THERMOGRAM

The New Jersey Chapter of ASHRAE Newsletter

www.njashrae.com **January 2010** **reply@njashrae.com**

ASHRAE

Sustaining Our Future
by Rebuilding Our Past

NJ Chapter of ASHRAE Meeting

Research and Promotion Night

Tuesday, February 2, 2010

Renaissance Woodbridge Hotel
(same location, new name)
515 US Highway 1 South
Iselin, New Jersey

Max Sherman, PhD
Lawrence Berkeley Labs
Presenting
"Ventilation, the "V" in HVAC"

Cost: Members $50.00
Non-members $55.00
YEA members $25.00***
Students $5.00

Cocktails: 5:30 pm
Dinner and Speaker: 6:30 pm

RSVP: REPLY@NJASHRAE.COM or
Call 732-218-7463
By January 29th, 2010

*****NJ ASHRAE Welcomes YEA Members**

COMMITTEES
(continued)

CTTC — TEGA
John Tellefsen, PE
973-565-7622

Historian
Bob Daly, PE
212-566-5764

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Mark Richter, PE
212-354-5656

Programs
Janet Shipton
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Refrigeration
TBA

Research/Promotion
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973-777-6700

Scholarships
James Sarno, PE
732-938-2666

Seminars
Mark Richter, PE
212-354-5656

Special Events/ Golf Outing
Chris Phelan
973-777-6700

Student Activities
Saheel Chandrani
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ASHRAE Society
Toll Free Number
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Inside this issue:

Calendar of Upcoming Meetings

March 2, 2010: Mark MacCracken, CALMAC, *"Thermal Energy Storage"* **Membership & History Night**

April 13, 2010: Tom Pitcherello, NJ DCA, *"Adopted Codes of New Jersey"* **Student Night**

May 4, 2010: Ed Karpenski, National Air Filter, *"Air Filtration as a Defense" NYS CEUs available.* **Scholarship Awards Night and Installation of Officers**

June 2010: Social Event TBA

Do you have a topic of interest that you would like to present at a NJ ASHRAE meeting?

Presentations of a non-commercial nature are always welcomed. Contact any chapter officer or committee chairperson for more information.

President's Message

Dear Chapter Members,

The first meeting of the new year, held on January 6th, was our annual joint meeting with MCA and ASPE. Mr. Steve Shirley, CEO of University Mechanical (El Cajon, CA) spoke to a packed house about the use of Building Information Modeling (BIM) on large projects, the pros and cons of its use, and the business implications of both. Mr. Shirley acknowledged the time and cost needed to learn and implement the program effectively, but pointed out the time and cost savings during construction with significantly reduced RFI's and change orders. I thank Mr. Shirley for his informative presentation. I also thank MCA for their efforts in bringing us all together.

We will be celebrating" Research and Promotion Night" at our next meeting. It will be held at the Renaissance Hotel on Tuesday, February 2nd. The topic is "Ventilation - the 'V' in HVAC", presented by Dr. Max Sherman, PhD, of Lawrence Berkeley Labs. Mr. Sherman is part of ASHRAE Society's Distinguished Lecturer Program that provides highly qualified speakers to ASHRAE chapters worldwide. Please join us in welcoming Mr. Sherman to our New Jersey Chapter.

Janet

2009-2010 Presidential Award of Excellence (PAOE) Summary

Chapter #	Chapter Name	Chapter Members/ students	Member Promotion	Student Activities	Research Promotion	CTTC	History	Chapter Operations	Chapter PAOE Totals
007	N.J.	754	55	140	-	275	25	335	830

February Buffet Dinner Menu

Green Seasonal Salad

Chicken Waldorf Salad

Three Bean Salad and Pasta Salad

Chicken Picatta and Penne Vodka

Vegetables

Assorted Desserts

*Vegetarian selection available

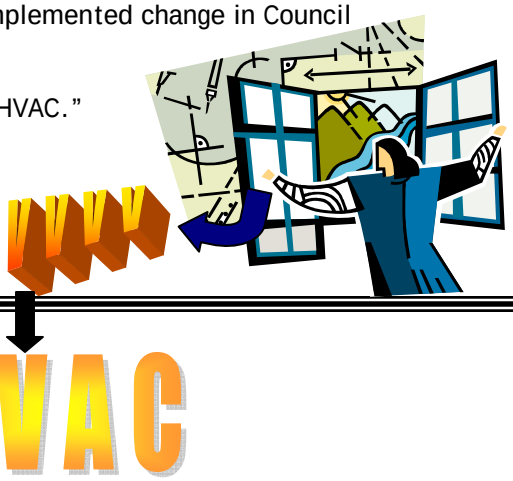
Speaker Bio: Max Sherman, PhD, Lawrence Berkeley National Laboratory

Dr. Max Sherman is a Staff Senior Scientist at the Lawrence Berkeley National Laboratory where he runs the Energy Performance of Buildings group. His research career spans over 25 years and almost 200 publications, most of which focus on buildings, energy efficiency and HVAC.

His most recognized research areas concern ventilation, thermal distribution systems, infiltration and envelope-dominated buildings. He gives technical lectures frequently and has appeared in the popular media on issues of ventilation and duct tape.

Dr. Sherman was one of the youngest to be made an ASHRAE Fellow and has had a distinguished career since being elevated. He has chaired SPC 62.2P, the committee which developed ASHRAE's residential ventilation standard. He served as a Director-At-Large for the Society in 2001-2004 and chaired the committee that coordinated the transition to the recently implemented change in Council and Committee structure.

Dr. Sherman will be speaking about "Ventilation, the "V" in HVAC."



Green ASHRAE News: ASHRAE, UNEP Further Work in Protecting the Ozone

ASHRAE and the United Nations Environment Programme have launched a joint program of work in order to reduce emissions and encourage energy-efficient refrigeration and air conditioning systems and building designs.

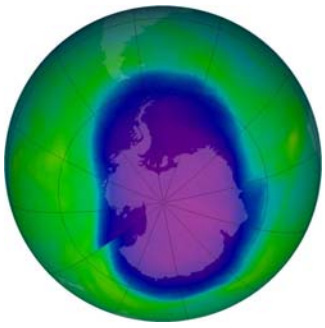
The First Annual Cooperation Work Plan between ASHRAE and UNEP, an organization that promotes the wise use and sustainable development of the global environment, was presented on October 5, 2009 at the Region-at-Large Chapter Regional Conference in Kuwait. The program of work sets goals and timelines for phasing out ozone-depleting refrigerants and the management of ozone-depleting substance refrigerant banks, to name just a few.

One of the ways ASHRAE will support the established goals is by providing Distinguished Lecturers to present the latest achievements in non-Ozone depleting refrigeration technology to both ASHRAE chapters and technical activities organized by UNEP. ASHRAE will also support an ozone literacy course developed by UNEP.

"By partnering with UNEP, ASHRAE can more efficiently respond to the growing demand for new technologies that do not contribute to ozone depletion and are energy efficient," Gordon Holness, ASHRAE president, said. "Through collaboration, continuing education and provision of experts on the topic, ASHRAE, UNEP and the global community can look forward a healthier environment."

The program of work is the result of a memorandum of understanding signed between ASHRAE and UNEP in June of 2007.

UNEP was formed in 1972 and acts as "the voice for the environment within the United Nations system." The Programme works with a wide range of partners to asses global, national and regional environmental conditions and trends; strengthen institutions for the wise management of the environment; and facilitate the transfer of knowledge and technology for sustainable development.



NASA image showing ozone thinning at Antarctica

Bio of Spencer Morasch
by Bob Daly, PE, Chapter Historian

Spencer Morasch is currently serving ASHRAE as the Director of Region I for a period of three years from 2009 until 2012. He is a native New Yorker having been born in Brooklyn. He is a graduate of Stevens Institute in Hoboken, New Jersey with a degree in Electrical Engineering.

When asked how he became a member Spencer replied "He was working at Louis Allis when a co-worker advised him that he must join ASHRAE to meet key customers and be aware of industry needs." He took the advice and joined the North Jersey Chapter in 1985. He firmly believes that when you join an organization, you must put something back into the organization. That is the way any volunteer program will thrive. He started his "ASHRAE Career" as a member of the membership committee working on advancements. The next year, he was chairman of the membership committee. He worked closely with chapter secretary to develop a member database. In 1990, he was elected chapter secretary and served as president in 1994-95. He identified Ruth Giacobbe and S. Louis Kelter as his mentors. They guided him as he moved along through the chapter offices. Their counsel was open and honest and led to his success.

It is common for past presidents to disappear for years following their service. As he has stated, he values his membership and considers it a privilege. To reach the full potential of membership, you must continue to put something back into the organization. Having held the various chapter offices, he continued to assist in various roles with the chapter. A lengthy tenure on the Board of Governors, with many years on the by-laws committee, CRC, and Winter Meeting host committee are a few of his ongoing roles.

He also began to serve on the regional level. He was Regional Vice Chairman for Membership for four years, Research Promotion for three years, and Regional vice chairman for the past two years. He has also been an active member of the technical committee TC-6.8 Geothermal Energy Utilization for ten years. He has attended nearly twenty CRC's throughout the region. Many members have watched his children grow up by seeing his family at these events. CRC's are viewed as a fun filled family event.

Spencer Morasch has been with Jersey Central Power and Light, a First Energy Co. since 1991.
He started out as a support engineer in the Marketing Dept. to help promote the company's energy efficiency programs. Since then he has helped launch the statewide "SmartStart Buildings Program", and through his technical expertise, convinced the other major utilities in the State of New Jersey to also include in the statewide programs, technologies such as: Ground Source Heat Pumps, Variable Frequency Drives on VAV systems and variable speed pumping on chilled water systems. Spencer's projects have included over 40 schools, including his own high school and his own home built with a geothermal system in 1992! Today, Spencer is the major account representative for JCP&L, working with customers such as AT&T, Lucent Technologies and Six Flags, Great Adventure.

He also has devoted a great deal of time to the Boy Scouts. He is an Eagle Scout and his son has now achieved the same. He has been an adult advisor for the past 14 years and is currently serving on the Monmouth Council in New Jersey. He has led numerous programs for scouts to encourage them to pursue technical careers.

Spencer also has a passion for music. Who knows what he may play for us in the future?
His hobbies include camping, vacations, family, serious record collecting (tens of thousands of vinyl records!), posting vinyl records onto YouTube, collecting radio "airchecks" and being involved with "Oldies" Radio programming. Spencer has a very serious interest in anything related to radio station WABC in New York City, especially when they used to be the biggest Top 40 music station in the USA during the 1960's & 70's. That interest earned Spencer as one of the top "panel of experts" who would help out with WABC's annual "Rewound" show where the station turned back the clock to the 60's & 70's every Memorial Day from 1999 to 2008.

(Spencer's Bio is continued on page 11)

SPENCER MORASCH PHOTO EVENTS

Spencer Morasch on You Tube

Spencer Morasch, DRC, and William Coad, ASHRAE Presidential member at 2009 Region I CRC in Albany.

Spencer Morasch, DRC, presents an Award to Om Taneja, Ph.D, P.E., 2008-09 NY Chapter President

Garry Myers, Arc/Treasurer and Spencer Morasch, DRC, at 2009 Region I CRC in Albany.

Spencer Morasch, DRC, on his NY Chapter visit in October 2009.

Improved IAQ

New Guidance on Clearing the Indoor Air through Improved IAQ

Ensuring good indoor air quality (IAQ) means everyone breathes a little easier: occupants who experience improved health, comfort and productivity, and owners who see increased building value and reduced risk.

New guidance for achieving enhanced IAQ is available from five leading building industry associations and the U.S. Environmental Protection Agency. The book and CD provide strategies needed to achieve good IAQ using proven technologies and without significantly increasing costs.

"The health and comfort of buildings occupants is too important to leave IAQ as an after-thought in design, construction and operation," said Andrew Persily, Ph.D., chair of the committee that wrote the new guidance. "There is plenty of experience out there to help avoid IAQ problems in buildings, allowing all of us to breathe a little easier.

The *Indoor Air Quality Guide: Best Practices for Design, Construction and Commissioning* is a collaboration between ASHRAE, the American Institute of Architects, the Building Owners and Managers Association International, U.S. Environmental Protection Agency, the Sheet Metal and Air Conditioning Contractors of North America and the U.S. Green Building Council.

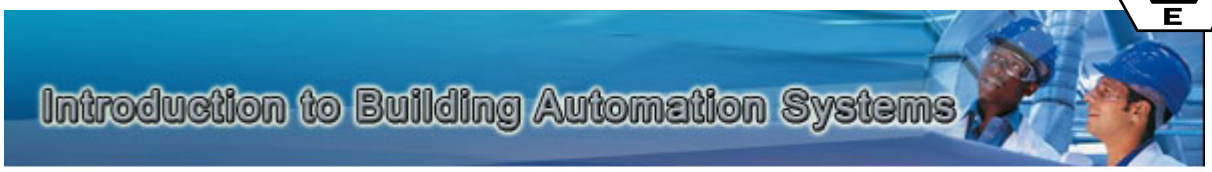
The book describes 40 strategies for achieving critical IAQ objectives related to moisture management, ventilation, filtration and air cleaning and source control. It also highlights how design and construction teams can work together to ensure good IAQ strategies are incorporated from initial design through project completion.

Here a few tips from the guide on improving IAQ in buildings:

- Bring IAQ into the very earliest design discussions. Don't get stuck retrofitting the design for IAQ at the end of the process
- Strictly limit liquid water penetration and condensation in the envelope, and control indoor humidity.
- Where outdoor air quality is poor, use enhanced filtration and air cleaning to provide high quality ventilation air. Locate outdoor air intakes away from contaminant sources and provide the means to measure and control minimum outdoor airflows.
- Select building materials and furnishings that have low contaminant emissions and don't require use of high-emitting cleaning products.
- Exhaust contaminants from indoor activities as close to their source as possible.
- Recognize that O&M is essential to long term IAQ, and provide the access, training and documentation needed to facilitate O&M.
- Commission from design through occupancy to ensure that IAQ objectives are met.

A summary document of the *Indoor Air Quality Guide* – ideal for a general understanding of the importance of major IAQ issues can be downloaded for free at www.ashrae.org/iaq. The full publication complete with a CD that contains detailed guidance essential for practitioners to design and achieve good IAQ is available in hard copy or electronically for $29.

To order, contact ASHRAE Customer Service at 1-800-527-4723, fax 404-321-5478, or visit www.ashrae.org/bookstore.



ISA's NEW, expert-led, real-world-based course will give you a broad introductory understanding of Building Automation Systems

Introduction to Building Automation Systems

This real-world-based course will give you a broad introductory understanding of the specific issues involved with Building Automation Systems (BAS). In this course, you will survey the world of BAS including: Future of BAS, Digital Direct Control (DDC) Basics, Field Devices, The Human Machine Interface (HMI), BAS Design and Specification, Energy Conservation Control Strategies, and System Maintenance.

Main Topics Covered:
Building Automation Overview
BAS Applications
BAS System solutions
BAS System Delivery
The Human Machine Interface (HMI) Applications

You will Be Able To:
Identify and describe the major components in a BAS
Identify and describe the basic mechanical components in an HVAC control system
Describe and Explain the basic functions of DDC systems
Reference codes and standard applicable to BAS
Describe and explain HMI basics
Explain BAS in non-ATC systems (lighting, fire, security, etc.)
Explain the process of implementing BAS
Explain Energy Conservation Strategies
Justify control components for project work
Know where to look for additional references
Describe the major components in a Building Automatic System

ASHRAE LEARNING INSTITUTE
Supported by ASHRAE

Register Online

Go to www.ashrae.org for additional information and to register online

ASHRAE's Chapter Technology Transfer Committee with support from ASHRAE's *High Performing Buildings Magazine*, will present a ***free*** Webcast, **"Right from the Start – Commissioning for High Performing Buildings,"** on Wednesday, April 21, 2010, 1:00 to 4:00 PM.

Hear from leading commissioning experts about how commissioning supports a smoother construction process, maximizes energy and cost reductions, and provides a facility that operates as intended. This program will define the "what, why, when, and who" of the commissioning process and provide you with tools to commission your high performing building.

The panel of presenters includes Rick Casault, H. Jay Enck, Michael L. Weiss, and Ron Wilkinson.

The Webcast is available to both members and non-members.

If you have any questions or need assistance, please call (678) 539-1200 or email ashrae-webcast@ashrae.org.

HIGH PERFORMING BUILDINGS

Can't Attend the ASHRAE Winter Meeting?

Sign up for the Virtual Conference

All conference papers (audio and video) will be online and available 24/7 for at least the next year

http://www.ashrae.org/events/page/1337

NJ ASHRAE CHAPTER – SCHOLARSHIP REQUIREMENTS

By: Jim Sarno, PE

If you work with or know of a student who is enrolled in an HVAC program and is interested in applying for a scholarship, have them review the information below and apply if they meet the requirements.

High School Seniors:
High School seniors that have been accepted into a Mechanical Engineering Degree Program at a college, university or technical school.

Students Enrolled In Two-Year Program:

- The must be full or part-time students who have complete a minimum of 25% of the required curriculum.
- They must be students in a curriculum that grants an AAS degree, [preferably in HVAC&R technology, that includes at least two (2) courses in this discipline.]
- They must have a Quality Point Index higher that 3.0. They shall direct the School to forward a certified copy of their academic transcript directly to the committee. They must sign a release form that permits the Selection Committee to examine their academic transcript.
- The Chair of their department or their Academic Advisor must provide a letter of recommendation for the award.

They must complete and submit a minimum 500-word essay describing their educational goals and objectives, and how they expect their career to evolve.

Students Enrolled In Four-Year Programs:
They must be full or part-time students who have completed a minimum of 25% of the required curriculum.
They must have successfully completed either:

25% of a curriculum that grants a Bachelor's degree in which the student has successfully completed at least
two (2) courses in HVAC&R fundamentals and exhibits a sincere interest in pursuing an HVAC&R related career.

They must have a Quality Point Index higher than 3.0. They shall direct the school to forward a certified copy of their academic transcript directly to the committee. They must sign a release form, which permits the selection Committee to examine their academic transcript.
The Chair of their Department or their Academic Advisor must provide a letter of recommendation for the award.
They must complete and submit a minimum 500-word essay describing their educational goals and objectives, and how they expect their career to evolve.

Graduate Students:

- They must be a full-time student enrolled in a HVAC&R related program.
- They must have a Quality Point Index higher that 3.0. They shall direct the School to forward a certified copy of their academic transcript directly to the committee. They must sign a release form that permits the Selection Committee to examine their academic transcript.
- The Chair of their department or their Academic Advisor must provide a letter of recommendation for the award.

They must complete and submit a minimum 500-word essay describing their educational goals and objectives, and how they expect their career to evolve.

General Requirements:
Applicant shall live and/or be matriculating at a school in the NJ ASHRAE region.

Relatives of ASHRAE members shall be eligible to apply for and be considered for scholarships.

ASHRAE

Technology for a Better Environment

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Darcy Carbone
Regional Vice-Chair –Research Promotion, Region I

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Region I Dinner
Orlando Winter Meeting

HOULIHAN'S
RESTAURANT + BAR

Please reserve your spot today!

Date: Sunday, January 24, 2010
Location: HOULIHAN'S -9150 International Drive, Orlando, FL
Phone 407-363-0043

Time: 7:00PM

Menu: Dinner Menu see attachement or go to http://www.houlihans.com

Cost: You will be able to order from the dinner menu and will be responsible to pay for your own meal.

In order to ensure adequate staffing please RSVP to me by January 15, 2010
darcycarbone@stebbinsduffy.com
Dress is casual

INTERNATIONAL AIR - CONDITIONING • HEATING • REFRIGERATING EXPOSITION

AHR EXPO® January 25-27, 2010
Orange County Convention Center
Orlando, Florida

Co-sponsors: AHRI Honorary sponsor: HRAI

AHR 2010 Expo in Orlando, Florida at the Orange County Convention Center Monday, January 25th through Wednesday, January 27th, 10 am to 6 pm ASHRAE Winter Meeting is onsite

Featuring New Product Technology Theater, Free Educational Seminars and Workshops, numerous educational courses and certification testing hosted by industry groups, and more.

On Sunday, ASHRAE is presenting Chilled Beam Technology for Excellent Indoor Climate in an Energy Efficient Manner (co-sponsored with REHVA), Engineering for Sustainability: Understanding Air-to-Air Energy Recovery Technologies and Applications, The Basics of Panel Heating and Cooling and Using Standard 90.1 to Meet LEED Requirements.
On Monday, ASHRAE is presenting Construction management, District Cooling and Heating Systems: Central Plants (co-sponsored with BCA, IESNA, NEBB), Grooved Piping Sustem Technology & Design, Introduction to BACnet, Successful Solar Applications and the Basics of a Proposed Standard on High-performance Green Buildings.
Tuesdays presentations include: Healthcare Facilities—Best Practice HVAC Design Considerations and Criteria and Best Practice Applications of HVAC Systems, Determining Energy Savings from Energy Efficiency Projects, Intro to Cleanrooms, Cost/Benefit Analysis Methodology and Tools Needed by Owners, Designing Towards New Zero Energy Commercial Buildings (co-sponsored with REHVA), IAQ & Productivity: How to Maximize Investments in Indoor Climate (co-sponsored with REHVA), and Understanding Dedicated Outside Air Systems (DOAS).
Visit www.ahrexpo.com or www.ashrae,org for additional information.

Spencer Morasch Bio
(continued from page 9)

Spencer is a member of Society of Plastics Engineers, International Ground Source Heat Pump Association, and member and co-founder of American Society of Mobile Disc

Other awards: Vigil Honor (Boy Scouts of America, Order of the Arrow), District Award of Merit (Boy Scouts of America, Monmouth Council, Thunderbird District), and Eagle Scout, with Bronze Palm (Boy Scouts of America, Troop 128).

Region I New York Chapter will celebrate its Centennial in 2011 under the leadership of Region I DRC Spencer Morasch.

As the incoming DRC, he was asked where has ASHRAE fallen short and what are his hopes for ASHRAE. He said that ASHRAE should continue its work toward leadership in energy efficiency in built environment. Someday, all of our next-door neighbors will know about ASHRAE. Hundreds of thousands of buildings will have the ASHRAE EQ (Energy Quotient) certification logo at the main entrance to the sites.

Changes Proposed for Standard 90.1 Address Metal Buildings

Changes to assembly descriptions and U-Factors regarding metal building assemblies are being considered in the 2010 version of Standard 90.1, expected to be published in the fall.

ANSI/ASHRAE/IESNA Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings,* provides minimum requirements for the energy-efficient design of buildings except low-rise residential buildings.

The changes regarding metal buildings are among many being proposed for the 2010 standard. Some 43 addenda already have been approved, impacting the standard in a variety of ways from energy recovery to controls to daylighting.

The proposed changes are in Standard 90.1 Appendix A "Rated R-Value of Insulation and Assembly U-Factor, C-Factor and F-Factor Determinations." The revised Appendix A resulted from a Metal Building Task Group investigation of existing metal building stock that revealed that typical installation practices of the single and double-layer assemblies described in Appendix A compress insulation and thereby negatively affects the thermal performance of the assembly. The previously published R-Values/U-Factors did not reflect the thermal performance from such installation methods, which typically yield lower R-Values and higher U-Factors. The proposed Appendix A adds revised modeling equations to estimate the performance of compressed insulation in metal building assemblies based on these less energy-efficient installation practices, as well as incorporates the modified R-Values/U-Factors for metal building assemblies that reflect these new modeling equations.

The Metal Building Task Group's investigation grew out of an ASHRAE appeals panel recommendation that SSPC 90.1 review expeditiously all available information to determine if the metal building assembly U-Factors in the current 90.1 Standard are appropriate.

The assembly descriptions and U-Factors proposed for inclusion in the new 90.1-2010 Standard appear below. This excerpt contains items from the first public review draft of addendum *bb* to Standard 90.1 that did not change in the second public review draft that was completed in late December. Items that received comments in the second public review draft will be discussed by the standard 90.1 committee at the ASHRAE Winter Conference in Orlando later this month.

(Continued on pages 15 and 16)

Follow ASHRAE's Lead and Become a Fan: Twitter, Facebook New Ways to Stay Up-to-Date

A little birdie has tweeted to ASHRAE fans about the Society's recently established presence on the popular social networking sites Twitter and Facebook.

Members can now become followers of ASHRAE through Twitter, a real-time short messaging service. By signing up for a free Twitter account and going to www.twitter.com/ashraenews, members can receive short "tweets" about the Society's activities delivered directly to their phones.

The Society also has a presence on the social networking site Facebook through the ASHRAE fan page, which currently has more than 1,000 fans. Members can create a free Facebook account and find and fan ASHRAE on Facebook by going to www.ashrae.org/members.

Additionally, ASHRAE has created a Facebook page for students, where students can connect, share information about scholarships and network. To become a fan, or to recommend the page to an ASHRAE student member, simply conduct a Facebook search for ASHRAE Student Connection.

Both Facebook and Twitter provide information about ASHRAE news and events; new publications; and educational and networking opportunities. Members are encouraged to follow the Society tweets and become a Facebook fan in order to connect with other members and to receive ASHRAE updates in a direct and personal format.

Changes Proposed for Standard 90.1 Address Metal Buildings (continued)

Metal Building Roofs

Single Layer. The rated R-value of insulation is for insulation installed perpendicular to and draped over purlins and then compressed when the metal roof panels are attached. A minimum R-3 thermal spacer block between the purlins and the metal roof panels is required, unless compliance is shown by the overall assembly U-factor.

Double Layer. The first rated R-value of insulation is for insulation installed perpendicular to and draped over purlins. The second rated R-value of insulation is for unfaced insulation installed above the first layer and parallel to the purlins and then compressed when the metal roof panels are attached. A minimum R-3 thermal spacer block between the purlins and the metal roof panels is required, unless compliance is shown by the overall assembly U-factor.

Liner System (Ls). A continuous membrane is installed below the purlins and uninterrupted by framing members. Uncompressed, unfaced insulation rests on top of the membrane between the purlins. For multilayer installations, the last rated R-value of insulation is for unfaced insulation draped over purlins and then compressed when the metal roof panels are attached. A minimum R- 3 thermal spacer block between the purlins and the metal roof panels is required , unless compliance is shown by the overall assembly U-factor.

Metal Building Walls

Single Layer. The first rated R-Value of insulation is for insulation compressed between metal wall panels and the steel structure.

Insulation System	Rated R-Value of Insulation	Overall U-Factor for Entire Base Wall Assembly
Single Layer	R-10	0.186
	R-11	0.185
	R-13	0.162
	R-16	0.155
	R-19	0.147

(Continued on page 16)

PAOE: Presidential Award of Excellence

Each month on page 3 of the newsletter, is a summary of the Presidential Award of Excellence points along with chapter membership statistics.

Curious about why these numbers are tabulated and how the points are assigned in each category? Attend the ASHRAE meeting and speak with a chapter officer for more information.

Changes Proposed for Standard 90.1 Address Metal Buildings (continued)

Insulation System	Rated R-Value of Insulation	Overall U-Factor for Entire Base Roof Assembly
Standing Seam Roofs with R-3 Thermal Spacer Blocks		
Single Layer	R-10	0.115
	R-11	0.107
	R-13	0.101
	R-16	0.096
	R-19	0.082
Double Layer	R-10 + R-10	0.088
	R-10 + R-11	0.086
	R-11 + R-11	0.085
	R-10 + R-13	0.084
	R-11 + R-13	0.082
	R-13 + R-13	0.075
	R-10 + R-19	0.074
	R-11 + R-19	0.072
	R-13 + R-19	0.068
	R-16 + R-19	0.065
	R-19 + R-19	0.060
Liner System	R-19 + R-11	0.035
	R-25 + R-11	0.031
	R-30 + R-11	0.029
	R-25 + R-11 + R-11	0.026
Standing Seam Roof without Thermal Spacer Blocks		
Liner System	R-19 + R-11	0.040
Thru-Fastened Roofs without Thermal Spacer Blocks		
Single Layer	R-10	0.184
	R-11	0.182
	R-13	0.174
	R-16	0.157
	R-19	0.151
Liner System	R-19 + R-11	0.044

BUSINESS CARD ADVERTISEMENTS

If you would like to submit project or technical articles for the *THERMOGRAM* or if your would like to place an advertisement, please contact Jori Fahrenfeld @ 609-520-1600 or via email Jori.Fahrenfeld@Emerson.com for further details