org |
| Webmaster | **Richard Rosner, P.E.** | 631.737.9170 | 631.737.9171 | web@ashraeli.org |
| Nominating | **Michael Gerazounis, P.E., LEED AP** | 212.643.9055 | 212.643.0503 | nominating@ashraeli.org |
| Reception & Attendance | **James Hanna**<br>**Ken Mueller** | 718.269.3768<br>201.395.3761 | 718.269.3794<br>763.231.6924 | reception@ashraeli.org |
| PR & Engineering Joint Council of LI | **Andrew Manos, LEED AP** | 631.632.2791 | 631.632.1473 | pr@ashraeli.org |
| 2014 CRC Committee | **Richard Halley** | 718.269.3809 | 718.269.3725 | CRC@ashraeli.org |
| Golf Outing | **Peter Gerazounis, P.E., LEED AP**<br>**Steven Friedman, P.E., HFDP, LEED AP** | 212.643.9055<br>212.354.5656 | 212.643.0503<br>212.354.5668 | golf@ashraeli.org |
| **ASHRAE LI, P.O. Box 79, Commack, NY 11725** | | | | |

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# BOG Meeting Minutes

**BOG** December Meeting, Long Island Chapter
Tuesday December 9th, 2014
5:00 – 6:00
Westbury Manor, Westbury, NY

**Call to Order -** At 5:23 by Chapter President Rich Rosner
First roll call showed 7 Members - Rich Rosner, Tom Fields, Don Kane, Rich Halley, Andy Manos, Frank Paradiso and Brian Simkins

**Secretary (Rich Halley)**
June 2014 Minutes Still Pending
November Minutes were approved with one Correction from Don Kane
Motion to Approve - Andy Manos, Second -Tom Fields

**President (Richard Rosner)**
Rich wished the Board a Happy Holiday Season and reviewed the PAOE point's update.
Please make sure you're on top of your PAOE and lets have a strong 2nd half of the year

**President-Elect/Programs (Thomas Fields)**
ATI is lined up for January. Tom is working on getting a seismic presentation for the chapter.
The Islander game is going to be February 19th and the field trip is still open

**Chapter Technology Transfer (Don Kane)**
We are still looking to book our April field trip, Don is requesting suggestions and lead from the board.
Don also noted that the third sentence in last month's minutes (CTTC) should read … "Rich Rosner noted that he has arranged for viewing of the "Hydronic System Solutions® (HSS)" webcast at his office Friday, November 21st."
Quick discussion was held on new smart phone apps and computer programs. We should start thinking on how we want to push these in the future.

**Treasurer (Andrew Dubel)**
Andrew Dubel reported Balance in the General fund as of December 2014 $12,548 expense of $461. Ending Balance as of December 2014 $12,087.
We received a donation from SMACNA in the amount of $2,500.00 with the gratitude of the BOG
Don and Andrew will be working on the invoicing for the newsletter advertising and will report back next month
Motion to Approve - Tom Fields, Second – Charles Lesniak

**Grassroots Government Activities (Charles Lesniak)**
No Report – Article will be done for this month

**Historian (Andrew Dubel)**
No Report

**Honors and Awards Chair (Brian Simkins)**
Brian is continuing to work with Evans Lizardos on Katz
Rich Halley is finalizing the Campbell awards Submission

Cont'd. on Page 4

## BOG Meeting Minutes (Cont'd. from Page 3)

**Research Promotion (Andy Manos)**
The 30% goal by December has been met. The Vendor book is progress

**Membership Promotion (Lee Feigenbaum)**
No Report

**Student Activities (Richard Halley)**
Student Chapter Meetings were held in both Stony Brook and SCCC. Suffolk added 6 more new members to the group.
We are working with Brian Simkins on the nomination of a local Educator for the Campbell award.
Rich Rosner has requested that we get the new Student Members on the e-mail list for the chapter so that they can receive all chapter updates RH will work on putting together the list as there is no automatic way to pull the list been a very busy year to date

**YEA (Frank Paradiso)**
Frank reported that he is looking into special events to attract members

**Web Master (Richard Rosner)**
No Report

**CRC 2017 (Richard Halley)**
The BOG approved setting up a CRC account with the $2,500.00 donation received earlier in the evening Rich Halley Reported that he has started the search for possible locations to hold the CRC
We are still waiting for Region to give us the actual dates for 2017

**Golf (Steven Friedman, Peter Gerazounis)**
No Report, next outing is scheduled for May 4th, 2015 Cherry Valley

**Old Business**
EK Campbell award deadline 12/14/14
Gift Cards going out tonight

**New Business**
Look into Chapter dues not being paid or forwarded to the Chapter
Going to List Links to formula and/or apps for phones in next newsletters, send in what you have
Newsletter articles due two weeks before next meeting or after last meeting.
Our Next bright ideas speaker should be in February (still looking to fill)

**Second Roll Call**
Second roll call showed 9 Members Present
Rich Rosner, Tom Fields, Don Kane, Rich Halley, Andy Manos, Frank Paradiso, Brian Simkins, Charles Leaniak and Andrew Dubel

**Motion to Adjourn** by Andy Mano 2nd by Tom Fields @ 6:09pm

**Time/Place of next BOG Meeting – January 13th, 2015. Westbury Manor**

# Chapter Monthly Meeting - Program for 2014/2015

| | |
|---|---|
| **September 9, 2014** * At Westbury Manor<br><br>Dinner Presentation – New Advances in High Efficiency Cooling for Data Centers ****1 PDH****<br>Presenter - Dave Smith<br><br>**Membership Promotion Night** | **February 2015**<br><br>**NATIONAL ENGINEERS WEEK** |
| **October 14, 2014** * *At Westbury Manor*<br><br>Dinner Presentation – Variable Frequency Drives and Motor Considerations ****1 PDH****<br>Presenter - Gail O'Keefe<br><br>***Back to Basic Session I - Evans Lizardos*** *****1 PDH*****<br>***"Smoke Purge System Design"*** | **March 10, 2015** * *At Westbury Manor*<br><br>Dinner Presentation – Plate/Frames ****1 PDH****<br>Presenter - Chris Abbot<br><br>**Joint meeting with LI-Geo / YEA Night**<br><br>***Back to Basic Session III – Evans Lizardos*** *****1 PDH*****<br>**"Energy Requirements for Different Refrigerant Systems"** |
| **November 11, 2014** * *At Westbury Manor*<br><br>Dinner Presentation – HVAC Air Distribution System Efficiency ****1 PDH****<br>Presenter - Eli Howard<br><br>**Resource Promotion Night**<br>**Joint meeting with SMACNA**<br>**Student Activities Night & YEA Night as well as Membership Promotion and Upgrade Night** | **April 14, 2015**<br><br>**ANNUAL FIELD TRIP - TBD** |
| **December 9, 2014** * *At Westbury Manor*<br><br>**HOLIDAY PARTY**<br>Free Buffet Dinner for Members | **May 4, 2015** * *Cherry Valley Club, Garden City, NY*<br><br>**ANNUAL GOLF OUTING** |
| **January 13, 2015** * *At Westbury Manor*<br><br>Dinner Presentation – "The Steam Kettle" The Generation and Control of Steam for Space Heat and Process ****1 PDH****<br>Presenter - Paul Peck<br><br>***Back to Basic Session II - Evans Lizardos*** *****1 PDH*****<br>**"Pipe Designs for Control of Temperature and Flow in Water Systems"** | **May 12, 2015** * *At Westbury Manor*<br><br>Dinner Presentation – Responsible Use of Refrigerants<br>Presenter - Julian de Bullet ****1 PDH****<br><br>**ASHRAE DISTINGUISHED LECTURER**<br><br>**Student Activities Night / Refrigeration Night** |
| **January 24-28, 2015**<br><br>ASHRAE Winter Meeting<br>Palmer House Hilton<br>Chicago, IL | **June 9, 2015** * *At Westbury Manor*<br><br>**Free Buffet Dinner for Members**<br><br>**PAST PRESIDENTS NIGHT & OFFICER INSTALLATION**<br>**STUDENT SCHOLARSHIPS TO BE AWARDED**<br>**ASHRAE History Quiz and prize Give-A-Ways** |
| **February 10, 2015** * *At Westbury Manor*<br><br>Dinner Presentation – TBD ****1 PDH****<br>Presenter - TBD<br><br>**Joint Meeting with USGBC**<br>**Resource Promotion Night / Membership Promotion Night / Student Activities Night** | **August 2015**<br><br>**Chapter Regional Conference (CRC) Region I**<br>**Syracuse Chapter Hosting**<br>**August 20-22, 2015** |

## Long Island Chapter - Past Presidents

| | | | |
|---|---|---|---|
| 1958 | H. Campbell, Jr. PE | 1986 | Jerome T. Norris, PE |
| 1959 | Clyde Alston, PE | 1987 | Abe Rubenstein, PE |
| 1960 | Sidney Walzer, PE | 1988 | Michael O'Rouke |
| 1961 | Sidney Gayle | 1989 | Mel Deimel |
| 1962 | William Kane | 1990 | Robert Rabell |
| 1963 | Louis Bloom | 1991 | Gerald Berman |
| 1964 | Milton Maxwell | 1992 | Donald Stahl |
| 1965 | Will Reichenback | 1993 | Ronald Kilcarr |
| 1966 | Joseph Minton, PE | 1994 | Jerald Griliches |
| 1967 | Irwin Miller | 1995 | Walter Stark |
| 1968 | Walter Gilroy | 1996 | Joe Marino |
| 1969 | Charles Henry | 1997 | Norm Maxwell, PE |
| 1970 | William Wright | 1998 | Alan Goerke, PE |
| 1971 | Louis Lenz | 1999 | Frank Morgigno |
| 1972 | Ronald Levine | 2000 | Michael Gerazounis, PE, LEED AP |
| 1973 | Henry Schulman | 2001 | Ray Schmitt |
| 1974 | Myron Goldberg | 2002 | Steven M. Stein, PE |
| 1975 | John N. Haarhaus | 2003 | Andrew Braum, PE |
| 1976 | Richard K. Ennis | 2004 | Claudio Darras, P.E. |
| 1977 | Kenneth A. Graff | 2005 | Craig D. Marshall, P.E. |
| 1978 | Evans Lizardos, PE, LEED AP | 2006 | John Nally |
| 1979 | Albert Edelstein | 2007 | Peter Gerazounis, PE, LEED AP |
| 1980 | Ralph Butler | 2008 | Steven Friedman, PE, HFDP, LEED AP |
| 1981 | Robert Rose, PE | 2009 | Steven Giammona, P.E., LEED AP |
| 1982 | Timothy Murphy, PE | 2010 | Nancy Román |
| 1983 | Leon Taub, PE | 2011 | Carolyn Arote |
| 1984 | Raymond Combs | 2012 | Brian Simkins, LEED AP |
| 1985 | Edward W. Hoffmann | 2013 | Andrew Manos, LEED AP BD+C |

ASHRAE Long Island Chapter

## PAOE POINTS FOR 2014/2015

| 350Chapter Members | Membership Promotion | Student Activities | Research Promotion | History | Chapter Operations | CTTC | GGAC | Chapter PAOE Totals |
|---|---|---|---|---|---|---|---|---|
| 282 | 375 | 245 | 795 | 50 | 1,230 | 670 | 425 | 3,790 |

## January Program


# Dinner Presentation

***"How NOT to Design a Steam System"***

*Presented by*

***Paul Pack***
***Fulton Boiler Company***

**Attendees Will Earn 2 PDH's!**

| | | | |
|---|---|---|---|
| **DATE:** | **TUESDAY, JANUARY 13, 2015** | | |
| **Time:** | 6:00 PM - Cocktails and Hors D'ouevres<br>6:45 PM - Dinner Presentations<br>8:45 PM - Conclusion | **Fee:** | $ 40.00 Member<br>$ 45.00 Guest<br>$ 15.00 Student |
| **Location:** | **WESTBURY MANOR** (516) 333-7117<br>Jericho Tpke (South Side), 3/10 of mile east from Glen Cove Rd., Nassau County, NY.<br>**Directions are posted at @ www.ashraeli.org.** | | |
| **Presentation:** | This month's presentation Focuses on common mistakes made throughout the industry by installing contractors, and designers with steam system design. It highlights common poor practices that have been duplicated from years past and covers good practices in steam system design moving forward. It also covers issues that can arise from improper steam system design. With system design we review steam velocities, near boiler piping, steam header piping, proper header design, impact of condensate on the system, proper condensate system piping and design and proper boiler sizing.<br><br>**In addition Evans Lizardos, PE, LEED AP, will be presenting Part II of the 'Back to Basics' series – Pipe Designs for Control of Temperature and Flow in Water Systems.**<br><br>**All attendees will receive 2 PDH's.** | | |
| **About our Speaker:** | **Paul Pack** (Industrial Product Manager for Fulton Boiler Company) has over 36 years experience in the commercial and industrial boiler field.<br><br>Fulton is a leading producer of package boiler systems for low & high pressure steam and hot water applications and is also the parent company of the Synex Control Group. They are an international company with manufacturing facilities in the US, China, Great Brittan and Australia. Paul's extensive background in boiler systems comes from many years of experience working as design and applications engineer for several of the largest US Manufacturers Representatives. Serving as a regular consultant to the power industry, he shares his knowledge of boiler design, applications, commissioning and system service.<br><br>The speaker is a graduate of US Merchant Marine Academy and currently holds dual Chief Engineer's Operating Licenses for unlimited horsepower with steam and diesel operation. | | |

## Student Activities

It was a very busy first semester. Our Student Chapters got off to a very strong start this year. Regular monthly meetings were held at both SUNY Stony Brook and Suffolk Community College Chapters. Our Students have learned about our Industry and the Long Island Market Place.

While the Students are on their Holiday break we are in the process of planning the spring semester. We are always on the lookout for Industry Professionals to join our students and share their experience.

Last month we had Bill Kissam from Pyramid Air Conditioning spend an hour giving our students his prospective on what it takes to be successful as they prepare to enter the work force. Much thanks to Bill for spending his time and investing in our young people

We have we have continued to welcome new student members with a year to date total of 18 new members and our looking for more. If you know of anyone looking to get involved please let me know

ASHRAE Student Zone http://www.ashrae.org/membership--conferences/student-zone is a great place for student to go on line and learn more about ASHRAE and the multiple resources available to you

Students who are currently enrolled or soon to be enrolled in an engineering undergraduate degree should take a look at https://www.ashrae.org/membership--conferences/student-zone/scholarships-and-grants/ashrae-scholarship-program. There are 13 undergraduate scholarships available ranging from 10,000 to 3,000 dollars!

If you would like more information take a look at the website or see me.

***Richard Halley***
***Student Activities Committee Chair***

## Membership

I'd like to begin my first newsletter of the New Year with best wishes for a happy and healthy 2015. I wish everyone continued success in the coming year! Speaking to success, our membership continues to grow as an increasing number of HVAC professionals recognize the value and benefits that ASHRAE membership provides. Since we kicked off in September, your Long Island Chapter of ASHRAE has had the privilege of welcoming 13 new members to our family. This is especially exciting considering that we added 12 during the same period last year. Our membership remains our greatest strength, and we look forward to welcoming even more new members in the coming year!

Rest assured, we will continue to offer great programs, leadership, and learning opportunities that will serve you all – even our newest members – very well as you navigate through the coming year. These opportunities will provide vital stepping stones to success by way of education, networking, and friendships.

Make ASHRAE your resolution. Please visit our website at www.ashraeli.org for more information about upcoming events. We look forward to seeing you at our next meeting, and encourage you to bring a friend. Let's toast to the promise of the New Year together!

***Lee Feigenbaum, LEED AP BD+C***
***Membership Chairman***

# Research Promotion

I would like to thank the companies who have participated in the annual 2015 Product Directory of Manufacturers and their Representatives.

The Product Directory has been prepared as a service to all its members and as a service to the local HVAC industry. It will be will be made available to all ASHRAE and non-ASHRAE members at no-cost and can be obtained from our monthly meetings or directly from our web-site.

There's still time if you would like your company listed in the directory please contact me. The deadline is January 15th.

The Directory is intended to provide better communications between manufacturers and their sales representatives; engineers who specify products; contractors who purchase and install the equipment; and other interested parties. Product Directory listings are not limited to ASHRAE members and the listings are not to be considered as advertising or endorsement by ASHRAE of any product, manufacturer or representative.

This year's overall resource promotion goal is $2,208,050 with over 75 research projects on board. Our chapter is expected to raise approximately $15,300 towards the overall goal of which we have already raised $5,350. I am hoping I can count on the continued support of all of our past contributors who have generously supported us over the years.
I also look forward to gaining the support of new contributors this coming year. Please help support ASHRAE in any way you can.

I would like say 'thank you' to all the contributors listed below whom have already donated to ASHRAE this year:

**INDIVIDUALS**

Mr Andrew B Dubel, PE
Mr Andrew E Manos, LEED AP
Mr Charles J. Lesniak, PE
Mr Donald Kane, PE
Mr Frank Paradiso
Mr John D Nally
Mr Kenneth T Mueller
Mr Lee Feigenbaum
Mr Marcel A Bally
Mr Michael Gerazounis, PE, LEED AP
Mr Richard I Halley
Mr Richard Pearson, PE, LEED AP
Mr Richard L Rosner, PE
Mr Ronald J Kilcarr, PE
Mr Thomas Fields, PE, LEED AP

**COMPANIES**

Accuspec Inc.
Building Cooling Systems
Catan Equipment Sales
Dagher Engineering
Daikin
Gil-bar Industries
PVI / Riverside Hydronics
Technical Air Systems, Inc.
Vitaulic

**CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:**

1) You can mail your checks, made out to ASHRAE Research Promotion, to:
Andrew Manos
ASHRAE Research Promotion Chair
c/o Stony Brook University
Research and Support Services, Suite 160
Development Drive
Stony Brook, NY 11794-6010

2) You can bring your check to any of the meetings and give it to me. I will mail it into headquarters.
3) You can contribute via PayPal from the ASHRAE LONG ISLAND web site just click on the donate button.
4) You can contribute directly on-line. www.ashrae.org

**** Please make sure you accredit your contribution to the LONG ISLAND CHAPTER 006 ****

Thank you again for all of your support!

***Andrew Manos, LEED AP BD+C***
***Research Promotion Chair***

# CTTC - Steam Boiler Design and Installation - Watts My Line?

When one looks into the history of heating, especially the events related to the two competing technologies of steam based and water based systems, one can't help but wonder why all hydronic systems are not steam based ones? Smaller (cheaper to install) piping for a given heat capacity, generally fewer "moving parts" and, with the advent of reliable controls and safety devices, one generally does not have to worry about one's boiler ascending heavenward, like a *MythBusters* experiment gone awry. Aha! That explosion thing. It seems that, in the process of "upping the ante" in the boiler game (which seemed to degenerate into a "who can run their equipment at a higher pressure than I can" kind of dare), a significant number of boilers deconstructed themselves in the process. It is reported that in 1888 there were 246 reported boiler explosions in the USA, resulting in more than 370 deaths and more than 500 injuries. Although many contributing causes of the explosions were claimed, a more succinct assessment was provided in the December 1865 issue of *The Manufacturer and Builder"* wherein it was noted that "...the sole cause of all boiler explosions is always that the tension produced by the steam pressure is greater than the tensile strength of the weakest part of the boiler". Why then did people continue to install these potentially destructive devices in their buildings to provide heat? Why not just let hot water course through the building's piping where, at most, one might have to deal with a leak and a puddle of water? Water based systems of the time remind one of Victor Borge's description of the development of the piano. At first, there was just one big white key. When played it was not very melodic or inspiring...until someone invented the cracks...that changed everything! What was it that finally allowed water based systems to compete with the steam systems? Remembering that circulator pumps were still thirty years or so in the future (of course, there was no way for them to know that at the time), and the water based systems were all so-called atmospheric ones, vented to the ambient atmospheric pressure though an elevated, open expansion tank, flow through these systems could best be described as lethargic. With only thermal expansion and gravity to move the water through the system (and the maximum temperature kept below 200 degrees F), if you wanted to provide more heat you would have to increase the pipe size to a ludicrous dimension. Then, around the turn of the century (the 20th century, that is) one Mark Honeywell came up with the hydronic equivalent to the piano's key cracks...the Honeywell Heat Generator. This nifty device, comprising a tube-within-a-tube and a pool of elemental mercury, allowed the pressure in the system to reach 10 PSI, and the water to be heated to about 240 degrees F (without boiling), while providing a means of relieving excess pressure should it exceed the 10 PSI value, as the water would displace the mercury, and allow the water to vent to the external expansion tank. Ironically, about the same time, steam boiler manufacturers were finally adopting 2 PSI as a maximum pressure which, while certainly not totally eliminating the possibility of a boiler explosion, sounded so much "safer" than the higher pressures which had been used to that point.

While the battle for single family residences has certainly been won by the proponents of water based hydronic systems or forced air systems, steam boilers have prevailed in larger buildings and process industries. What advantages does steam have when designing and installing a system and what care must be taken when retrofitting newer equipment into existing installations?

The key to the efficacy of steam based heating systems is the latent heat of vaporization of water. Some years ago, an Englishman by the name of Tom Tredgold determined how much heat it took to raise the temperature of one pound of water, one degree F. He, fortunately, did not name this quantity after himself but, rather, defined that amount of heat as one British Thermal Unit (BTU). He, using his newly defined quantity and making measurements from a square foot area of one of James Watt's radiators, determined that in a room at 70 degrees F, and (1 psig) steam at 215 degrees in the radiator, 240 BTUs would emanate from each square foot of the radiator surface. This is the Equivalent Direct Radiation (EDR), a parameter which becomes important when sizing new or replacement boilers so as to properly size them.

While it only takes one BTU to raise one pound of water one degree F, It takes 970 BTUs to change one pound of water at 212 degrees F to Steam at 212 degrees F. That same 970 BTU's is, conversely, liberated when the steam is condensed back to the liquid state. This characteristic allows the same amount of heat to be transported in smaller piping than would be needed for a water based system as, pound for pound, the steam contains almost a thousand times more heat than an equivalent weight of liquid water.

While both one-pipe and two-pipe steam systems have been successfully used, the two pipe systems generally make it easier to keep the steam (vapor Phase) and condensate (liquid phase) separate. Excessive condensate in the vapor piping can, at the least, degrade system performance and, in the extreme (should a slug of water be propelled by high energy steam through the piping) cause catastrophic damage to system components and personal injury if piping fails.

Cont'd. on Page 11

## CTTC - Steam Boiler Design and Installation - Watts My Line? (Cont'd. from Page 10)

When sizing a steam boiler and ancillary system components, one must be aware of the magnitude of the system steam load requirements as well as the nature of the load. Is it constant? Cyclical? Is there a peak "demand" followed by a steady state load? How many BTUs are needed just to "warm up" the piping and components when first fired up? Until the system is up to temperature, steam will continue to condense in the piping, using system capacity and, perhaps, creating operational problems. If a boiler cannot supply the demanded load, the boiler can experience depressurization. This can result in water carryover, degrading the quality of the steam supplied and possibly damaging the supplied equipment. Protective device actuation (on apparent low-water condition due to water carry-over) and, if automatic make-up water is supplied, overfilling resulting in flooding when the condensate finally returns to the boiler may occur. Methods to prevent depressurization of the boiler during rapid load demand include; over sizing the boiler, use of back-pressure regulators and/or orifice plates or use of steam accumulators. Generally, over sizing the boiler is not economically justifiable and limiting steam output will often not be practical if the supplied equipment cannot deal with reduced input. The use of steam accumulators (analogous to the use of capacitors in electrical power supplies) provides a means to provide peak steam demand, without over sizing the boiler. Either a dry accumulator or a wet accumulator may be used. These devices can only store steam. They cannot make up for a boiler that is undersized for the amount of steam required. This is a function of the boiler and the amount of fuel supplied to fire it. The dry accumulator is well suited to preventing false low-water shutdowns and water carryover. For applications requiring significant instantaneous steam, the wet accumulator will generally be preferred. When determining the accumulator capacity, one must take into account the amount of time needed to bring a boiler up to full fire once the call for steam is established. Purge cycles, pilot ignition and flame verification will prevent most boilers from reacting fast enough to satisfy a sudden steam demand without the use of an appropriately sized accumulator.

Assuming the appropriately sized boiler has been selected and provision made for meeting sudden steam demand, what other kinds of concerns can arise?

Near Boiler Piping - The cross sectional area of the risers out of the boiler should be 30-50% greater than the mains they supply. If this is not done to reduce steam velocity, water carry-over will be a problem.

System Take-Off Location - When more than one riser supplies a header, the point of connection should be between the last riser and the drip/equalizer piping. This will assist in keeping the steam and condensate flowing in the correct direction.

Bullheaded Tees - Use of bull-headed tees, where the steam enters from the side, should be avoided, to prevent pulsation and varying water level in the boiler.

Header Expansion Provision - Avoid welded headers without provision to accommodate thermal expansion. Threaded connections with swing joints are preferred. Where welded headers are unavoidable, incorporate flanged, gasketed joints to provide some (small) amount of "give".

Boiler Elevation - When replacing an existing boiler with a physically smaller one, don't assume that the mounting elevation is arbitrary. If the static pressure of the water column in the piping leading to the boiler is insufficient to overcome the boiler pressure, water will not flow to the boiler. If a minimum piping length from the boiler to the header is called for, do not reduce the length below this dimension, or you risk water carry-over. Smaller, more modern boilers may not incorporate the large steam chest of older designs and the additional specified piping is to ensure only dry steam makes it way to the header.

Properly Install/Adjust Automatic Water Feeders (When Used) - Do not set the auto feed level too high, as flooding will occur when condensate fully returns to the boiler. The feeder should provide for a minimum level of water, and not be used to maintain an operational level.

Finally, a note about flues and chimneys. If you are replacing an existing boiler, and are planning to use the existing flue/chimney, ensure that the size and category are correct for the new boiler (negative/positive vent static pressure, condensing/non-condensing). If a new flue is called for, make sure there is no other "orphan" equipment connected to the old flue, which may now be oversized for the reduced flow.

While this short piece merely touches on the topic of steam boilers and steam in general, I would heartily recommend that those who are interested in furthering their knowledge to check out the writings of Dan Holohan and his "Dead Men", always and interesting and informative read and a source for much of the background for this article.

***Don Kane, P.E.***
***CTTC Chair - cttc@ashraeli.org***

## Young Engineers in ASHRAE (YEA)

I hope everyone had a great holiday season and a happy new year's celebration.

The 2015 ASHRAE Winter Conference is being held in Chicago between January 24th -28th take a look at the ASHRAE webpage for any helpful information about the conference.

We will be looking for ideas for social events so please contact me if you have suggestions. One such idea is a spring get together at a German Beer Hall in Franklin Square NY

Be sure to connect with Young Engineers in ASHRAE on Facebook and LinkedIn. We will see you next meeting.

***Frank Paradiso***
***YEA Chairman***

**Donate your old Handbooks**

**Please bring your old handbooks to the meetings for donations to our student members who do not have complete sets at this time. Frank Paradiso will be collecting them.**

## Programs and Apps offered on the Web or for Your Smartphone

Since the Web has become more and more useful for finding information about products and the works of others, we have decided to start a space in the Sounder to note items that some of us might find useful. This is not an endorsement of a web site nor is the information furnished said to be accurate but rather just the advice that the information is available to you for your review. Send what you find useful and we will publish it for others to try.

***Rich Rosner***

**Web Sites:**

http://www.buildingscience.com/documents/reports Various Reports from Building Science Corp.

http://www.lead-central.com/AssetManager/02427e68-6f15-4f3a-9749-d37abf613741/Documents/ABBReview/ABB-213-WPO_Harvest%20time.pdf – Intersting articles on the pluses of wireless design.

https://www.box.com/about-us/ want to send large files that you can't in a regular email, try this.

**Apps for Smart Phones:**

**None this month**

# History

The First Century of Air Conditioning

Prior to the late 1800s, rotating shaft power was limited mainly to trains and ships. There were wind and water mills for pumping water and grinding grains and some steam-driven water pumps and ventilation fans. However, few people lived in windy regions or near fast-moving streams. Some ventilation fan designs for mine shafts were powered by man, wind or water pressure.

Early Refrigeration

Refrigeration was provided by ice from frozen ponds and rivers in the more northern climates. This ice was harvested and stored in winter and then sold during warmer weather. Ice trade became a major industry in the United States. Frederic Tudor of Boston started shipping ice to warmer climates in 1815. He became known in 1864 as the “Ice King of the World,” and Boston ice was shipped to every major seaport in South America, the Far East, China, the Philippines, India and Australia.

As pollution around the cities increased, particularly in the form of sewage run-off, the market emerged for artificial ice. Use of steam boilers to drive the thermodynamic process cycle and produce ice was growing rapidly. Daniel L. Holden and J. Andrew Muhl built and operated mechanical refrigeration plants in 1865 and 1867 in San Antonio, Texas. Holden designed improvements to the Carré absorption units of Paris, which made San Antonio in 1867 and New Orleans in 1869 the southern regional leaders in making artificial ice.

The areas that could harvest “natural” ice tried to convince people that the “artificial” ice was somehow unnatural and to be avoided. But the areas that were producing manufactured ice were able to convince people that “natural” ice was contaminated. As costs came into line with the natural ice costs, producers of artificial ice were able to make significant inroads into the northern monopoly on ice.

Ice delivery was hard work. Imagine lugging around a 300 to 400 lb block of ice on your shoulder! By 1909, ice was produced in approximately 2,000 refrigeration plants.

Heating: From Stoves to Steam

Heating was provided by wood-burning fireplaces, which were later replaced with cast-iron radiant stoves that burned wood and/or coal. As cities became more populated, fire control became much more important. Fireproof construction was mandated by some city codes after several large and costly fires destroyed central districts.

Steam boilers became a standard for heating buildings. Central district steam plants that sold steam to buildings were developed. The steam boilers were large and expensive to operate and required supervision and maintenance. Coal handling bunkers and stokers also constituted a portion of the overhead.

As steam-driven engines developed as a reliable means of rotating shaft power and heat sources, they began to be used as the power source for refrigeration and ventilation systems. Of the steam engines used for this purpose in 1914, more than 90% exceeded 15 million calories/hour.

Facilities that had a large steam boiler used the steam to provide for ventilation with large, low rpm centrifugal fans because they could convert the steam to rotary shaft work. Smaller, steam-driven piston engines were developed for the purchasers of central district steam to convert steam to rotary shaft horsepower for all manner of equipment. Wood- and coal-burning steam driven vehicles were developed in the late 1890s. An experienced operator could achieve sustained vehicle movement or sustained rotation of the steam driven power take-off wheel from a cold start after about 1 ½ to 2 hours of hard work. The engines were quite powerful, but they weighed several tons. The Stanley Steamer automobile was fairly impressive in appearance, size and speed.

Early Ventilation

In other areas, ventilation was almost non-existent. Natural ventilation was controlled by the building orientation and placement of windows to catch the prevailing breezes. High ceilings and large, open central staircases with ventilated domes provided some assistance to gravity and Mother Nature. Ventilation did not truly take off until after the mid-1880s, when the use of steam and electricity had spread. An exception was a kerosene powered fan sold by the Whirl-

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## History (Cont'd. from Page 13)

wind Fan Company. The sales slogan for this unit boasted, "It will give you greater efficiency and enable you to do more and better work."

The electrical industry was growing rapidly. New patents and ideas for residential electrical appliances were being advertised as the best or most natural way of life. The world was rather unsophisticated and uneducated, but some of the biggest changes to affect humankind were taking place. The development of steam and electric-powered equipment surged ahead due to better understanding of electrical, mechanical and thermodynamic principles. Direct or Alternating Current?

The competition between direct current (DC) and alternating current (AC) was fierce. Thomas Edison was a prime proponent of DC power because of his involvement in the design and marketing of direct current lighting, power distribution and motors. He felt that AC power was only good for electrocutions. DC power did provide a flicker-free light and could vary the speed of a motor by varying the voltage. Its major drawback, however, was its inability to transmit via wire over long distances.

George Westinghouse, Jr. was the principal proponent of AC power. The flicker problem with incandescent lighting was resolved by using more cycles per second, ranging from 133½ to 25 cycles per second. The various voltages and cycles for AC power transmission were being tested, and the ones that worked best were retained.
By 1914, most frequencies above 60 cycles per second had been abandoned, but it took another 20 to 25 years for 60 cycles per second power to become the standard in the United States. Some other countries settled on 50 cycles per second.

Generally, the only electrical load of a central power generator plant was the street lighting at night in the central business district. Some single-phase, induction- type motors with brushes and commutators became popular, especially among small industries in suburban towns.

Use of small electric fans, curling irons, irons for laundry, washing machines and hair dryers increased the use of electric power, particularly during the idle daytime period when the generators were under-utilized. This trend has reversed in the present day. Modern utility companies now offer premiums to shift the daytime power consumption to evening hours because their generating capacity is underutilized at night.

Single-phase induction and synchronous motors for AC power were popular with the public. To properly start synchronous motors, however, required experience. The power utility companies liked the synchronous motors because they could be operated with a 1.0 or higher leading power factor to help correct the lagging power factor of the utility distribution system. Automatic starters were developed later. Because it was difficult to control the motor speed, almost all the applications used belt-drive connections to drive the machinery.

Advances in Motor Technology

The physicist and inventor Nikola Tesla began working on AC electrical designs as a college student in Croatia during the 1870s. At this time, it was thought impossible to construct a motor without a commutator. Tesla worked as a telephone engineer before quitting to develop in his mind a complete alternating current power system with generators, transformers and motors. He then took a job as an electrical engineer, but no one was interested in his seemingly incredible ideas. He developed working models of generators and motors while on a long-term assignment in Strasbourg, then part of Germany. Tesla moved to the United States in 1887, at age 31, where he filed for 25 patents covering virtually the entire field of alternating current generation, distribution and polyphase, brushless induction AC motors. Shortly after, he sold his patents to George Westinghouse, who implemented widespread use of alternating current.

Prior to 1891, there had been no demonstration of electrical transmission of any considerable amount of power over any considerable distance. A demonstration of the capability to transmit 100 hp of AC electricity a distance of 106 miles from Lauffen to Frankfurt in Germany was staged in 1891 for a technical exhibition. The wye-connected, three-phase generators were wound for 55 volts and driven by hydraulic turbines. A transformer increased the voltage to approximately 30,000 volts.

The three copper conductors were only 4 mm in diameter each. The incoming power was stepped-down to drive a 60-hp, four-pole polyphase induction motor at a speed of 1,200 rpm and supplied power for incandescent lights and some

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## History (Cont'd. from Page 14)

other small motors. The AC polyphase motor became more popular. The HVAC&R industry was able to capitalize on its popularity as the polyphase motor spread to small, commercial applications. Electric power costs in 1897 averaged about $0.10/kWh. The price dropped to approximately $0.03/ kWh in 1950 and is now approaching $0.10/kWh again. Fans and pumps continued to be direct drive with several available rpm configurations. By 1925, the electric motor was the preferred method of drive, providing 62%, vs. 32% for steam engine drives, while diesel and gas engines were used 4% and 2% of the time, respectively. As refrigeration systems that were powered by electrical motors became available and the electrical infrastructure developed, the use of natural and artificial ice for refrigerating effect was discontinued. This was a welcome development for merchants and consumers who had suffered the messiness of the ice refrigeration systems. The Ice Refrigeration Blue Book listed 100 different refrigeration equipment options in 1909, which increased to more than 260 in 1911.

The use of hermetic motors evolved in the early 1930s, driven by the competition between General Electric, Frigidaire, Servel and Westinghouse to capture the greatest portion of the emerging home refrigerator market and the expanding commercial refrigeration market. Westinghouse applied a variant of the hermetic refrigeration compressor to air conditioning by making a console-style room air conditioner in 1933.

Conclusion

Comfort air conditioning has expanded from the wealthy residential and upscale commercial establishments to become a virtual necessity in contemporary times. It is possible in many areas to go from an air-conditioned home to an air conditioned office in an air-conditioned car without experiencing more than a few moments of discomfort from the ambient outdoor temperature and humidity. And modern refrigerators require no one to carry hundreds of pounds of ice up rickety ladders propped precariously against the side of a building.

***Andrew B. Dubel, PE***
***History Chairman***

***Credit:***
***Bruce L. Flaniken, PE***
***Article originally from ASHRAE Journal, January 1999***

## Grassroots Government Activities Committee (GGAC)

As most of you know ASHRAE is no longer a US based society it has moved itself to a global society. The main purposes of the GGAC is to serve as a communicator between the local ASHRAE chapters and national, serve as a communicator between the local ASHRAE chapters and other trade organizations, and to update local government officials on ASHRAE standards and technical issues.

So for this ASHRAE season we are having three joint engineering meetings. In November we had a great joint meeting with the Long Island Chapter of SMACNA. In February we are having a joint meeting with The International Facility Management Association Long Island Chapter (IFMA-LI) and the Long Island Chapter of USGBC. Our final joint meeting will be in March with Long Island Geothermal Energy Organization (LI-GEO). And we are looking to see if other organizations would like to join us for joint meetings.

Our chapter will also be sponsoring activities for the National Engineer's Week (February 22-28, 2015) with the EJCLI. More details will follow in next month's Sounder.

As you know December 31st, 2014 brought about the adoption of the new building code in New York City. Please see the NYC DOB website at: http://www.nyc.gov/html/dob/html/codes_and_reference_materials/reference.shtml for further information.

***Charlie J. Lesniak, P.E.***
***Grassroots Government Activities Chair***

## NY Islanders Hockey Game - February 19, 2015 at 7pm (Nassau Coliseum)

# Join us for an upcoming Islanders Game!!

New York Islanders **vs.** Nashville Predators

**Thursday, February 19th, 2015**
**7:00 pm**

| Location | Fee |
|---|---|
| Nassau Colisuem<br>1255 Hempstead Tpke.<br>Uniondale, NY 11553 | $50.00 per person<br>*($100.00 ticket face value)* |

**Tickets available up to January 21st, 2015**
**To reserve a ticket or for more information please contact:**

**Andy Manos at andym22@optonline.net**

# December Holiday Party Pictures



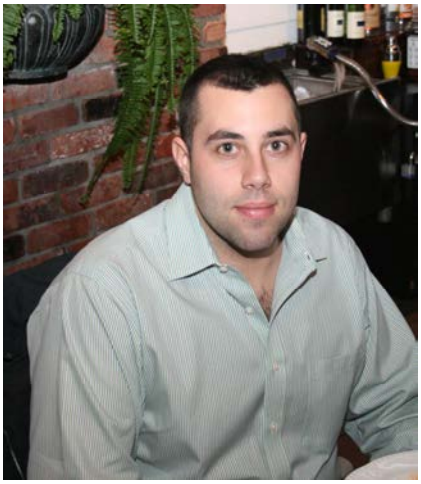







ASHRAE™
Long Island
Chapter

# December Holiday Party Pictures



# ASHRAE 2015 Winter Conference in Chicago, IL


You attended an ASHRAE Winter Conference in 2014 or 2013 but you've not registered to join us in 2015. ASHRAE is excited to return to Chicago for the 2015 Winter Conference, its historically best-attended event. Attendees can discuss the latest topics in the building industry; participate in technical tours; attend ASHRAE Learning Institute courses; earn professional credits; and obtain ASHRAE certifications. Chicago also serves as the site of the AHR Expo, co-sponsored by ASHRAE and held in conjunction with the Winter Conference.

## Why You Should Join ASHRAE in Chicago…

**Gain personal and career excellence** through peer contact, exchange of technical information and continuing education. Share ideas with members from around the world.

Visit the world's largest HVAC&R marketplace. The AHR Expo brings the entire industry together under one roof to see the latest products and technology, **learn about innovations and trends that are shaping the future**, and build new relationships. www.ahrexpo.com.

With the Conference being held in the Windy City, the Technical Program itself is going big with a **focus on big projects, the big picture and big impacts.** Eight tracks are featured. The complete Technical Program is available at www.ashrae.org/chicago.

# ASHRAE 2015 Winter Conference in Chicago, IL

We have 20 high-quality, authoritative, Professional Development Seminars and Short Courses presented by the ASHRAE Learning Institute. There is a new course on Standard 202, *Commissioning Process for Buildings and Systems*, in addition to updates to Standard 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, and 62.1, *Ventilation for Acceptable Indoor Air Quality*. Training topics include commissioning, energy management, Standard 55, *Thermal Environmental Conditions for Human Occupancy*, energy efficient data centers, healthcare facilities, building energy audits, the coming smart grid and ground source heat pumps.
Register at **www.ashrae.org/chicagocourses**.

Culture abounds through social events and general tours of historic Chicago venues. Kick off the Conference by catching up with friends and meeting new acquaintances at the **Welcome Party** held at the Chicago Cultural Center.

See the technology you help create first-hand via a **Technical Tour**. Tours include a brewery, Walgreens net zero store and McCormick Place. Complete information can be found online.

**Featured tracks** for the technical program include Industrial Facilities, Mission Critical Facilities, Life Safety and Hospital Design.

Gain valued credentials held by top engineers via ASHRAE's six Certification programs. An exam session for all six ASHRAE certifications takes place Wednesday, Jan. 28. ASHRAE's six certification programs are as follows:

- Building Energy Assessment Professional (BEAP)
- Building Energy Modeling Professional (BEMP)
- Commissioning Process Management Professional (CPMP)
- High-Performance Building Design Professional (HBDP)
- Healthcare Facility Design Professional (HFDP)
- Operations & Performance Management Professional (OPMP)

Hear Keynote Speaker Aron Ralston share the dramatic story of being forced to cut off his hand after being trapped while hiking. Author, adventurer and subject of the film *127 Hours*, which was nominated for six Oscars.

Advanced registration, offering the lowest Conference rates, ends Nov. 3.

**Register early at www.ashrae.org/chicago.**

We look forward to seeing you in Chicago.
If you have any questions, please contact us at **meetings@ashrae.org**.

# ASHRAE 2015 Winter Conference in Chicago, IL

## REGION I WINTER MEETING DINNER

**Come Join us at Maggiano's Downtown Chicago on January 25, 2015 at 6:30 pm.**

Address: 516 North Clark Street Chicago, IL 60654
Contact: P: 312-644-4284 F: 312-644-1027
Check out www.maggianos.com for Maggiano's Downtown Chicago-Virtual Tour


From Palmer House Hilton, the restaurant is

- Block and 1/2 away
- 20 minutes walk
- 4 minute cab ride

## Preselected Family Style Dining

**First Course**

***Appetizers***
Mozzarella Marinara
Calamari Fritte

***Salads***
Caesar
Chopped Apple & Walnut

**Second Course**

***Pastas***
Baked Rigatoni & Meatball with Italian Cheese
Gnocchi & Italian Sausage

***Entrees***
Chicken Saltimbocca
Balsamic Glazed Salmon

***Desserts***
New York Style Cheesecake
Profiteroles, vanilla bean ice cream hot fudge

**CASH BAR - Each person is responsible for the cost.**
**Dinner price is $52.00 per person.**
**Please bring cash to pay for dinner and drink(s).**

**RSVP by emailing Stacie Suh at Stacie@stebbinsduffy.com**

**Any questions, please email Stacie Suh at Stacie@Stebbinsduffy.com or call at 781-258-1002**

## Save-the-Date: Free ASHRAE Webcast - April 23, 2015

**SAVE THE DATE**

**April 23, 2015**

**1:00pm - 4:00 pm EDT**

# FREE ASHRAE WEBCAST

## *New Tomorrows for Today's Buildings: Existing Building Commissioning*

This FREE webcast will feature industry experts who will define the benefits of existing building commissioning for the environment, occupants, operations staff, and overall ownership costs. Viewers will be able to recognize the varied scopes of commissioning, when to apply comprehensive versus focused commissioning, and best practices in existing building commissioning specifications & contracting.

Visit www.ashrae.org/Webcast for additional information about the program, sponsorships, continuing education credits, speakers, and registration.

## $$$ SAVE MONEY $$$

ASHRAE-LI is now offering **Ticket Books** for our Monthly Meeting/Dinner presentations. **$400 for a book of Eleven** (that's right….eleven, one better than ten) tickets for the price of ten member admissions. Tickets are valid until December of 2015 and may be used by members and non-members. For those of you who attend all or most of our meetings and for organizations who normally send large groups to the meetings, this is a great way to save a few dollars and speed up the entry process. For more information and/or to purchase ticket books, **please contact Don Kane at finsec@ashraeli.org or call 631-574-4870**.

ASHRAE Long Island Chapter

# CLASSIFIEDS

**ELECTRICAL TRAINING CENTER Inc.**
**65 Elm Street, Copiague, NY 11726**
**Tel: (631) 226-8021 Fax: (631) 226-8326**
**www.electricaltrainingcenter.edu**

## Help Wanted - HVAC/R Instructor

**Job Description:**

Electrical Training Centers HVAC/R training division is hiring HVAC/R instructors.

Full and part time available to provide instruction with an approved training curriculum and materials in accordance with the state of New York Education department standards.

Enjoy and appreciate teaching in our newly completed state of the art laboratory and classrooms to educate and develop the HVAC/R industries finest & future technicians and installers of Heating, Ventilation and Air Conditioning.

**Responsibilities**:

Motivate, Educate, Develop and prepare present and future technicians in all aspects of the educational process.

Maintain expertise in subject matters taught.

Provide regular, precise and timely feedback to students and school administration concerning academic progress as well as behavior and attendance.

**Job Requirements**:

Industry certified HVAC\R technician with experience in residential and commercial applications.

EPA Universal Certification and/or related licenses/certifications preferred.

Prior teaching experience a plus.

Ability to work with other instructors and independently while utilizing excellent communication and emphasis on organizational skills.

Gas and oil burners, controls and wiring a definite plus!

**Company Overview**:

The Electrical Training Center Inc. was founded in 1998 to meet the ever-increasing demand in today's market for qualified electrical helpers. In 1999, the school was licensed by the New York State Education Department and began their first class in electrical training. In 2003, the school changed ownership and began to expand the curriculums and programs offered at the school. In 2010, the school was granted accreditation from ACCET. The school is presently working towards further expanding the facilities and curriculum. Please visit our Website at: **www.electricaltrainingcenter.edu**

Send resume to: **robert@electricaltrainingcenter.edu** or Fax: (631) 226-8326

# CLASSIFIEDS

**DAIKIN APPLIED - SOLUTIONS PLAZA MANAGER**

Daikin Applied manufactures technologically advanced commercial HVAC systems that customers from around the world can trust to advance their needs for performance, reliability and energy efficiency. The people at Daikin Applied use their expertise to creatively move HVAC technologies forward. Daikin Applied products and services are sold through a global network of dedicated sales, service and parts offices.

**Position Summary**

Provide the primary customer support for the Solutions Plaza. This includes leading customer events and meetings, providing technical overviews and benefit presentations of all Daikin Applied products, solutions and Aftermarket services. Also, this person will lead programs and program development conducted under the Daikin University education. The attendees of these classes will be consulting engineers, architects and contractors seeking industry instruction and continuing education credits. Key responsibilities of the role include:

- Host all customers that visit the Solutions Plaza. As the host, you will develop and present customized technical and commercial presentations to our customers, based on specific needs and vertical markets.
- Act as the primary instructor for the education classes conducted in the Solutions Plaza. As the primary instructor you will research and develop training materials to be used in the Daikin University program, identify instructors who can share the teaching role, and maintain the Daikin certification program.
- Demonstrate and describe all Daikin products, solutions and Aftermarket service that are included in the Solutions Plaza. This includes having a thorough understanding of vertical market applications and being able to describe the benefits of Daikin products and solutions, for those applications.
- Create and manage Solutions Plaza budget, including capital expenditures, operating and marketing expenses.
- Perform as the Solutions Plaza Facility Manager. This includes: Directing the development and activities for the Solutions Plaza Coordinator; Providing input to the marketing teams for suggested improvements to the Solutions Plaza; Managing existing equipment, modifications and upgrades to ensure the Solutions Plaza features our most innovative equipment.; Perform obligations related to tenancy (lease, utilities, space maintenance)

**Qualifications**

- Bachelor's Degree in Engineering or related disciple
- 6+ years or professional work experience
- Proven sales track record or extensive customer marketing event experience
- Outstanding relationship management, interpersonal, and problem-solving skills
- Demonstrated leadership capabilities
- Demonstrated proficiency in the MS Office Suite (Outlook, PowerPoint and Excel)

**Preferred Qualifications**

- Graduate degree in engineering , finance, business
- Prior experience creating sales proposals/marketing presentations
- Prior experience managing people (this role will manage a Coordinator)
- Prior experience managing budgets
- Competitor experience in commercial HVAC industry experience
- Demonstrated sales success – energized by meeting or exceeding sales goals
- Demonstrated example of taking initiative with a solid work ethic
- Exceptional communication skills, well developed listening skills, and ability to interpret business and/or client needs

**Interested applicants can view and apply for this role on our website by going to www.daikinapplied.com/employment.php and using job ID 2300.**

*It is the policy of Daikin Applied to provide equal employment opportunity (EEO) to all persons regardless of age, color, national origin, citizenship status, physical or mental disability, race, religion, creed, gender, sex, sexual orientation, gender identity and/or expression, genetic information, marital status, status with regard to public assistance, veteran status, or any other characteristic protected by federal, state or local law. In addition, Daikin Applied will provide reasonable accommodations for qualified individuals with disabilities.*

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**AN AD OR BUSINESS CARD LISTING IS A GREAT WAY TO GET YOUR COMPANY'S NAME IN FRONT OF THE HUNDREDS OF LI CHAPTER MEMEBERS, AND TO HELP SUPPORT THE CHAPTER'S ACTIVITIES.**

If you would like to place an advertisement in the Long Island Sounder, please contact our Chapter Financial Secretary, Don Kane, PE @ 631-574-4870 or by email at finsec@ashraeli.org for further details. Thank you.

**Rates (includes all issues September-June):**

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| Business Card | $200 | Half Page | $500 |
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## ADVERTISEMENTS

# ADVERTISEMENTS



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