



THE LONG ISLAND SOUNDER



ASHRAE Long Island Chapter, Region 1...Founded in 1957

www.ashraeli.org

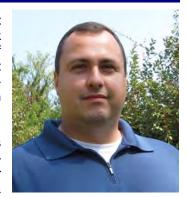
American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

Inside this issue: **President's Message Meeting Information** 1 LI Chapter Officers 2 LI Past Presidents 3 PAOE 3 **Meeting Schedule** 4 **BOG Minutes** 5 **October Program** 6 **Research Promotion** 7 8 CTTC Membership 9 **Student Activities** 9 History 10 YEA 11 **Sept. Meeting Photos** 12 **ASHRAE Conferences** 2013-2014 13 **Fall 2013 Online Courses** 14-16 **ASHRAE Polo Shirts** 17 18-20 **Advertisements**

President's Message

Thank you for starting off this year with a great turn out and interest in our chapter. Thank you again to Frank Bergamini and his presentation on "Characteristics of Throw – Overhead Air Distribution Fundamentals". It was very informative and displayed the many considerations needed when designing a space with comfort in mind.

This month's meeting will again include our first for this season "Back to Basics" Session hosted by Evans Lizardos. This year we are concentrating on air side. Our first session is on "How to Select & Specify Heating & Cooling Coils. Evans will talk about Coil selection soft-



ware and what it is based on and cautions with its use. He will go over Formulas, determining coil load, psychometric charts, Flat, Star and Wave fin type coils together with spacing, quantity of rows and pressure drop, effects of velocity across the coil faces, fouling factors, schedules and finally coil selection.

Following we have Joel Southwell speaking to us on "Optimizing Efficiency of Multiple Hydronic Boiler Systems." With ASHRAE's focus on sustainability and our never ending hopes of a more energy efficient society. This topic promises to teach us a lot. Be sure to read this month's CTTC article about this topic. Don Kane makes some great points to consider pertaining to this month's lecture.

CHAPTER MONTHLY MEETING

DATE:	Tuesday, October 8, 2013
TIME:	6:00 PM - Cocktails/Dinner 6:30 PM - Back to Basics #1 6:45 PM - Dinner Presentation 8:45 PM - Conclusion
LOCATION:	Westbury Manor South Side of Jericho Tpke. 25 Westbury, NY 11590
FEES: Members - Guest - Student -	\$40.00 \$45.00 \$15.00

Reservations requested, but not required.

In addition to our traditional meeting, the Chapter on behalf of the Student Branch will be hosting a presentation at Stony Brook University. This presentation will be on ASHRAE 90.1 Controlling Single Zone VAV Systems. It will be held on Wednesday 10/9/2013 at 1:00 PM at the Old Engineering Building in Lecture Hall 145 and is open to any of our members and non-members to attend.

Please check out our website www.ashraeli.org and take a look at the latest programs that Rich Rosner, 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.

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 October meeting and thank you for your continued support of the Long Island Chapter of ASHRAE.

Andrew Manos, LEED AP BD+C President - Long Island Chapter

Long Island Chapter Officers & Committees

ASHRAE 2013/2014 OFFICERS

POSITION	NAME	PHONE	FAX	EMAIL	
President	Andrew Manos, LEED AP	631.632.2791	631.632.1473	president@ashraeli.org	
President-Elect	Richard Rosner, P.E.	631.737.9170	631.737.9171	president_elect@ashraeli.org	
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Treasurer	Don Kane, P.E.	631.737.9170	631.737.9171	treasurer@ashraeli.org	
Secretary	Andrew B. Dubel, P.E.	212.967.7651	212.967.7654	secretary@ashraeli.org	
Board of Governors	Richard Halley	718.269.3809	718.269.3725	bog1@ashraeli.org	
Board of Governors	Lee Feigenbaum, LEED AP BD+C	212.243.2555		bog2@ashraeli.org	
Board of Governors	Brian Simkins, LEED AP	203.261.8100	203.261.1981	bog3@ashraeli.org	

ASHRAE 2013/2014 COMMITTEES

COMMITTEE	NAME	PHONE	FAX	EMAIL
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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
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Young Engineers in Training	Lee Feigenbaum	212.243.2555		yea@ashraeli.org
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PR & Engineering Joint Council of LI	Andrew Manos, LEED AP	631.632.2791	631.632.1473	pr@ashraeli.org
Golf Outing	Peter Gerazounis, P.E., LEED AP Steven Friedman, P.E., HFDP, LEED AP	212.643.9055 212.354.5656	212.643.0503 212.354.5668	golf@ashraeli.org

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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				



PAOE POINTS FOR 2013/2014								
Chapter Members	Membership Promotion	Student Activities	Research Promotion	History	Chapter Operations	сттс	GGAC	Chapter PAOE Totals
296	75	250	100	175	570	200	50	1,420

Chapter Monthly Meeting - Program for 2013/2014

onaptor monthly moothing in rogitaling			
September 10, 2013 * At Westbury Manor	February 2014		
Dinner Presentation – Characteristics of Throw (Overhead Air Distribution Fundamentals) Presenter: ADE - Frank Bergamini **1 PDH**	NATIONAL ENGINEERS WEEK Feb 16 through Feb 22		
Membership Promotion Night			
October 8, 2013 * At Westbury Manor	March 11, 2014 * At Westbury Manor		
Dinner Presentation—Optimizing Efficiency of Multiple Hydronic Boiler Systems Presenter: Joel Southwell **1 PDH**	Dinner Presentation—GeoThermal Systems – Design and Installation Considerations Presenter: Ray Schmitt and Panel **1 PDH**		
Resource Promotion Night	Joint meeting with LI-Geo YEA Night		
Back to Basic Session I - Evans Lizardos **1 PDH** "How to Select & Specify Heating & Cooling Coils"	Back to Basic Session III – Evans Lizardos **1 PDH** "Design & Theory of dedicated Outside Air Systems for Humidity Control"		
November 12, 2013 * At Westbury Manor	April 8, 2014 (5 PM)		
Dinner Presentation TBA Presenter: TBA **1 PDH** Joint meeting with SMACNA	ANNUAL FIELD TRIP Long Beach Ice Skating Rink – See the refrigeration system and hear about the storm damage and recovery. **1 PDH**		
Student Activities Night & YEA Night as well as Membership Promotion and Upgrade Night	Dinner to follow at a local Restaurant with a "Sandy" story Joint meeting with RSES		
December 10, 2013 * At Westbury Manor	May 5 th , 2014 * Cherry Valley Club, Garden City, NY		
HOLIDAY PARTY Free Buffet Dinner for Members	ANNUAL GOLF OUTING		
January 14, 2014 * At Westbury Manor	May 13 th , 2014 * At Westbury Manor		
Dinner Presentation- Automatic Flow Balancing Presenter: John Knowles **1 PDH**	Dinner Presentation—Introduction to Ammonia Refrigeration Systems Presenter: Douglas T. Reindl, Ph.D., P.E. **1 PDH**		
Back to Basic Session II - Evans Lizardos **1 PDH** "Design of Variable Air Volume Systems"	ASHRAE DISTINGUISHED LECTURER		
	Student Activities Night Refrigeration Night		
January 2014	June 10, 2014 * At Westbury Manor		
ASHRAE Winter Meeting Jan 18-22	Free Buffet Dinner for Members		
New York Hilton 1335 Avenue of the Americas New York, NY	PAST PRESIDENTS NIGHT & OFFICER INSTALLATION STUDENT SCHOLARSHIPS TO BE AWARDED ASHRAE History Quiz and prize Give-A-Ways		
February 11, 2014 * At Westbury Manor	August 2014		
Dinner Presentation—TBA Presenter: TBA **1 PDH**	Chapter Regional Conference (CRC) Region I Bi-State Chapter Hosting August 14-16, 2014		
Joint Meeting with USGBC Resource Promotion Night Membership Promotion Night			

Board of Governors Meeting Minutes

Attendees:

Andrew Manos (AM); Rich Rosner (RR); Charles Lesniak (CL); Don Kane (DK); Andrew Dubel (AD); Richard Halley (RH); Lee Feigenbaum (LF); Brian Simkins (BS); Ken Muller (KM)

The meeting was called to order at 5:05pm by Andrew Manos - President, at Westbury Manor.

President: Presidents PAOE points are currently at 0.

President Elect/Programs: RR noted all meetings were booked except January. Joint meetings in November with SMACNA an joint meeting in February with USGBC still need speakers. USGBC may want to hold a panel discussion. A \$15 fee for non- member PDH's was suggested and tabled. Selling books of tickets for individual dinner for purchase by engineering companies at the member rate was suggested and discussed. Selling books of tickets for students member sponsored by engineering companies was suggested and discussed. BOG will pursue both ticket books. Will use ASHRAE NYC ticket books as examples.

Chapter Technology Transfer: CTT PAOE points are current at 0. DK send draft of MBO to RVC. RR has reached out to long beach ice rink to confirm field trip.

Treasury: As of august 30th, current account balance is 13,735.07. A chapter assessment of 2154.75 is due. (1) CRC travel reimbursement form needs to be submitted. All CRC attendees must submit mileage to Don. A chapter has a POX box which will be used for all official mail. The address is ASHRAE LI, P.O. Box 79, Commack, NY 11725. Don will check the PO box once a week. The chapter will complete the short tax form in-house. DK to send chapter reimbursement form to region for CRC attendance (committee chairs).

Grassroots Government Activates: GGA PAOE points are current at 0. CL to contact RVC and submit MBO. CL to establish list of local government officials. RR to email CL notes from CRC.

Historian: Historian PAOE points are currently 150.

Research Promotion: RP PAOE points are currently at 0. RR will be attending RP central training. Current RP is \$750. All BOG should submit full circle donation. May be done online.

Membership Promotion: Have already exceeded new member goal. Goal was 5 new members. We have 8 new members. 6 are YEA. 8 members are delinquent. Letters have been sent to these members. Nov is Membership night.

Student Activities: SA PAOE points are currently at 0. Rich to submit MBO to RVC.

YEA: LF Reported that A YEA event has been scheduled for Brooklyn brewery on October 12th.

Webmaster: The website has been updated. BOG email address have been created and distributed. FTP site log in was distributed.

Golf: The golf outing has been confirmed for May 5th.

New Business: The clam bake will not be held this year. ASHRAE LI shirts are on sale now. The cost is \$30.

Time/Place of next BOG Meeting – October 8th, 2013. Westbury Manor

The meeting was adjourned at 6:10 PM.

Respectfully submitted

Andrew B. Dubel, P.E. Chapter Secretary

October Program



Presentation #1 – Back to Basics Program

"How to Select & Specify Heating
and cooling Coils"

By Evans J. Lizardos, P.E., LEED AP
ASHRAE DISTINGUISHED LECTURER

Presentation #2
"Optimizing Efficiency of Multiple
Hydronic Boiler Systems"
By Joel Southwell



Attendees Will Earn 2 PDH's!

DATE:	TUESDAY, OCTOBER 8, 2013	Will Earn					
Time:	6:00 PM - Cocktails and Hors D'ouevres 6:45 PM - Dinner Presentations 8:45 PM - Conclusion	Fee:	\$ 40.00 Mem. \$ 45.00 Guest \$ 15.00 Student				
Location:	WESTBURY MANOR (516) 333-7117 Jericho Tpke (South Side), 3/10 of mile east from Glen Cove Rd., Nassau County, NY. Directions are posted at @ www.ashraeli.org.						
Presentation:	Presentation #1 – Evans Lizardos, PE, LEED AP, will be presenting Part I – How to Select & Specify Heating & Cooling Coils of the 'Back to Basics" series. Presentation #2 - This month's presentation will discuss the different types of hydronic boiler systems, the methods of reducing energy consumption and the various control systems available and performance results. Participants will receive 1 PDH credit. All attendees will receive 2 PDH's.						
About our Speaker(s):	Evans J. Lizardos, P.E., LEED AP is a founder and President of Lizardos Engineering Associates, P.C. A Mechanical Engineering graduate of Polytechnic Institute, Evans credentials include: Professional Engineer (licensed in 12 states), LEED Accredited Professional, Certified Energy Manager, Demand Side Manager, Indoor Air Quality Professional and Cogeneration Professional. An ASHRAE Fellow, Evans has spoken nationally in his role as Distinguished Lecturer on topics such as Sustainable Design for Green Buildings, Water and Air-Side Design, Efficient Central Plant Design, Piping, and Combating Mold in Building Design. Joel Southwell is the Business Manager for Synex Controls, a central New York based company focused on energy efficiency gains through customized control philosophies. Joel has over 20 years of experience with HVAC and Process control applications. His professional career has included responsibilities associated with Engineering, Sales, Marketing and Product Management. Prior to the establishment of Synex Controls, Joel was the Commercial Heating Product Manager for Fulton Heating Solutions. His work with condensing boilers and hydronic systems became the stepping stone for the development of updated control solutions to support these ultra-high efficiency boiler plant designs. Joel is currently active with a number of energy efficiency associations, including the Syracuse Center of Excellence and the ASHRAE Chapter of Central New York.						

Research Promotion

As Santa says, "If you have been good you will be rewarded!" Many of you have given generously to ASHRAE to help with the important programs sponsored every year. This year I have a little something for you to say thanks and if you are amongst the most generous perhaps a little something even nicer to be handed out at the October meeting. If you miss the meeting you may never know what I had for you. So there is the incentive to make the meeting as well as seeing all of your friends, doing some networking as well as enjoying the two lectures we will have and receiving the 2 PDH credits for attending.



I am still learning a lot as RP chair and have now attended my second intensive RP training during September in Chicago where the national leaders came to show us how

it's done. Although I didn't get to ride next to a celebrity like heavyweight champ Smoking Bert Cooper as I did during last year's flight it was still an adventure and a heck of a learning experience. The new programs include a new fund raising program for scholarships which is now falling under RP. Chapters are asked to donate \$250 minimum to this fund with the money going towards our RP goal but being earmarked specifically for scholarships. If you recall we gave \$250 last year towards the Lynn Bellenger perpetual giving fund. Monies were received in excess of what they were looking for and with additional funds to be collected this year it is hoped to be able to fund an additional scholarship every year in her name. I am going to ask the board at the Oct BOG meeting to approve funding the Bellenger fund again this year. The society is going to match the funds making every donation even more valuable. If you want to donate yourself feel free to give me a check at any meeting or do so online at https://xp20.ashrae.org/secure/LynnBellengerScholarship/index.php.

I met with Chris Phelan our RP RVC in Chicago and he gave me the goal for this year. Our Goal this year is \$14,900 up from last years \$14,681 which again thanks to all of you we did exceed. Our High Five challenge goal is \$22,514 this year and I am shooting to bust that goal! I didn't make the high five last year but I have started early this year just hope we don't have another Sandy to dampen my plans.

I will be soliciting donations for the 2014 ASHRAE LI Product Directory starting this month. This is still our biggest fund raiser. If you haven't picked up a copy of the current directory they are a great tool and can be picked up at the sign in table at any meeting, they are free to members. If you haven't advertised before please consider it as it is good for your company and 100% of the money goes to ASHRAE Research where 100% of the money is spent on research. This is possibly the best donation you will ever make.

CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:

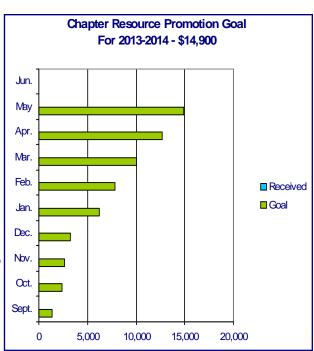
You can mail your checks, made out to ASHRAE Research Promotion, to:

Richard L. Rosner, P.E.
ASHRAE Research Promotion Chair
c/o Nassau Suffolk Engineering & Architecture, PLLC
801 Motor Pkway, Suite 103
Hauppauge, NY 11788

- 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 <u>ASHRAE LONG ISLAND</u> web site just click on the donate button.
- 4) You can contribute directly on-line, www.ashrae.org
- * Please make sure your accredit your contribution to the LONG ISLAND CHAPTER 006 *

Thank you again for all your support!

Richard L. Rosner, P.E. Research Promotion Chair



CTTC - OPTIMIZING BOILER SYSTEM EFFICIENCY - A MEASURE OF SUCCESS

We have, in prior months, discussed in these pages the concepts of condensing boilers (March 2013), hybrid-boiler systems (October 2011), as well as sensors and controls for HVAC systems, in general (December 2012). The technical aspects of how these systems operate and the advantages offered are fairly straightforward...selection of what is considered the best choice for a particular application generally depending upon location (climate cycles), predominant type of heating (radiant vs. fin-tube, for example) total building load (as well as variation in load with time and diversity of load within a building) and type of fuel or fuels readily available. It is often stated that the goal is to optimize the efficiency of the system. A noteworthy goal, to be sure, but one that is as elusive and conflicting at times as the proverbial description of an elephant by six blind men. How do we measure this "efficiency"? Most efficient use of fuel (Btu's out vs. Btu's in), operational cost (fuel cost, as well as the cost of personnel to operate and maintain the system), system life cycle cost (including intermediate replacement of equipment whose end of life is not co-terminus with other system components)? Yes, depending upon ones viewpoint, this elephantine system may earn a



completely different score when its "efficiency" is calculated by different parties. Even something as simple as "Btu's out vs. Btu's in" is complicated by the varying energy content (therms) in a given volume of, for example, natural gas, depending upon season and geographical location and source of fuel gas. While it is relatively simple to measure the heat content of the boiler output, real-time date would be needed for the fuel composition. On the other hand, it seems foolish to worry about 6 decimal point accuracy in measuring fuel heat content, if the other sensors for the system controls only provide +/- 5 or 10% accuracy.

While the efficient use of fuel is important, both to comply with governmental energy codes (which will only get more stringent) and various voluntary codes for certification purposes, system life-cycle cost efficiency will be of importance to the owner of the building, who does not want to face a repetitive capital outlay and system disruption for replacement of major system components with widely differing lifetimes.

Operationally, whatever efficiencies the system is capable of are only achieved when all system components and controls are operating at 100%. With the plethora of technology (PLCs, VFDs, Mod-Con boilers) what is the result if something is NOT working as intended. Are there backup systems to provide continuity of operation? If so, this has to be figured into the mix as far as total life-cycle cost of providing the desired comfort level. This is not a negative for the use of technology, merely a cautionary note that, while many systems can operate at high levels of efficiency when nothing is malfunctioning, if the loss of a pump control or temperature sensor can cause the system to operate out of design limits, it is no longer a properly operating system. If that degree of control is needed to maintain the stated operational efficiency, than some type of redundancy is required (maybe not so much as the \$19 million toilet on the International Space Station...) to provide a reasonable comfort level while system repairs are being effected.

By now you have realized that this treatise is not so much about how to optimize boiler efficiency as it is about how to make sure that whatever system design is chosen and installed is delivering the promised level of performance and will do so with minimal disruption to the normal level of comfort in the structure involved. With the networking capability now available in the control segment of the industry, adding additional points to be monitored does not carry the burden of dedicated sensor systems which required additional wiring for each point of measurement. With a control network installed, the incremental cost to add additional monitored points and redundant sensors to that loop becomes insignificant compared to the cost of disruption of the system operation should a parameter monitored by a single device no longer be available to the control system.

So, perhaps, the answer to the question of what metric to use to facilitate the optimization of efficiency could very well be one based on the "availability" and "accuracy" of the system and its ability to operate within design limits.

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

Membership

What a great time to be in ASHRAE! I just finished renewing my membership at www.ASHRAE.org/membership in order to ensure that I can continue to enjoy the benefits of membership in this great organization! I'm not alone, as many others have committed to the continuing advancement of their careers, educations, and networks. Congratulations to (alphabetical order):

Michael Herman; Greg Kern; Andy Manos; Ted Schaper; Brian Simkins.

So why is renewal and uninterrupted membership so important? Did you know that there are four membership grades with different benefits, and that they are based on your time in ASHRAE?



Many people enter ASHRAE as students. While students may not hold office in ASHRAE, they can participate in technical committees that essentially shape the industry. In addition students can begin to network with HVAC professionals and build bridges that will serve them well when they are ready to enter the workforce. In terms of building a solid resume, I can't think of a better way to spend \$20.

After graduation, students can advance to Affiliate Members. For three years this level of membership allows them to keep their fees relatively low while they build their network and advance their careers. As an added benefit, in addition to the obvious benefits such as access to discounted ASHRAE publications, affiliates are eligible for various products and services to include Group Health Insurance Benefits that are only available to ASHRAE members.

Affiliate members naturally advance to Associate Members after 3 years. Now that you have experience you are ready to get involved and change the world...or at least the way it's heated and cooled. Associate Members can participate in the governance of their chapters and take advantage of leadership opportunities all over the globe. Dubai anyone?

After 12 years, you become a Member. At this point you're confident in your professional skills, comfortable in leader-ship positions, and well established in the industry. Even better, you are eligible to hold office and vote all the way up at Society level. As an ASHRAE Member, you really can change the world through ASHRAE's global reach.

Unfortunately, none if this is possible if you allow your membership to lapse. Even if you've been a member for 20 years, if you allow your membership to expire (90 days past due) you lose your seniority, and the clock goes back to zero when you come back. Don't let this happen to you! Don't lose what you've worked so hard for. Renew your membership and hold your esteemed place in the conversation. Check back next month where we will talk about how to advance your membership, and recognize some of the people who have taken the next step.

Do you have a testimonial about the benefits of ASHRAE that you'd like to share? If so, then please forward it to me at LFeigenbaum@PJMechanical.com

Lee Feigenbaum, LEED AP BD+C Membership Chairman

Student Activities

It's hard to believe that summer is over and the school year has started but we are definitely in full swing and the first semester well underway. At the Chapter level we have completed our MBO's for the year and have started the process of meeting the students and getting the word out about ASHRAE.

We have meetings scheduled with most of the Higher Education Campuses and look forward to increasing our rolls. The first student night is scheduled for our November meeting. If you know of students that would like to attend please invite them or send me their e-mail address and I would be happy to send them a personal invitation.

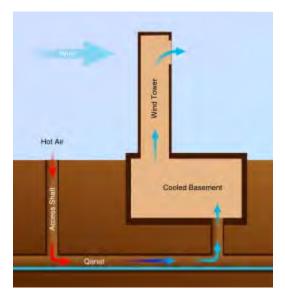
As always we are looking for ASHRAE handbooks in good condition that are no longer in use and could be given to our student members. If you have are in position of a hand book or two please bring them into the chapter meeting and we will find them a new home

We also encourage you to check out the ASHRAE student's zone at http://www.ashrae.org/students/. Information on society level design completions, scholarship and grant programs can all be found here.

History

As we design new buildings and systems, we often look for multiple uses for the systems we install. This is not a new goal of engineering. An interesting example of this is the Qanat from ancient Persia. Qanats had several functions, primarily the supply of irrigation and drinking water. However, there were additional applications as well.

Cooling:



Wind tower and ganat used for cooling.

Qanats used in conjunction with a wind tower can provide cooling as well as a water supply. A wind tower is a chimney-like structure positioned above the house; of its four openings, the one opposite the wind direction is opened to move air out of the house. Incoming air is pulled from a qanat below the house. The air flow across the vertical shaft opening creates a lower pressure (see Bernoulli effect) and draws cool air up from the qanat tunnel, mixing with it. The air from the qanat is drawn into the tunnel at some distance away and is cooled both by contact with the cool tunnel walls/water and by the transfer of latent heat of evaporation as water evaporates into the air stream. In dry desert climates this can result in a greater than 15°C reduction in the air temperature coming from the qanat; the mixed air still feels dry, so the basement is cool and only comfortably moist (not damp). Wind tower and qanat cooling have been used in desert climates for over 1000 years.

Ice storage:



Yakhchal in Yazd Province

By 400 BC <u>Persian</u> engineers had mastered the technique of storing ice in the middle of summer in the desert.

The ice could be brought in during the winters from nearby mountains. But in a more usual and sophisticated method they built a wall in the east—west direction near the <u>yakhchal</u> (ice pit). In winter, the qanat water would be channeled to the north side of the wall, whose shade made the water freeze more quickly, increasing the ice formed per winter day. Then the ice was stored in yakhchals — specially designed, naturally cooled refrigerators. A large underground space with thick insulated walls was connected to a ganat, and a system of windcatchers or

wind towers was used to draw cool subterranean air up from the qanat to maintain temperatures inside the space at low levels, even during hot summer days. As a result, the ice melted slowly and was available year-round.

Source

Qanat. (2013, September 13). In *Wikipedia, The Free Encyclopedia*. Retrieved 16:52, October 1, 2013, from http://en.wikipedia.org/w/index.php?title=Qanat&oldid=572769119

Thomas J. Fields, P.E., LEED AP History Chair

Young Engineers in ASHRAE (YEA)

HVAC&R is a serious business...that's why it's so important to have fun! Bring a friend and join us for a not-so-serious tour of the Brooklyn Brewery on October 12th. We'll meet at the door at noon, and proceed to take a tour of the facility at 1PM. After lots of questions about how they chill their wort and maintain their beer at constant temperatures during the fermentation process, all YEA's and their guests are welcome to stay and enjoy some of Brooklyn's finest. The first round is on us!

Mandatory disclaimer – Alcoholic beverages should be consumed responsibly. Bring a designated driver, carpool, or take the train. Visit http://brooklynbrewery.com for more info.

Lee Feigenbaum YEA Chairman



YEA Brooklyn Brewery Trip - Saturday, October 12, 2013 (12-3pm)

YEA Brooklyn Brewery Trip

WHO: ASHRAE Members under 35 years old (must be 21).

WHAT: Trip to Brooklyn Brewery

WHEN: Saturday, October 12th,

12-3 PM

WHERE: 79 North 11th Street, Williamsburg, Brooklyn 11249

HOW MUCH: Free!

ASHRAE will buy your first round.

Beer tokens are 5 for \$20.

For more information about Brooklyn Brewery visit their website at

www.brooklynbrewery.com.

SAFETY

Rule #1 - DON'T DO DUMB THINGS!

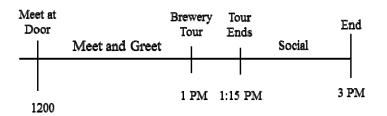
➤ DON'T DRINK AND DRIVE

> Wear your seat belt

➤When all else fails, see Rule #1



Timeline



September Chapter Meeting Photos





















ASHRAE Conferences 2013-2014

ASHRAE Conferences 2013-2014

Attend to See What's New, Learn New Skills, Earn PDHs, Network with Peers

ASHRAE IAQ 2013: Environmental Health in Low Energy Buildings

Oct. 15-18, 2013 | Vancouver, BC, Canada www.ashrae.org/IAQ2013

Comprehensive overview presented via papers.

Co-organizer:



ASHRAE 2014 Winter Conference

Jan. 18-22, 2014 | New York, NY Jan. 21-23, 2014 | AHR Expo www.ashrae.org/newyork

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First International Conference on Energy and Indoor Environment for Hot Climates

Feb. 24-26, 2014 | Doha, Qatar www.ashrae.org/hotclimates

Papers focused on arid and humid hot climates.

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High Performance Buildings Conference

April 7-8, 2014 | San Francisco, Calif. www.hpbmagazine.org/hpb2014
State-of-the-industry presentations



Efficient, High Performance Buildings for Developing Economies

April 24-25, 2014 | Manila, Philippines www.ashrae.org/Developing2014
First ASHRAE conference on this topic.

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ASHRAE 2014 Annual Conference

June 28-July 2, 2014 | Seattle, Wash. www.ashrae.org/seattle

2nd Annual Research Summit presented.

2014 ASHRAE/IBPSA-USA Building Simulation Conference

Sept. 10-12, 2014 | Atlanta, Ga. www.ashrae.org/Simulation2014 Single collaboration of Energy Modeling and SimBuild Conferences.

Organized by: ASHR





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www.ashrae.org/conferences



Fall 2013 Online Courses



Register Early & SAVE!

Register BEFORE August 31:

\$239 (ASHRAE Member: \$179)

Two-part courses: \$439 (ASHRAE Member: \$319)

Register AFTER August 31:

\$259 (ASHRAE Member: \$199)

Two-part courses: \$459 (ASHRAE Member: \$339)

Take 3 or more courses and save 15%.

2 Ways to Register

- 1. Internet: www.ashrae.org/onlinecourses
- Phone: call toll-free at I-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

NOTE: You may register up to 24 hours prior to an online course. Course times are in Eastern US Time Zone.

Earn Continuing Education Credits | Take 3 or More Courses & SAVE!

Courses are archived for a period of time after their initial presentation.

Commisioning

Commissioning for High-Performance Buildings

Wed, October 16, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: Walter Grondzik, P.E., Fellow/Life Member ASHRAE, LEED® AP

Environmental Quality

IAQ Best Practices for Design, Construction and Commissioning

(formerly Project Management for Improved IAQ)

Wed, November 13, 2013, 1:00 pm to 4:00 pm, EST

Fall 2013 Online Courses

Instructor: Hoy Bohanon, P.E., Member ASHRAE, BEAP, LEED® AP

Troubleshooting Humidity Control Problems[^]

Wed, September 11, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: Lew Harriman, Fellow ASHRAE

Energy Performance

Commercial Building Energy Audits Part 1 NEW!

(Registrants must attend both parts in order to receive credits) Mon, November 4, 2013, 1:00 pm to 4:00 pm, EST

Instructor: Jim Kelsey, P.E., ASHRAE Member, BEAP, LEED® AP

Commercial Building Energy Audits Part 2 NEW!

(Registrants must attend both parts in order to receive credits)

Wed, November 6, 2013, 1:00 pm to 4:00 pm, EST

Instructor: Jim Kelsey, P.E., ASHRAE Member, BEAP, LEED® AP

Energy Management Best Practices* (formerly Energy Management in New and Existing Buildings)

Wed, October 2, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: Richard Pearson, P.E., Fellow/Life Member ASHRAE

Energy Modeling Best Practices and Applications* Part 1

(Registrants must attend both parts in order to receive credits)

Mon, September 16, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: Erik Kolderup, P.E., Member ASHRAE, BEMP, LEED® AP and McHenry Wallace, P.E.,

Member ASHRAE, LEED® AP

Energy Modeling Best Practices and Applications* Part 2

(Registrants must attend both parts in order to receive credits)

Mon, September 23, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: Erik Kolderup, P.E., Member ASHRAE, BEMP, LEED® AP and McHenry Wallace, P.E.,

Member ASHRAE, LEED® AP

High-Performance Building Design: Applications & Future Trends*

Wed, October 9, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: Tom Lawerence, Ph.D., P.E., Member ASHRAE, LEED® AP

HVAC Applications

Air-to-Air Energy Recovery Applications: Best Practices*

Wed, October 30, 2013, 1:00 pm to 4:00 pm, EDT Instructor: Paul Pieper, P.Eng., Member ASHRAE

Fall 2013 Online Courses

Air-to-Air Energy Recovery Fundamentals*

Wed, October 23, 2013, 1:00 pm to 4:00 pm, EDT Instructor: Paul Pieper, P.Eng., Member ASHRAE

Energy Efficiency in Data Centers*

Mon, October 28, 2013, 1:00 pm to 4:00 pm, EDT Instructor: Don Beaty, P.E., Fellow ASHRAE

Standards & Guidelines

Complying with Standard 90.1-2010: HVAC/Mechanical*^

Mon, September 30, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: McHenry Wallace, P.E., Member ASHRAE, LEED® AP

Fundamental Requirements of Standard 62.1-2010[^]

Mon, October 21, 2013, 1:00 pm to 4:00 pm, EDT

Instructor: Hoy Bohanon, P.E., Member ASHRAE, BEAP, LEED® AP

Introduction to BACnet®

Mon, September 9, 2013, 1:00 pm to 4:00 pm, EDT Instructor: David Fisher, P.E., Member ASHRAE

Register Now

- * This course is applicable for the Energy Savings Practices Career Enhancement Curriculum
- ^ This course is applicable for the IAQ Practices Career Enhancement Curriculum



ASHRAE Long Island Chapter Polo Shirts for Sale

New ASHRAE Long Island Chapter Polo shirts are now available for purchase at our monthly chapter meetings:

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Colors: Blue or White
Pricing: \$30 per shirt





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