

THE HOT AIR DIFFUSER

Chapter Newsletter

FEBRUARY 2013

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FEBRUARY PROGRAM*

The speaker for this month's chapter meeting will be Jeremy Kroll from the Hartwell Corp. Jeremy will be presenting on "The Ten Commandments of Professional Liability."

The Hartwell Corporation markets multi-line insurance products, including commercial insurance, surety bonding, personal insurance, and financial services. Areas of specialization include risk management programs for construction firms, design professionals, and the transportation industry.

<http://www.thehartwellcorp.com/index.html>

***Please RSVP at www.idahoashrae.com**

When: WEDNESDAY, February 13, 2013

11:45AM-1:00PM

Where: Idaho Power Building

1221 W. Idaho St.

Boise, Idaho 83702

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

QUOTE OF THE MONTH:

“Not everything that counts can be counted, and not everything that can be counted counts.”

Albert Einstein

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EXCITING AGENDA TAKING SHAPE FOR THE 2013 IDAHO ASHRAE TECHNICAL CONFERENCE!

This year the Idaho ASHRAE Technical Conference will feature two ASHRAE Distinguished Lectures, Stanley Mumma, Ph.D., P.E. and Julian R. de Bullet.

Dr. Mumma has been an educator since 1971 and is a registered Professional Engineer in three states. Dr. Mumma is the author of numerous technical papers and articles on Dedicated Outdoor Air Systems and Radiant Panels that have published in Engineered Systems, Applied Thermal Engineering, Consulting and Specifying Engineer, the ASHRAE Journal, and ASHRAE IAQ Applications. Dr. Mumma's has his own website devoted to DOAS and radiant technology (<http://doas-radiant.psu.edu>). Dr. Mumma is a Professor Emeritus for the Department of Architectural Engineering in the College of Engineering at Pennsylvania State University.

Julian R. de Bullet is an ASHRAE Distinguished Lecturer with over 300 Seminars delivered around the world with topics including "Responsible Refrigerant Use", "Sustainable HVAC Systems", "Variable Primary Flow System designs" and "90.1 and LEED". He is a member of ASHRAE TC 8.2 Centrifugal Chillers and has co-authored numerous ASHRAE Handbook chapters. He chaired the Professional Development Committee, (Responsible for the ASHRAE Educational programs), was a voting member of the Publications and Education Council and the Society Advocacy Committee. He has co-authored ASHRAE Position Documents on Energy Efficiency, Natural Refrigerants and Ozone Depletion. He is a Life Member and holds the Distinguished and Exceptional Service Award. Mr. de Bullet has over 40 years experience in the HVAC industry. He is Vice President, Business Development with FAFCO Thermal Storage Systems LLC. His career has concentrated on the applications of Chilled Water and All-Air systems as a manager of applied equipment sales and of a service/performance contracting operation.

The conference will consist of two plenary talks and six breakout sessions. Vendor booths will also be on hand to talk about the latest products and services. Join us for a great day of education, information and networking.

This year's Technical Conference will be held on April 19th from 7:30 AM to 4:00 PM at the Oxford Suites, 1426 Entertainment Ave. Boise, ID. Registration and more information will be posted soon at www.idahoashrae.com.

EnergyPlus + Radiance
Modeling Energy Efficient Buildings

5 DAY TRAINING WORKSHOP
FEBRUARY 25th - MARCH 1st

Ery Djunaedy, Ph.D, Integrated Design Lab
208.429.0220 | eryd@uidaho.edu

<http://www.idlboise.com/energyplus-radiance-workshop-2013>

FULL 5 DAYS: \$1000 per seat
ENERGYPLUS 3 DAYS: \$750 per seat
RADIANCE 2 DAYS: \$500 per seat

University of Idaho
INTEGRATED **idl** DESIGN LAB

Understand the role of simulation within the building design process.

Report meaningful simulation results with confidence.

Develop iterative simulation based analysis methods.

Understand the concept of building performance, in particular, the energy performance.

Develop model geometry and prioritize simulation alternatives.

The poster features a background image of a modern office interior with people working at computers. Overlaid on this are several data visualization elements: a circular gauge chart, a bar chart, and a line graph with multiple data series. The text is arranged in a clean, professional layout with clear headings and contact information.

HISTORY LESSON

Five Years Ago

The chapter president was Xenon Long. The 5th annual technical conference was held on Friday, February 8, 2008, at the Holiday Inn – Airport. Some of the topics were Idaho Energy Code Update; Energy Issues in the 2008 Idaho Legislature; M&V: Measuring Your Success; Green Motors; The Case For Building Commissioning; The Business Case for Green Buildings; The Case For Building Operator Certification; Effective Air Conditioning System Design Considerations; Optimizing Operations; Efficient Buildings: Do They Really Perform?; Boost Your Bottom Line with Resource Conservation Management; and Advanced Building Core Performance – The Value Way to Building Efficiency.

Ten Years Ago

The chapter president was Preston Nance. The meeting was held on Friday, February 14, 2003, with a tour of the Norco Air Separation Plant in Nampa.

Twenty Years Ago

The chapter president was Richard Kartchner. The meeting was held on Friday, February 12, 1993, at Edwards Restaurant. Paul Clausen, District Sales Manager for Copeland, Inc., gave a presentation on regulations which will eliminate CFC refrigerants and what the compressor manufacturers are doing to conform to these regulations. Ben Strawn and Adrian Fannin gave a report on new code regulations for chiller room design.

Twenty Five Years Ago

The chapter president was Phil Terrell. The meeting was held on February 12, 1988, at the Kings Table Restaurant. An unknown presenter gave a presentation on Advanced Studies at BSU, including what will be offered and how they will provide classes.

NEWS FROM THE HOME OFFICE

Proposed ASHRAE Standard on Prevention of Legionellosis Open for Third Public Comment

ATLANTA—Changes to clarify requirements in a proposed standard to prevent legionellosis associated with building water systems are open for public comment from ASHRAE.

Standard 188P, Prevention of Legionellosis Associated with Building Water Systems specifies what must be

done to control the spread of legionellosis. The standard helps facility managers/owners understand how to apply the available information on Legionella effectively in order to prevent cases of legionellosis associated with building water systems.

The proposed standard underwent an earlier public review in June 2011 and is currently open for a third public review from Jan. 25-March 11, 2013. For more information, visit www.ashrae.org/publicreviews.

William McCoy said the committee received more than 150 comments during the 2011 review. The input helped the committee in clarifying many aspects of the standards. Changes being proposed to the third review based on that input, include:

- Clarifications made to definitions in Section 3, Definition of Terms and a new term was defined.
- Clarifications made to Section 5, Risk Characterization. Those changes were substantive because building characteristics were reorganized into two subsections for clarity, subsections 5.2 and 5.3.
- Reorganization of Table 1, Determining Preventative Measures Required for Buildings. The improvements reference two subsections of Section 5 (Sec 5.2 and 5.3).
- Creation of a new subsection, 7.4, Water System Treatment and Management Program, in Section 7. Commenters indicated there should be specifications for a “water system treatment and management program” for buildings with none of the risk characteristics (now listed in Sec 5.2) but with any of the equipment specified (now listed in Sec 5.3),.
- Clarifications to Section 8 regarding wording, references, cited regulations and informative notes.

Compliance with the standard requires facility managers/owners to formally take responsibility for controlling Legionella in their building water systems, while at the same time acts as a defense against accusations of negligence in those cases which are caused by the hazard from unknown sources.

Standard 188P also covers the potable water system in buildings, which are not treated as often as cooling towers, and will hold facility managers/owners accountable for properly managing the entire building water system both potable and utility water.

The standard differs from ASHRAE Guideline 12, Minimizing the Risk of Legionellosis Associated with Building Water Systems, in that while the guideline gives recommendations about how to treat various building water systems, the standard specifies the practice of exactly what must be done with all those recommendations.

Chiller Efficiency Improvements Proposed for Standard 90.1

ATLANTA – Chiller efficiencies for air and water cooled chillers would be boosted to more than 20 percent under a proposed addendum to the ASHRAE/IES energy standard.

Proposed addendum ch to ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, changes the requirements for air and water cooled chillers as defined in section 6.4.2.1 and the efficiency requirements listed in table 6.8.1C. This change is a continuation of the efficiency improvements that were implemented in 2010 by further improving the efficiency requirements, according to Dick Lord, a member of the committee who developed the proposal through a working team of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) chiller section.

Addendum ch is open for public review from Nov. 30, 2012-Jan. 14, 2013. For more information, visit www.ashrae.org/publicreviews.

In 2010, a Path B was added to the standard for part load intensive water cooled chillers. Proposed addendum ch would expand Path B by adding requirements to include air cooled chillers. Also as part of this change, efforts were made to bring the efficiency requirements for water cooled positive displacement and centrifugal chillers together while considering the available technology, and to chillers to be applied at other application conditions where one technology may better suited than the other. If approved, the new efficiency requirements would go into effect on Jan. 1, 2015.

The proposed efficiency requirements in addendum ch increase annual energy savings to 23.1 percent vs. Standard 90.1-2004 and 8.3 percent vs. Standard 90.1-2010. In 2010, the overall weighted average savings resulted in a 16.2 percent improvement in chiller annualized energy use vs. Standard 90.1-2004.

Lord noted the average payback was calculated at 6.3 years, given some units that exceed the scalar limits. Chiller manufacturers are aware of this and know that redesign and cost reduction will be required, but do support the proposal, he said. Lord also noted that we are reaching maximum technological limits at a component level and that in the future the industry will have to look at the full HVAC system for further improvements. AHRI is in the process of forming a new working group to address systems approaches for efficiency improvements and will work closely with Standard 90.1.

In addition, improvements also were made to the requirements to clarify their use. AHRI has recently updated the AHRI 550/590 rating standard that is used for the rating of chillers and its certification program. As part of this effort,

AHRI developed a hard metric standard with slightly different rating conditions than the inch pound (I-P) ratings and have released it as AHRI 551/591. For the International System of Units (SI) rating, the change was reflected in the ratings as well as revising the reference to the AHRI rating standard to include AHRI 551/591.

The Standard 90.1 committee also opted to exclude chillers when the leaving condensing temperatures are greater than 115F from the equipment efficiency requirements of Table 6.8.1C. This proposed clarification stems from the fact that high-lift, heat reclaim chiller applications often use a different compressor and sometimes a different refrigerant. The intention of using heat reclaim chillers is to increase system efficiency, but the effect on overall system efficiency cannot be assessed at standard cooling design conditions, Lord said. AHRI is developing rating requirements, test procedures and certification for heat reclaim chillers as well as heat pump chillers.

Also open for public comment from Nov. 30-Jan. 14 is addendum aq that makes minor changes to improve clarity and to address issues identified in sections 6.5.1.3.a and 6.5.3.2.1.

In addition, 15 proposed addenda also are open for public review from Nov. 30 until Dec. 30. They are:

- Addendum bs reduces occupancy threshold for demand controlled ventilation from greater than 40 people per 1000 ft² to equal to or greater than 25 people per 1000 ft² with exemptions for certain occupancies.
- Addendum ca requires that vestibule heating be locked out when outside air is above 45F, the same temperature that lockout of freeze protection or ice melting systems is required in section 6.4.3.8.
- Addendum cb to removes the 10,000 cfm threshold for optimum start and adds a threshold for systems controlled by DDC. The addendum also expands the requirement beyond air-based systems so that convectors and radiant systems would be included.
- Addendum cc adds minimum efficiencies for both axial and centrifugal fan evaporative condensers with R-507A as the test fluid to Table 6.8.1G.
- Addendum cd clarifies what to do with piping system accessories that are not in series with the piping circuit that do not have the same heat losses/gains and pressure drop
- Addendum ce establishes package single zone systems as the baseline HVAC system type for all retail occupancies of two stories and less.
- Addendum cf enables the establishment of a window-to-wall ration for retail strip mall buildings.
- Addendum ck requires the use of dual maximum control for variable air volume zone control when the building has DDC controls.
- Addendum cl updates the IEER values for air-cooled and water-cooled air conditioners and heat pumps above 65,000 Btu/h. Depending on the cooling capacity and product classes, the new IEERs are between 7 and 13 percent better than the values they are replacing. The new IEERs will

become effective on Jan. 1, 2016. Note the IEER is a new metric that was developed by AHRI and first implemented in the 2010 standard and is a better representation of the annualized refrigeration system energy use of a typical commercial packaged air conditioner.

- Addendum cn allows laboratory designs that incorporate strategies to reduce peak airflows and minimum unoccupied airflows to document energy savings associated with reduced outside air volumes.
- Addendum co modifies the Lighting Power Densities in Table 9.5.1 to match the recommended light levels in the 10th Edition of the IES Lighting Handbook.
- Addendum cp corrects a value in table 5-5 for steel joist floors.
- Addendum cr modifies Table 9.6.1 to correct the required light levels for hospital corridors, assisted living dining spaces and retail sales spaces.
- Addendum an allows the option to use energy rates either from actual local rates or EIA state data, where approved by the building official when using Appendix C.
- Addendum ar corrects the definitions for walk-in coolers and walk-in freezers.

Rep. Peter Welch New Co-Lead for High-Performance Buildings Congressional Caucus

WASHINGTON, D.C. – High-performance buildings help create local jobs, while lowering overall costs and enhancing their communities. In recognition of the critical need to improve our nation’s public and private buildings, where people spend about 90 percent of their time, U.S. Representative Peter Welch (D-VT) has taken up the important task of co-leading the High-Performance Buildings Congressional Caucus.

Formed in 2008, the Caucus heightens awareness among federal policymakers about the major impacts that buildings have on the health, safety and welfare of the general public, and the opportunities to design, construct and operate buildings addressing these factors.

Specifically, the Caucus focuses on the eight aspects of high-performance buildings outlined in the Energy Independence and Security Act of 2007:

- Accessibility
- Aesthetics
- Cost-Effectiveness
- Functionality
- Historic Preservation

- Productivity
- Safety and Security
- Sustainability

“This Caucus is about finding practical ways to make progress in Washington,” Welch said. “Despite the heated political rhetoric, common ground does exist. For example, while there are big differences on energy policy, everyone agrees that using less energy is a good thing. So why not work together make homes and buildings more energy efficient? It’s simply common sense. This Caucus will help identify more areas where we can work together, and I am pleased to serve as its co-chair.”

“The Coalition is delighted with Welch’s new leadership role as the Democratic Co-Chair of the Caucus,” Doug Read, chair of the Caucus Coalition, said. “His leadership over the years on building energy efficiency and sustainability has resulted in the introduction and passage of several key bills in Congress. The Coalition looks forward to working with him and the rest of the Caucus to continue educating members of Congress on the importance of high-performance buildings issues.”

The Caucus is supported by the High-Performance Building Congressional Caucus Coalition (www.hpbccc.org), a broad-based group of over 160 technical societies, associations, and businesses. Since 2008, the Coalition has held over 40 briefings on Capitol Hill to help educate policymakers and bridge the gap between the often highly technical and highly political worlds inhabited by the building community and Congress.

Focuses on Tall Building Performance ASHRAE Announces Call for Papers for 2014 Winter Conference, January 18-22, NY, NY

ATLANTA – ASHRAE has announced a call for papers for its 2014 Winter Conference in New York, New York, Jan. 18-22.

The Conference has a building-oriented theme and seeks papers on building information systems; environmental health; international design; HVAC&R applications and systems; and, featured for this Conference, tall building performance.

The Tall Buildings: Performance Meets Policy track focuses on the performance of tall buildings or political challenges and opportunities in the design, development

and operation of tall and super-tall buildings. Papers are sought on the measured and measurable use of utilities, envelope (infiltration and exfiltration), building pressure, waste handling, elevators, carbon and adaptive reuse.

Building performance is addressed in three other tracks:

- The Building Information Systems track investigates how building control technologies are integrated and used for building management, operation and efficiency.
- The Hydronic System Design track addresses innovative hydronic system design, components and research and case studies of their application, including unintended consequences.
- The Building Performance and Commissioning track seeks case studies in achieving high efficiency buildings.

The International Design track addresses new and innovative design strategies to meet various environmental elements, geography and cultures and seeks papers to share this information internationally.

The Environmental Health through Indoor Environmental Quality track seek papers on developing, evaluating and predicting optimal indoor environmental conditions, especially as they pertain to environmental health. A subsection of this track includes case histories, lessons learned and advice to operators and designers about IEQ and disaster recovery in buildings affected by hurricanes and floods.

As with past ASHRAE conferences, the New York Conference seeks papers addressing the core HVAC&R Systems and Equipment and Fundamentals and Applications advances and practices.

ASHRAE offers two types of paper submissions:

- Conference Paper Abstracts due March 15, 2013. Upon acceptance, papers will be due July 2, 2013. These “final” papers undergo a single-blind review, are submitted as a PDF and have an eight single-spaced page maximum length.
- Full Technical Papers due April 19, 2013. Papers submitted for review must be both technically accurate and clearly written. These papers undergo a rigorous double-blind review and can be a maximum of 30 double-spaced pages.

To submit a Conference paper abstract or a technical paper and for more information about the tracks, go to www.ashrae.org/newyork.

Held in conjunction with the 2014 Winter Conference is the International Air-Conditioning, Heating, Refrigerating Exposition, Jan. 21-23, 2014, which is expected to attract more than 40,000 visitors and exhibitors.

ASHRAE Publishes Revised Filtration Standard; Combines Standard 52.1 and 52.2

ATLANTA – A newly revised filtration standard from ASHRAE combines two standards setting the path to improve the technical accuracy of filter testing. ANSI/ASHRAE Standard 52.2-2012, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size, establishes a test procedure for evaluating the performance of air-cleaning devices as a function of particle size. The publication marks the first time Standard 52.2 has been published combining Standard 52.1, Gravimetric and Dust Spot Procedures for Testing Air Cleaning Devices Used in General Ventilation for Removing Particulate Matter.

“Combining the two standards provides a clean slate to begin significant changes regarding making the method much more technically accurate,” Robert Burkhead, chair of the Standard 52.2 committee, said.

“Specifically, we have plans in motion to change the MERV (minimum efficiency reporting value) table ranges, narrow the ambient conditions allowed and further refine the instrumentation specifications – all in an effort to reduce the variability of the data product from the standard.”

Standard 52.2 now incorporates the Standard 52.1 sections on arrestance and dust-holding capacity; and also adds a new informative appendix, Appendix J, that provides an optional method of conditioning a filter using fine potassium chloride particles to demonstrate efficiency loss that might be realized in field applications.

The standard addresses three air-cleaner performance characteristics of importance to users: the ability of the device to remove particles from the airstream, the total dust holding capacity with arrestance (weight efficiency) and its resistance to airflow, according to Burkhead.

The cost of ANSI/ASHRAE Standard 52.2-2012, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size, is \$54 (\$46 ASHRAE members). To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 678-539-2129, or visit www.ashrae.org/bookstore.

ATTENTION: ASHRAE MEMBERS

**The Chapter is now accepting advertisements
in the monthly newsletter.**

Sponsorship Rates are as follows:

	Per Issue	Annual (9 issues)
Business Card	\$10.00	\$50.00
Quarter Page	\$25.00	\$200.00
Half Page	\$40.00	\$325.00
Full Page	\$60.00	\$450.00

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Visit Us At:
www.idahoashrae.com

