



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

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President's Message

Thank you for starting off this year with a great turn out and interest in our chapter. Thank you again to Richard Berger and his presentation on the International Building Code regarding the effects of Seismic, Wind, and Snow loads on HVAC&R equipment. It was very informative and downright frightening at the same time.

I would like to share with you Tom Watson's presidential theme. ASHRAE has been working for years on developing technical standards and design guides for sustainability. Well this year Mr. Watson has asked all of us to put this knowledge to work at a local level.



ASHRAE Members:

This year, I am asking the Society to focus on *Broadening ASHRAE's Horizons*. We have a strong heritage. Let us explore how we can build on that heritage and broaden the application of our technology to support our mission to serve humanity and promote a sustainable world.

To accomplish the goals in this year's theme, I am calling on our members and chapters to examine ways to get more involved in their local communities using a new Community Sustainability Project program designed to share the knowledge of our members to improve the world around them. The resources on this page are created for chapters to help them get involved in a project, such as the Energy 4 Kids project of the Hampton Roads Chapters of ASHRAE and the International Facility Managers Association (IFMA). The Chapters use funds raised from a barbeque and volunteer help for the engineering and installation of energy efficiency measures for the facilities of local charities. You can learn more about how our members are improving their local communities [here](#).

Incentives for chapters to host a Community Sustainability project are included in the Presidential Award of Excellence (PAOE). The [2012-13 PAOE program](#) offers 500 points for chapter sponsored community sustainability project/event held with a non-profit organization. In addition, 100 points are offered for chapter sponsored community sustainability project publicity (outside of normal chapter promotion and including print, audio, electronic media at local, state, provincial, national or industry level) promoting work of ASHRAE and/or the chapter. I encourage you to share your knowledge to help improve the environment in which we live, work and play by taking part in a Community Sustainability Project. I look forward to working with you in *Broadening ASHRAE's Horizons*. Best wishes,

CHAPTER MONTHLY MEETING

| | |
|------------------|---|
| DATE: | Tuesday, October 9, 2012 |
| TIME: | 6:00 PM - Cocktails/Dinner 6:30 PM - Back to Basics #1 6:45 PM - Dinner Presentations |
| LOCATION: | Westbury Manor South Side of Jericho Tpke. 25 Westbury, NY 11590 |
| FEES: | |
| Members - | \$40.00 |
| Guest - | \$45.00 |
| Student - | \$15.00 |

Reservations requested, but not required.

Call (516) 333-7117

Long Island Chapter Officers & Committees

ASHRAE 2012/2013 OFFICERS

| POSITION | NAME | PHONE | FAX | EMAIL |
|---------------------|------------------------------|--------------|--------------|--|
| President | Brian Simkins, LEED AP | 203.261.8100 | 203.261.1981 | bsimkins@accuspecinc.com |
| President-Elect | Andrew Manos, LEED AP | 631.632.2791 | 631.632.1473 | andym22@optonline.net |
| Vice President | Richard Rosner, P.E. | 631.737.9170 | 631.737.9171 | rrosner@csflc.com |
| Financial Secretary | Thomas Fields, P.E., LEED AP | 212.643.9055 | 212.643.0503 | thomas.fields@mgepc.net |
| Treasurer | Charles Lesniak, P.E. | 516.484.1020 | 516.484.0926 | charles.lesniak@leapc.com |
| Secretary | Don Kane, P.E. | 631.737.9170 | 631.737.9171 | dkane@csflc.com |
| Board of Governors | Andrew B. Dubel, P.E. | 212.967.7651 | 212.967.7654 | andrew.dubel@leapc.com |
| Board of Governors | Richard Halley | 718.269.3809 | 718.269.3725 | rchalley@trane.com |
| Board of Governors | Carolyn Arote | 516.568.6550 | 516.568.6575 | carote@adehvac.com |

ASHRAE 2012/2013 COMMITTEES

| COMMITTEE | NAME | PHONE | FAX | EMAIL |
|--------------------------------------|---|------------------------------|------------------------------|--|
| Programs & Special Events | Andrew Manos, LEED AP | 631.632.2791 | 631.632.1473 | andym22@optonline.net |
| Membership | Charles Lesniak, P.E. | 516.484.1020 | 516.484.0926 | charles.lesniak@leapc.com |
| Chapter Technology Transfer (CTTC) | Don Kane, P.E. | 631.737.9170 | 631.737.9171 | dkane@csflc.com |
| Newsletter Editor | Liset Cordero | 212.643.9055 | 212.643.0503 | liset.cordero@mgepc.net |
| Research Promotion | Richard Rosner, P.E. | 631.737.9170 | 631.737.9171 | rrosner@csflc.com |
| Historian | Thomas Fields, P.E., LEED AP | 212.643.9055 | 212.643.0503 | thomas.fields@mgepc.net |
| Student Activities | Richard Halley | 718.269.3809 | 718.269.3725 | rchalley@trane.com |
| Young Engineers in Training | Andrew B. Dubel, P.E. | 212.967.7651 | 212.967.7654 | andrew.dubel@leapc.com |
| Webmaster | Thomas Fields, P.E., LEED AP | 212.643.9055 | 212.643.0503 | thomas.fields@mgepc.net |
| Nominating | Michael Gerazounis, P.E., LEED AP | 212.643.9055 | 212.643.0503 | michael.gerazounis@mgepc.net |
| Reception & Attendance | Lee Feigenbaum | 516.558.2075 | | lfeigenbaum@emcor.net |
| PR & Engineering Joint Council of LI | Peter Gerazounis, P.E., LEED AP | 212.643.9055 | 212.643.0503 | peter.gerazounis@mgepc.net |
| 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 | peter.gerazounis@mgepc.net sfriedman@akfgroup.com |

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President Message (Cont'd. from Page 1)



Thomas E. Watson, P.E., Fellow ASHRAE, Life Member 2012-13 ASHRAE President

We have many great companies and employers in our chapter I would love to see if we could help our local community with a sustainable project, or engineering support, or flat out labor to give back to our community that has given so much to us.

Our next meeting will include our first Back to Basics Session with Evans Lizardos. This year we are concentrating on Fluids.

Our first session is on Fundamentals of Pumping System Design.

Evans would like us to use this as a guide for consultants and others to use the correct pumps both in size and type for the different types of applications and pumping technologies. Pumps ranging from 1 gpm to 5000 gpm will be discussed in open and closed pumping systems. Selecting and interpreting pumps and curves for performance will be shown.

I look forward to see you all this month and hearing from you any ideas on how we can bring Mr. Watson's theme to life on Long Island.

Brian Simkins, LEED AP
President - Long Island Chapter



Long Island Chapter - Past Presidents

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

PAOE POINTS FOR 2012/2013

| Chapter Members | Membership Promotion | Student Activities | Research Promotion | History | Chapter Operations | CTTC | Chapter PAOE Totals |
|-----------------|----------------------|--------------------|--------------------|---------|--------------------|------|---------------------|
| 301 | 300 | 0 | 0 | 100 | 50 | 375 | 825 |

Chapter Monthly Meeting - Program for 2012/2013

| | |
|--|--|
| <p>September 11, 2012 * At Westbury Manor </p> <p>Dinner Presentation – International Building Code Requirements for Design & Installation of HVAC&R Components from the Effects of Wind, Seismic, Snow & Flood Loads!</p> <p>Presenter: Richard Berger</p> <p style="text-align: right;">**1 PDH**</p> | <p>February 2013 NATIONAL ENGINEERS WEEK Feb 17 through Feb 23</p> |
| <p>October 9, 2012 * At Westbury Manor</p> <p>Dinner Presentation—ASHRAE 52.2, Testing Air Filters on Particle Size versus Efficiency</p> <p>Presenter: Danja McMillan</p> <p style="text-align: right;">**1 PDH**</p> <p>Resource Promotion Night</p> <p><i>Back to Basic Session I - Design of Pumping Systems</i></p> <p style="text-align: right;">**1 PDH**</p> | <p>March 12, 2013 * At Westbury Manor</p> <p>Dinner Presentation—Condensing Boilers Designs and Applications</p> <p>Presenter: Ian Rowburrey</p> <p style="text-align: right;">**1 PDH**</p> <p>YEA Night</p> <p><i>Back to Basic Session III - The Rise of Variable Flow Primary/Secondary/Tertiary Pumping Systems</i></p> <p style="text-align: right;">**1 PDH**</p> |
| <p>November 13, 2012 * At Westbury Manor</p> <p>Dinner Presentation-- TBD</p> <p>Presenter: TBD</p> <p style="text-align: right;">**1 PDH**</p> <p>JOINT MEETING WITH SMACNA</p> <p>Student Activities Night, Membership Promotion, & YEA Night</p> | <p>April 9, 2013 ANNUAL FIELD TRIP</p> <p>Sysco Long Island 199 Lowell Avenue Central Islip, NY 11722</p> <p>400,000 sq. ft. Food Distributor including 88,000 sq. ft. of Freezer, Ammonia Refrigeration Plant and Hydrogen Fueled Fork Lift Trucks (Indoor Air Quality)</p> <p>Dinner to follow</p> |
| <p>December 11, 2012 Holiday Party - Westbury Manor</p> | <p>May 6th, 2013 * Cherry Valley Club, Garden City, NY ANNUAL GOLF OUTING</p> |
| <p>January 8, 2013 * At Westbury Manor</p> <p>Dinner Presentation—Dispute Resolution such as Mediation, Arbitration and Litigation, the pros and cons of each and what to expect</p> <p>Presenter: Michael D. Ganz, Esq.</p> <p style="text-align: right;">**1 PDH**</p> <p><i>Back to Basic Session II - Fundamentals of Pumping System Design</i></p> <p style="text-align: right;">**1 PDH**</p> | <p>May 14th, 2013 * At Westbury Manor</p> <p>Dinner Presentation—Update on Refrigerants: Past, Present and Future</p> <p>Presenter: Eckhard A. Groll, Dr. Eng.</p> <p style="text-align: right;">**1 PDH**</p> <p>Student Activities Night Refrigeration Night</p> |
| <p>January 2013 ASHRAE Winter Meeting Jan 28-30 Convention Center, Dallas</p> | <p>June 11, 2013 * At Westbury Manor</p> <p>PAST PRESIDENTS & OFFICER INSTALLATION</p> |
| <p>February 12, 2013 * At Westbury Manor</p> <p>Dinner Presentation-- TBD</p> <p>Presenter: TBD</p> <p>Joint Meeting with USGBC Resource Promotion Night Membership Promotion Night</p> <p style="text-align: right;">**1 AIA**</p> | |
| <p style="text-align: center;">Chapter Regional Conference (CRC) Region I Burlington, VT August 15-17</p> | |

Board of Governors Meeting Minutes

Date: Tuesday, September 11, 2011

Attendees: Brian Simkins, President, Tom Fields, Financial Secretary, Andrew Dubel, BOG, Andy Manos, Pres Elect, Charles Lesniak, Treasurer, Richard Halley, BOG, Richard Rosner, VP, Don Kane, Secretary, Carolyn Arote, BOG-Past Pres

Guests: Nancy Román, Alan Goerke

The meeting was brought to order at 5:10 PM, at Westbury Manor.

President-Brian Simkins gave a brief summary of the Chapter's participation in the CRC held in Boston, along with the various awards received by the Chapter; Committee chairs responsible to draft MBO's should do so promptly to have them submitted by the end of September; All were reminded to make sure PAOE points are reported in a timely manner and to coordinate with other committees where additional points are available from cross-committee functionality; A review of the emailing list is needed to correct addresses and to remove obsolete ones, to minimize the "bounces" when the *Sounder* and meeting announcements are sent out. Brian noted that we have many eligible candidates for some of the Society's awards and should make a concerted effort to submit the paperwork for those awards.

PRES ELECT/PROGRAMS - Andy Manos reported that all speaker slots for chapter meetings have been filled except for the Joint SMACNA and USGBC meeting; We need to find out the current contact person for SMACNA.

CTTC – Don Kane reported that arrangements are being made to have our April Field Trip at Sysco Long Island, a 400,000 square foot food distribution warehouse which employs an ammonia refrigeration plant; A Distinguished Lecturer has been approved for our May (Refrigeration Night) meeting, Eckhard Groll, who will speak on the History of Refrigerants. Don Kane will check with Vicki Grant to obtain current list of Chapter members who have ASHRAE Certifications.

TREASURER - Charlie Lesniak reported a current balance of approximately \$9,000. Chapter reimbursements for CRC expenses need to be paid out. Charlie and Brian Simkins will work on preparing this year's budget for presentation to the Board. We are presently up-to-date with the IRS, but should explore finding another accountant to avoid issues that we experienced this year. A separate account will be set up for expenses related to the Chapter's hosting of the CRC in 2017, as planning and fund raising will have to start soon.

HISTORY - Tom Fields will set up an interview with a past president, for inclusion in the *Sounder*.

RESEARCH PROMOTION (RP) - Rich Rosner reported that he attended RP training in Chicago last week, an intensive session which provided much useful information. Rich showed attendees our Chapter's Directory, and those that saw it were impressed. Our Chapter's RP goal for this year is \$14,681. Rich noted that the Society has created a scholarship fund in Lynn Bellenger's memory and is looking for the Chapters to support this fund, which will be included in the RP total. On a motion by Tom Fields (seconded by Andy Dubel) it was voted to donate \$250 to this fund from the L.I. Chapter. RP donors who have given \$500 or more will receive commemorative coins in October, in recognition of their contributions. Board members were reminded to get their contributions in so we can achieve "Full Circle". Possible future RP activities were briefly discussed, such as all day training programs with corporate sponsorships, cocktail hour sponsor ship and mini-vendor expos.

MEMBERSHIP - Membership promotion nights are scheduled for our November 2012 and February 2013 meetings.

STUDENT ACTIVITIES - Richard Halley reported that the Stony Brook Students' Chapter was recognized as of June 2012. They require a Chapter banner. Hofstra received a plaque and received an ASHRAE grant for a refrigeration laboratory. Richard has been in contact with Eugene Silberstein at Suffolk County Community College's Grant Campus (Workforce Development Technology Center) in Brentwood. Anyone available to make a presentation (LEED, load calculations, etc) at a student chapter should let Richard know their availability.

YEA - Andrew Dubel noted that there is funding available for one or two YEA members to attend regional retreats and we should encourage participation. Possible events to spur YEA participation were noted, including golf and paint-ball. Possible joint events with other Chapters are a consideration. It is important to try to get businesses to support and encourage YEA participation.

WEBMASTER - Tom Fields reported that the web site is, or should shortly be, updated.

GOLF - May 6th, 2013 Cherry Valley Club, Garden City.

OLD BUSINESS - This year's clam bake was a success. If we start planning soon, it should be possible have an even better event, either another clam bake or boat cruise.

NEW BUSINESS - Next BOG Meeting - October 9th, 2012 - Westbury Manor

Respectfully submitted

Donald W. Kane, PE
Chapter Secretary

October Program



Dinner Presentation

“Energy and Green ”

Presented by

Danja McMillan
Northeast Regional Sales Manager
Camfil Farr

**Attendees
 Will Earn
 1 PDH!**

| | | | |
|----------------------------|--|-------------|---|
| DATE: | TUESDAY, OCTOBER 9, 2012 | | |
| Time: | 6:00 PM - Cocktails and Hors D'oeuvres 6:45 PM - Dinner Presentations 8:45 PM - Conclusion | Fee: | \$ 40.00 Member \$ 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. | | |
| Presentations: | <p>This month's presentation will discuss the following topics:</p> <ul style="list-style-type: none"> • Does filtration have an impact on a company's Green Initiative & the factors that fueled Green • Green Building Market and Impact Report 2011 • The future of "Green"- Renewable Delusions • The cost of moving air through an HVAC system- what does it cost you right now to run and operate your HVAC systems • Quantifying "Green and Air Filters" • Question/Answer <p>Participants will receive 1 PDH credit.</p> <p>In addition Evans Lizardos, PE, LEED AP will be presenting Part I - Design Analysis of Pumping Systems of the 'Back to Basics' series and all attendees will receive an <u>additional 1 PDH.</u></p> | | |
| About our Speakers: | <p>Danja McMillan is the Northeast Regional Sales Manager for Camfil Farr. She is responsible for sales, marketing, and management of 10 independent representative and distribution firms covering 10 states in the Northeast Region for the HVAC / High Performance Products Group. Currently, she is heavily involved in the application of high performance filtration products for specific markets with primary emphasis on the removal of airborne particles and gaseous contaminant. Danja has been serving the HVAC and air filtration industry for 24 years. She is an Associate member of the American Society of Heating, Refrigeration, and Air Conditioning Engineers. During her time in Arizona, as a member of the American Indoor Air Quality Council, she was a certified indoor air quality technician (CIAQT), conducting numerous IAQ audits. She has been the featured speaker for numerous ASHRAE/ASHE chapters across the country, speaking on ASHRAE Standard 52.2-2007, ASHRAE 62.1-2007, LEED, Green, and Sustainability along with the latest in filtration guidelines and requirements.</p> | | |

Research Promotion

This being my first year as Resource Promotion Chair I am still learning a lot. So far I have been to the CRC in Aug. and was trained there and then I went to the intensive RP training in September held in Chicago which was very insightful.



On the plane from Philly to Chicago I got to sit with heavyweight champ Smoking Bert Cooper who has fought Evander Holyfield, George Foreman and others and was a one-time protégé of the great Joe Frazier. I snapped a picture of us sitting in our plane seats. Bert took my contact info and we have spoken since. Don't make me call him by you being a slacker with those RP donations!

A Lynn Bellenger fund has been set up by the society to be a onetime funded, perpetual giving fund that will give scholarships each year in Lynn's name from the interest generated by the fund monies. In honor of Lynn being our first woman ASHRAE president, the Bellenger Scholarship will be awarded to a deserving female undergraduate engineering student pursuing a degree in a field related to HVAC&R. This year's scholarship award will be \$5,000. The society has asked that each chapter raise a certain amount of money for this fund and they will match that amount. Last month your board voted to meet the society's goal for us, \$250, with funds already collected and in our bank account. The monies are to be in the societies hands by Oct. 15th so special collections at meetings were limited. If someone

would like to contribute personally further, there is a place on the web at: <https://xp20.ashrae.org/secure/LynnBellengerScholarship/index.php> for you to do so. Lynn was a model ASHRAE President and supported our chapter and will be sadly missed. For information on students applying for an ASHRAE scholarship please go to the web at: <http://www.ashrae.org/membership--conferences/student-zone/scholarships-and-grants/ashrae-scholarship-program> or contact Rich Halley our chapter Student Activities Chairman.

At the Chicago training I was able to interact with other RP Chairs in different regions and share ideas on how to better generate funds. Leaders from ASHRAE Headquarters also spoke to us about what the financial goals and research projects are for this coming year.

This year's overall society's resource promotion goal is \$2,190,000 with many research projects on board. Our chapter is expected to raise \$14,681 or more towards the overall goal. Andy did a great job ahead of me and is helping me to keep up. I am hoping I can count on the continued support of all of our past contributors who have generously supported us over the years.

Keven Brunk & Richard Berger of The VMC Group located at 109 Herricks Rd, Garden City Park, NY 11040, PHONE: (516) 663-0290 WEBSITE: www.thevmcgroup.com were nice enough to become my first new advertiser for the 2013 ASHRAE LI Product Directory. Thanks guys!

I look forward to gaining the support of other new contributors this coming year. Please help support ASHRAE in any way you can. Even a call with a lead will be a big help for me.

As we all know Andy did such a great job at raising funds for RP last year. At this October meeting we will be personally thanking those who helped us out last year. On behalf of Andy and me we have listed the donators from last year below and would like to thank you for your donations to ASHRAE Research.

Research Promotion (Cont'd. from Page 7)

Thank you to the following donors for their
generous support of ASHRAE Research and the
Long Island Chapter during the
2011-12 Campaign!

Major Donor – Bronze

Applied Technologies of NY
County Fair AC Corp
Dnt Enterprises
Carl Graber
James Tauby
Trane
Wales Darby

Major Donor – Antique

| | |
|---------------------------|-------------------------------|
| 8760 Inc. | Leonard Powers |
| A D E Systems | Liebert-Emerson |
| Air Control Supply | M V Controls |
| Albert Weiss AC Products | Andrew Manos |
| Alnik Mechanical | Mason East |
| Bladykas Engineering | Metro Air Products |
| Building Cooling Systems | Miller Proctor Nickolas |
| Bush Wholesalers | Mitsubishi Electric |
| Captive Aire | Michael O'Rourke |
| Carrier Northeast | Pepco |
| Catan Equipment Sales | Platsky |
| Chimney Design Solutions | PVI Industries |
| Clean Air Company | Rathe Associates |
| Daikin US Corp. | Siemens Building Technologies |
| EMTEC Consultants | Brian Simkins |
| Environmental Air Quality | SRS Enterprises |
| Ga Fleet Associates | Technical Air Systems |
| Gilbar | Tower Enterprises |
| James Hanna | Venco |
| J-Mar Controls | Wallace Eannace Associates |
| KILMA NY | |

Honor Roll Donor

Carolyn Arote
Marcel Bally
Kevin Beirne
Berne & Bob Leventhal
Charleston ASHRAE Chapter
Mondechai Chetrit
County Energy Controls
Andrew Dubel
Ferguson Enterprises
Thomas Fields
Steven Friedman
Michael Gerazounis
Peter Gerazounis
Richard Gerbe
David Jendras
Donald Kane
Ronald Kilcarr
Charles Lesniak
John Lizardos
Lizardos Engineering Associates
Frank Morgigno
John Nally
Jerome Norris
Richard Pearson
Nancy Roman
Anthony Rosasco
Richard Rosner
Raymond Schmitt
Jerome Silecchia

ASHRAE Supporters

David Kwalbrun
Leonard Locascio

Thank You!

Thank You!

Already this year the following have donated to our chapter:

Mr John D Nally
Mr Roy Gustafson
Twinco Supply Corporation
Mr Andrew B Dubel
Mr Donald W. Kane, PE
Mr Brian C Simkins
Mr Jerome T Norris
Mr Ricky Gaska
Ms Carolyn Arote
Mr Richard L Rosner, PE
Mr. Andrew Manos, LEED AP

Research Promotion (Cont'd. from Page 8)

A Glance at What Your Resource Promotion Dollars Are Helping To Sponsor:

Goal 1: Maximize the actual operational energy performance of buildings and facilities.

Goal 2: Progress toward Advanced Energy Design Guides (AEDG) and cost-effective net-zero-energy (NZE) buildings.

Goal 3: To reduce significantly the energy consumption for HVAC&R, water heating and lighting in existing homes.

Goal 4: Significantly advance our understanding of the impact of indoor environmental quality (IEQ) on work performance, health symptoms and perceived environmental quality in offices, providing a basis for improvements in ASHRAE standards, guidelines, HVAC&R designs and operation practices.

Goal 5: Support the development of ASHRAE energy standards and reduce effort required to demonstrate compliance.

Goal 6: Building Information Modeling of energy efficient, high performing buildings. BIM is a rapidly developing field of knowledge which stretches beyond the traditional boundaries of the HVAC&R industry to the wider construction sector.

Goal 7: Support development of tools, procedures and methods suitable for designing low-energy buildings.

Goal 8: Facilitate the use of natural and low global warming potential (GWP) synthetic refrigerants and seek methods to reduce their charge.

Goal 9: Support the development of improved HVAC&R components ranging from residential through commercial to provide improved system efficiency, affordability, reliability and safety.

Goal 10: Significantly increase the understanding of energy efficiency, environmental quality and the design of buildings in engineering and architectural education.

Goal 11: Understand influences of HVAC&R on airborne pathogen transmission in public spaces and develop effective control strategies.

To read further about these goals see the pdf on the Internet at: [ASHRAE Research Strategic Plan 2010-2015 \(Strategic Plan 2010-2015 pdf\)](#) **CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:**

1) 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 ASHRAE LONG ISLAND 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

AIR FILTER EFFICIENCY – LET’S CLEAR THE AIR

With the issuance of the 2008 supplement (Addendum B) to ASHRAE 52.2 – 2007 – *Method of Testing General Ventilation Air-Clearing Devices for Removal Efficiency by Particle Size*, which included the optional conditioning method of Appendix “J”, a method became available to better correlate test ratings with real-life performance of air filters. Additionally, by incorporating tests for Dust-Holding capacity and Arrestance, the need to utilize two Standards (52.1 and 52.2) to fully evaluate a candidate filter was eliminated, as all of the needed testing was included in 52.2. Before we get into the details of what this document provides for (and conversely, doesn’t provide for) let us consider why effective filtration and the ability to evaluate the effectiveness of filters is important.

Why are air filters needed? Foremost would be concerns of health and safety. There are many materials carried in the typical airstream that may cause discomfort and/or illness for those who are sensitive or allergic to those materials. While “Sick Building Syndrome” gets most of the media’s attention, the causes of such reported symptoms can be due to other environmental factors than the air quality (such as audible and sub-audible noise levels, lighting quality and quantity and/or temperature. However, “Building Related Illnesses” are those afflictions whose symptoms are identified and attributed to airborne building contaminants. As serious as this can be in the normal residential or commercial environment, consider the **hospital environment**. Each year, approximately 100,000 individuals who enter hospitals succumb (fatally) to infections (so-called nosocomial infections) as a result of exposure to contaminants in the hospital environment (these fatalities exceed the yearly total of AIDS, breast cancer, and automobile accidents.) While not all of these are related to the air quality, one can readily see the significance an effective air filtering system in a healthcare facility has. While a small speck of dust may not have significant ramifications for personnel, certain manufacturing facilities, such as **semi-conductor fabrication** cannot tolerate the slightest contamination in the areas where the product is processed. At the other end of the cleanliness spectrum, we have many **industrial operations** which generate copious quantities of airborne particles (sawdust, textile fibers and the like). While generally personnel who work in these areas will use personnel respiratory protection, the equipment is not always so protected. Much of the electrical equipment utilized in **explosive and contaminated atmospheres** rely on exposed cooling fins to dissipate heat to a safe level. A build up of dust or lint can hamper the needed heat transfer and result in exposed surface temperatures in excess of those permitted.

One can see that there is a wide variety of applications, each requiring a different degree of filtration. To this end, a seeming plethora of filter solutions appear to exist. However, ignoring cyclonic type filters and pre-filters used in extremely “dirty” applications, most of the filter media may be broken down into categories based on media used and type of “loading”. **Media** used may be cellulose, cellulose/synthetic blend, full synthetic, membranes and/or nano-fibers. Filter loading may be of the **depth** type or **face** type. **Depth loading** may exhibit significant total dust holding capacity, but may permit initial passage of fine particles; **face loading** will result in more complete particle capture which will result in rapid increase in restriction. Since the dirt loading is on the face, this configuration is more conducive to self-cleaning provision (reverse air pulses, for example). **Media selection** in many cases will come down to an economic evaluation given similar performance ratings.

While some applications (welding and soldering, for example) lend themselves to **source capture**, with either portable or fixed local collection hoods, filters and discharge; most of the time the function of filtering the contaminants out of the air will be incorporated into the air handling system.

Previously, **ASHRAE Standard 52.1** had been used (along with other test methods) to evaluate the dust-holding capacity and arrestance of candidate filters. In order to provide a method to establish comparative ratings for different filters, **ASHRAE 52.2** established the **MERV** (Minimum Efficiency Reporting Value) rating. MERV ratings 5 and higher are based on the effectiveness using particles in three size ranges (E1 0.3-1 micron; E2 1-3 microns; E-3 3-10 microns.) MERV ratings 1-4 are based on the average arrestance, the measure of the filter’s ability to remove coarse particles. Typically, filters for equipment protection would employ MERV 1-4 elements; protection of personnel from contaminants which could affect health were typically employ MERV 6-16 elements (minimum MERV 13 for LEED rated buildings.)

CTTC (Cont'd. from Page 10)

Realizing that there was still a disconnect between the measured performance under test and “real world” experience, especially for some filter elements relying more on electrostatic means of capture which exhibited a degradation in performance in use, **Addendum B** was issued as a 2008 supplement to ASHRAE 52.2. The key features of this addendum were:

- **Incorporation of elements of ASHRAE 52.1** (dust-holding capacity and arrestance) allowing the phasing out of the use of 52.1
- The inclusion of **Appendix “J”**. This appendix added an optional filter-conditioning step utilizing an **aerosol potassium chloride** (KCl) rather than **“ASHRAE DUST”**. The ASHRAE DUST (comprising, by weight; 72% SAE Standard J726 dust, 23% Carbon Black and 5% milled cotton linters – fine, silky fibers which adhere to the cotton seeds after ginning) was retained for the remainder of the testing.

Those filters tested using the optional pre-conditioning were given a **“MERV-A”** rating. This rating may be less than the “MERV” rating using the method in the body of 52.2.

Particle size removal efficiency (PSE) is tested at the 100% rated airflow for the filter. Resistance to airflow of a clean filter is measured at 24%, 50%, 75%, 100% and 125% of rated airflow.

The incorporation of the methods of Addendum B was the result of significant testing and research conducted under ASHRAE Research Project 1190-RP (another example of the benefits your RP support brings to the HVAC community). The development of this alternative test method was driven by the realization that filter media which utilized electrostatic effects to improve particle capture were subject to degradation in PSE after being put into service, however, recognizing that there are filters utilizing this mechanism which are effective, the intent was to replicate the in-service degradation (by means of the pre-conditioning) rather than negate completely the electrostatic component of the filtration (by complete neutralization of charge.)

That being said, keep in mind that all test results are comparative in nature (when was the last time your fuel mileage matched the EPA “estimates”) and should not be taken as absolutes. Additionally, with the incorporation of the dust-holding capacity and arrestance metrics into ASHRAE 52.2, it should be noted that values obtained thusly may not be directly comparable to those obtained using the former 52.1 tests.

Environmental issues must also be considered when selecting the proper filter. If your application were located along the path blazed by T.E. Lawrence on his Brough Superior SS100, you would, most likely, want to consider some form of pre-filter, such as a self purging cyclonic type or pulse-cleaning face loading type of filter, due to the dust and sand conditions; in extremely **humid areas**, care must be taken that the media and collection of contaminants do not result in a breeding ground for living organisms. Further, high moisture levels can result in agglomeration of the dust particles, resulting in high restriction or, if dealing with soluble contaminants, the material may be carried downstream, in solution. In some locations, seasonal occurrence of pollen and insects can have a deleterious effect on the filter and should be accounted for.

Having delved into the history of filter efficiency testing, real-world issues to contend with and the various choices in filter media we should be about done.....or are we? The test methods in ASHRAE 52.2 address the performance of **the filter media**, but do not address the actual installation. If filters are installed with poor sealing surfaces their “real-world” performance can suffer. It was determined, in tests reported by Jeffrey Siegel, that a 10mm gap between the filter and frame could reduce a MERV 6 filter to a MERV5; and MERV 11 and MERV 15 filters would be reduced to the performance of a MERV 8 filter.

In summary, understand the nature of the contaminant which you are attempting to remove from the airstream, compare MERV and MERV-A ratings (where available) to determine possible performance degradation in time, be aware of environmental issues which will affect your media/style selection and ensure that all filters are properly installed with attention paid to sealing.

Don Kane, P.E.
CTTC

Young Engineers in ASHRAE (YEA)

Our first YEA night will be this meeting. Evans Lizardos is back to continue his back to basics seminar series. Last year we learned the basics of fans. This year we will be covering the fundamentals of pumping. We also would like to have some YEA social events this year. If you have any suggestions please contact me.

National YEA leadership conferences will continue into 2013. Dates should be posted to the YEA ASHRAE website and Facebook soon. We have sent several YEA members to these conferences, and everyone has had a positive experience. If you are thinking of going, come speak to myself or Charlie for more information.

YEA will also be hosting Leadership U during the ASHRAE Winter and Annual Conferences. During Leadership U, YEA members will be paired up with ASHRAE Society Officers and they will be able to participate in the in events and board meetings. There are four positions available for Leadership U, and they will be determined by an application process. The deadline to apply is October 15.

Have you liked the ASHRAE YEA page yet? Like it here: <http://www.facebook.com/ashraeYEA>

Andrew B. Dubel, P.E.
YEA Chairman

Student Activities

We are off to a good start this year with introduction meetings held at Suffolk Community College and meetings scheduled at Hofstra and CW Post.

November 13th meeting will be our first student activities meeting. We encourage all students members to attend and enjoy an evening on ASHRAE. We will be having a back to basics lecture in addition to our main seminar. These are great ways to gain experience and do some networking. 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.

The ASHRAE Senior Undergraduate Project Grant Program provides grants to engineering, technical and architectural schools worldwide with the goal of increasing student knowledge, learning and awareness of the HVAC&R industry through the design and construction of senior projects. Grants are to be used to fund equipment and supplies for senior projects and 2-year technical school projects that focus on ASHRAE-related topics. Grants may cover projects lasting from one academic term up to one year.

Learn More Here: <http://www.ashrae.org/students/page/743>

Our outreach to students should not be limited to colleges or students visiting us at our monthly ASHRAE meetings. We encourage our members to reach out to their local school districts and visit schools to discuss engineering. The society has produced a great deal of materials to assist you with lectures and project ideas. Please come talk to the board about any meeting which you have, the board may be able to support you with educational materials.

Richard Halley
Student Activities Committee Chair



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. Rich Rosner will be collecting them.

History

Brief History of the ASHRAE Handbook

The lineage of the Handbook begins in 1922, when the American Society of Heating and Ventilating Engineers (ASH&VE) published its *Heating and Ventilating Guide*. Its purpose was stated as follows in its preface:

'The purpose of this new addition to the Society's publications is to provide the engineer, the architect and contractor alike, with a useful and reliable reference data book relating to the art of heating and ventilating. A wide range of data within the scope of the field is presented and every effort has been made to present the material in a practical and useful manner.'



Society Technical Committees, Task Groups, and individuals obtained data and prepared chapters using information from any authoritative source. Society-sponsored research provided much information.

ASH&VE, which later became the American Society of Heating and Air-Conditioning Engineers (ASHAE), published *The Guide* until 1961, when it was merged with the American Society of Refrigerating Engineers' (ASRE) *Refrigerating Data Book*, published since 1932, following the merger of the two societies in 1959. The combined publication was called the *ASHRAE Guide and Data Book*. Separate volumes were issued for *Fundamentals* and *Equipment*, and *Applications*.

In 1967, the information in the *Guide and Data Book* was regrouped into a *Handbook of Fundamentals*, with separate *Systems*, *Applications*, and *Equipment* volumes. In 1973, the *Guide and Data Book* was renamed the *ASHRAE Handbook*. In 1985, separate I-P and SI unit volumes were issued, and in 1986, a separate Refrigeration volume was established. Although volume groupings have shifted over the years, the name and the essential method by which the *ASHRAE Handbook* is compiled has continued to the present.

Sources:

Flink, Carl H. 1969. History of ASHRAE Guide and Data Book. *ASHRAE Journal* (Dec. 1969).

Cansdale, James H., and MacPhee, Carl W. 1972. Technology Pacesetter: 1922---ASHRAE Guide and Data Book---1972. *ASHRAE Journal* (May).

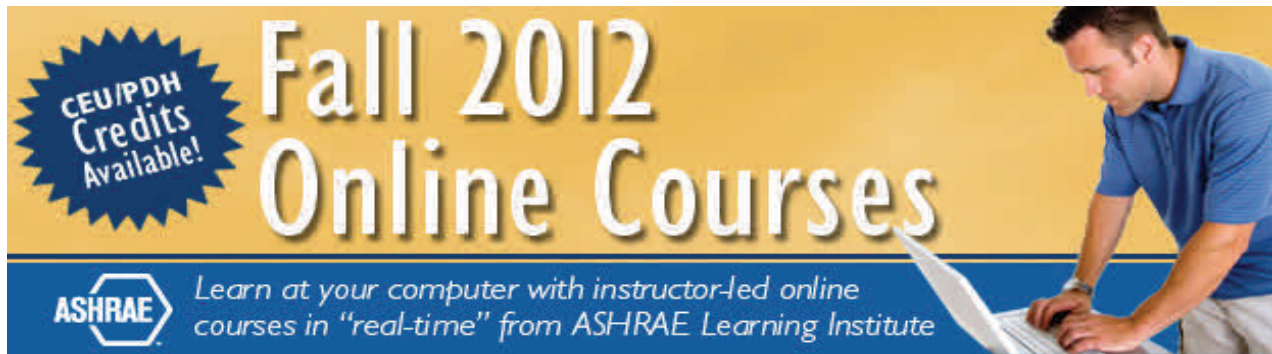
Thomas J. Fields, P.E., LEED AP
History Chair

Membership

First off I would like to say hello and to thank all our new members who signed up in August and September. Our chapter will hold our Membership Promotion nights during the November and the February monthly meeting. Please visit the ASHRAE website at <http://www.ashrae.org> to review and update your bios, and to check if you are up to date with your membership dues. We are always looking for new members to join and attend our meetings. ASHRAE is looking to retain more student members thru their smart start program. Student members should look into this program. It will help you adjust to the membership status. Please see the ASHRAE website for more information.

Charles Lesniak, P.E.
Membership Chairman

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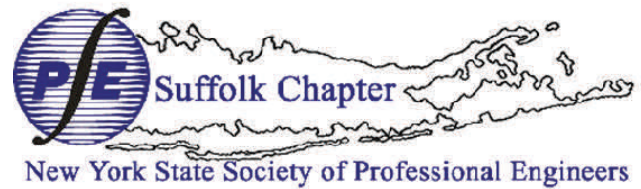
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| 11:00 am – 11:15 am | Break |
| 11:15 am – 12:15 pm | Morning Seminars Cont'd A & B 12:15 pm – 1:30 pm Lunch |
| 1:30 pm – 2:30 pm | Afternoon Seminars A & B |
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1 hour – Track B AM

Track B: 9:00 – 10:00 AM

Modular Stormwater Solutions -1 hour – Track B AM

Track B: 10:00 – 11:00 AM

Geosynthics for Erosion Prevention Applications -1 hour – Track B AM

Track B: 11:15 AM – 12:15 PM

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Track B: 1:30 – 2:30 PM

Masonry Codes & Standards Update 2011 - 1 hour - Track B – PM

Track B: 3:00 – 4:00 PM

High Performing Masonry Building Enclosures - 1 hour - Track B - PM

Track B: 4:00 – 5:00 PM

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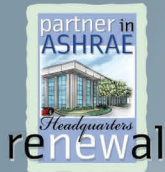
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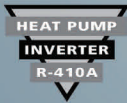
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