THE HOT AIR DIFFUSER

Idaho ASHRAE Chapter Newsletter

APRIL 2011 **Volume 17 Issue 6**

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PRESIDENT'S MESSAGE

Greetings Idaho ASHRAE Members!

This is an exciting time of year to be part of ASHRAE. Next week we have our annual technical conference at the Oxford Suites. We have a great agenda for the day that is full of very informational topics. In addition to the great sessions, we have not one, but TWO ASHRAE Distinguished Lecturers speaking this year. The technical conference is an excellent way to fulfill a portion of your Continuing Professional Development requirements. The early registration prices are gone after Friday so sign up today!

As the snow line starts rising it is time for the annual ASHRAE golf tournament. Like last year, we will be playing at the wonderful Eagle Hills course on June 10th. All proceeds from the tee and green sponsorships will go directly to ASHRAE Research and Promotions. More information will be sent out in the next month.

See you all next week,

Carl Marcum
President Idaho ASHRAE Chapter

APRIL PROGRAM

IDAHO ASHRAE 2011 TECHNICAL CONFERENCE

When: FRIDAY, April 15th (8AM-5PM)

Where: The Oxford Suites
1426 Entertainment Avenue
Boise, Idaho

Please REGISTER at www.idahoashrae.com

INSIDE THIS ISSUE:

IMPORTANT DATES

APRIL 15, 2011—TECHNICAL CONFERENCE

APRIL 24, 2011—EASTER SUNDAY

APRIL 27, 2011—ADMIN. PROFESSIONALS' DAY

MAY 8, 2011—MOTHER'S DAY

MAY 11, 2011—ASHRAE MONTHLY MEETING

MAY 30, 2011—MEMORIAL DAY

JUNE 10, 2011—ASHRAE GOLF TOURNAMENT

JUNE 19, 2011—FATHER'S DAY

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.

HISTORY LESSON

Five Years Ago

The chapter president was Bob Tikker. The meeting was held on April 14, 2006 and the group met at the Banner Bank Building in downtown Boise for a guided tour.

Ten Years Ago

The chapter president was Ben Kohler. The meeting was held on April 13, 2001 at the Doubletree Riverside. Bryce Atkinson (Atkinson Electronics of Salt Lake City) gave a presentation on the Gateway Project in Salt Lake. He discussed the temperature controls and refrigeration system controls for the Salt Lake City Olympic Facility.

Twenty Years Ago

The chapter president was Scott Richardson. The meeting was held on April 12, 1991 at the King's Table Restaurant. Sally Belcher gave a presentation on the Discovery Center; its history, national trends, and how you can get involved.

Twenty Five Years Ago

The chapter president was David Asmus. The meeting was held on April 11, 1986, at the Idaho Power Building. The program was on electricity "co-generation."

JOKE OF THE MONTH

The graduate with a Science degree asks,

"Why does it work?"

The graduate with an Engineering degree asks,

"How does it work?"

The graduate with an Accounting degree asks,

"How much will it cost?"

The graduate with a Liberal Arts degree asks,

"Do you want fries with that?"

NEWS FROM THE HOME OFFICE

ASHRAE Funds Research to Improve Building Maintenance, Operation through Performance Data

ATLANTA – Guidance to specifying engineers and designers on how they can use building data to improve building operations, energy efficiency, comfort and sustainability will be developed through newly funded research from ASHRAE.

Research Project 1633, "Data and Interfaces for Advanced Building Maintenance and Operation," will result in development of a set of standard data-driven metrics, interfaces and dashboards for advanced building operation and management. It was one of three projects totaling $430,000 approved by ASHRAE at its 2011 Winter Conference. The 1633 project is sponsored by Technical Committee 1.4, Control Theory and Application, and co-sponsored by 7.6, Building Energy Performance, and TC 7.9, Building Commissioning, and was awarded to KGS Buildings, Cambridge, Mass.

"Analyzing and interpreting building performance data is critical to the success of high performance buildings," Stephen Samouhos, Ph.D., principal investigator, said. "This research will help fill a void in standards literature by establishing data-driven metrics, interfaces and dashboards, organized by building type, that clearly quantify and communicate building performance to a diverse set of building stakeholders."

The other two projects approved at the Winter Conference are:

· 1580-RP, "Study of Input Parameters for Risk Assessment of 2L Flammable Refrigerants in Residential Air Conditioning and Small Commercial Refrigeration Applications," sponsored by TC 3.1, Refrigerants and Secondary Coolants; awarded to Navigant Consulting Inc.

· 1613-RP, "Update Climatic Design Data in Chapter 14 of the 2013 Handbook, Fundaments," sponsored by TC 4.2, Climatic Information, awarded to Numerical Logistics Inc.

Free ASHRAE Webcast Highlights Ground Source Heat Pumps: Registration Opens March 21

ATLANTA – While temperatures above ground vary with the seasons one constant is the temperature underground, which stays relatively the same all year. Designers in the built environment using ground source heat pump systems are harnessing the energy underground to help with heating and air conditioning in the buildings they design.

ASHRAE's upcoming webcast, "Ground Source Heat Pump Systems – Putting the Earth to Work for You," focuses on this method of using underground temperature to create a system using natural resources to save energy and money at the same time. The webcast takes place April 21, 2011, from 1– 4 p.m. EDT.

"The overwhelming choice from our several webcast surveys has been ground source heat pump systems," Dave Shugars, chair of ASHRAE's Chapter Technology Transfer Committee Webcast Ad Hoc Committee, said. "This webcast will highlight several critical factors in the evaluation and design process that are essential to deliver system efficiency. From understanding ground characteristics, to avoiding pitfalls of design and installation, the webcast is a must see for discerning owners and designers alike."

The webcast presenters are Jeffrey D. Spitler, Ph.D., P.E., professor in the School of Mechanical and Aerospace Engineering, Oklahoma State University, Stillwater, Okla.; Kirk T. Mescher, P.E., principal, CM Engineering, Inc., Columbia, Mo.; and Mick Schwedler, P.E., manager, Applications Engineering, Trane, LaCrosse, Wis.

Three Professional Development Hours (PDHs) or three AIA Learning Units (LUs) may be awarded to viewers who complete the participant reaction from online by May 5, 2011.

The live program will be archived online until May 5, 2011, for viewers who are unable to participate on April 21. Registration is required to view the archived program. Online registration for the webcast begins March 21, 2011. For more information on the webcast program, continuing education credits and ASHRAE ground source heat pump resources, visit www.ashrae.org/ghpwebcast. If you have questions about the webcast, call 678-539-1200 or email *ashrae-webcast@ashrae.org*.

New ASHRAE Guideline Published: ASHRAE Guideline Addresses Interactions Affecting Indoor Environmental Quality

ATLANTA – ASHRAE has published a new guideline that provides guidance on achieving good indoor environments by considering the interactions of air quality and thermal conditions, as well as lighting and acoustics. Guideline 10 is especially important in the design of low-energy buildings in order to ensure full consideration of indoor environmental quality and its effects on occupants.

ASHRAE Guideline 10-2011, Interactions Affecting the Achievement of Acceptable Indoor Environments, calls attention to many interactions that designers might not have previously recognized or understood. The guideline contains an assembly of available knowledge on the complexity of the indoor environment and its impact on building occupants.

"The guideline summarizes what research and experience have taught us about the complex interplay of the wide range of factors that determine occupants' reactions to the buildings they inhabit," Hal Levin, chair of the committee writing the guideline, said.

Levin explains that the guideline is intended to help users understand and use existing documents that deal with indoor environments, including the ASHRAE standards related to energy, ventilation, indoor air quality and thermal conditions with a more complete understanding of their combined effects on occupants.

"It can provide assistance to building design professionals and building operators by making them aware of the major interactions that have the potential to impact the indoor environment," he said. "We believe the guideline will help draw attention to the narrowly-defined scopes of the widely-used standards and the significance of combined or interactive effects in determining the acceptability of an indoor environment."

The cost of Guideline 10-2011, Interactions Affecting the Achievement of Acceptable Indoor Environments, is $54 ($46, ASHRAE members). To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

Luncheon Briefing to Focus on Secure and Sustainable U.S. Embassies

ATLANTA—As iconic symbols of diplomacy, U.S. Embassies are subject to a range of security and terrorist threats. The ongoing threats to those who live and work in overseas diplomatic facilities drive the security, design, construction and operations of U.S. Embassies.

A briefing of the High-Performance Building Congressional Caucus Coalition (HPBCCC)— established by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)—in late March will highlight how sustainable design practices and operations in U.S. Embassies can effectively reduce the consumption of resources at diplomatic facilities, while enhancing security.

Top industry leaders will discuss sustainable building initiatives at U.S. Embassies around the world and how sustainability and security result in design excellence. "During these turbulent times, we must take into consideration the safety of U.S. citizens as well as the sustainability of the buildings they live and work in," Doug Read, ASHRAE's program director for government affairs, said. "We can see that the balance between the two can be struck, leading to security and sound building design."

The briefing will be held 11:30 a.m.-1 p.m. Tuesday, March. 29 at 2325 Rayburn House Office Building. Representatives Judy Biggert (R-Ill.) and Russ Carnahan (D-Mo.), who serve as co-chairs of the High-Performance Building Caucus, have been invited to deliver opening remarks, followed by presentations by Lydia Muniz, deputy director, Overseas Buildings Operations (OBO), U.S. Department of State; Paul Phillips, American Institute of Architects, principal, Karn Charuhas Chapman & Twohey; and Faye Harwell, Fellow of the American Society of Landscape Architects, Rhodeside & Harwell. Congressional staff and press are invited to attend the briefing by RSVPing to Patricia Ryan at pryan@ashrae.org or by fax (202-833-0118) by close of business Friday, Mar. 25.

The High-Performance Buildings Caucus of the U.S. Congress heightens awareness and informs policymakers about the major impact buildings have on our health, safety and welfare and the opportunities to design, construct and operate high-performance buildings that reflect our concern for these impacts.

Do Clothes Make the Man Hotter or Cooler? Role of Fashion in Thermal Comfort Studied by ASHRAE

ATLANTA – The role of international fashions in determining how cool or hot we are is being studied by ASHRAE. It's not the impact of Gucci or Channel on our style but rather how non-western wear, such as burqas or saris, affects our thermal comfort.

Comprehensive data exists on western clothing insulation values but little research exists on non-western. Having information on attire like saris could influence the design of ventilation and air-conditioning systems to provide the best thermal comfort for occupants. "Given the growing energy needs of large nations such as India, China and Pakistan, all of which often have different clothing styles from western nations, knowing more about the impact of clothing on comfort is essential to improving ventilation and air-conditioning systems for these countries," John Stoops, head of the project monitoring subcommittee for Technical Committee 2.1, Physiology & Human Environment, which is overseeing the project, said. "The project also will look at how different fabrics and body postures and movements impact the insulation value of cloth. We expect to find that the results of non-western wear on thermal comfort will be different than that of western wear due to looser fit, long gowns and lighter materials that promote movement of air."

1504-TRP, "Extension of the Clothing Insulation Database for Standard 55 and ISO 7730 to Provide Data for Non-Western Clothing Ensembles, Including Data on the Effect of Posture and Air Movement on that Insulation," is one of 17 projects currently out for bid by ASHRAE. The deadline to submit proposals for all projects is May 16.

Results of 1504 would be of fundamental importance to both ASHRAE and the International Organization of Standardization (ISO) standards, building and building system designers and vehicle designers around the world. Specifically, it could expand the scope and reach of ASHRAE Standard 55, Thermal Environmental Conditions for Human Occupancy, to a worldwide audience.

Other projects open for bid are:

· 1399-TRP, "Survey of Particle Production Rates from Process Activities in Pharmaceutical and Biological Cleanrooms," responsible committee: TC 9.11, Clean Spaces

· 1410-TRP, "Effect of System Chemicals toward the Breakdown of Lubricants and Refrigerants," TC 3.2, Refrigerant System Chemistry

· 1413-TRP, "Developing Standard Procedures for Filling Climatic Data-Gaps for Use in Building Performance Monitoring and Analysis," TC 4.2, Climatic Information

· 1458-TRP, "Modeling Person-to-Person Contaminant Transport in a Mechanical Ventilation Space," TC 4.10, Indoor Environmental Modeling

· 1495-TRP, "Effect of Lubricant on the Distribution of Water Between the Vapor and Liquid Phases of Refrigerants," TC 3.3, Refrigerant Contaminant Control

· 1499-TRP, "The Effect of Humidity on the Reliability of ICT Equipment in Data Centers," TC 9.9, Mission Critical Facilities, Technology Spaces and Electronic Equipment

· 1550-TRP, "Thermal Performance of Insulating Coating," TC 1.8, Mechanical System Insulation
· 1557-TRP, "Lab Comparison of Relative Performance of Gas Phase Filtration Media at High and Low Challenge Concentrations," TC 2.3, Gaseous Air Contaminants and Gas Contaminant Removal Equipment
· 1564-TRP, "Measurement of Oil Retention in the Microchannel Heat Exchanger," TC 8.4, Air to Refrigerant Heat Transfer Equipment
· 1565-TRP, "Development of the ASHRAE Design Guide for Dedicated Outdoor-Air Systems," TC 8.10, Mechanical Dehumidification Equipment and Heat Pipes
· 1581-TRP, "Develop Alternate Set-up Guidelines for Unitary Air Conditioner Test Configurations Which Cannot Adhere to ASHRAE Standards 37 and 116 Specified Duct Dimensions and External Pressure Tap Locations," TC 8.11, Unitary and Room Air Conditioners and Heat Pumps
· 1584-TRP, "Assessment of Alternative Approaches to Predicting the Burning Velocity of a Refrigerant," TC 3.1, Refrigerants and Secondary Coolants
· 1592-TRP, "CHP Design Guide – Update to the Cogeneration Design Guide (1996)," TC 1.10, Cogeneration Systems
· 1603-TRP, "Role of HVAC Systems in the Transmission of Infectious Agents in Buildings and Intermodal Transportation," TC 9.3, Transportation Air Conditioning
· 1604-TRP, "Demand Controlled Filtration for Clean Rooms," TC 9.11, Clean Spaces
· 1606-TRP, "Laboratory Testing of Flat Oval Transitions to Determine Loss Coefficients," TC 5.2, Duct Design

Intensive ASHRAE Workshop Highlights Essentials of HVAC Design for High Performing Buildings

ATLANTA—As the demand for high performing systems and buildings has risen, what is considered to be status quo in HVAC&R has changed. Whether you're an experienced engineer or new to the field, it's crucial to have a firm understanding of these new HVAC& essentials for the green building industry. ASHRAE Learning Institute presents an intensive, three-day workshop focusing on both the fundamental and technical aspects of HVAC design in commercial buildings, providing practical strategies for HVAC designers and others involved in delivery of HVAC services. HVAC Design Essentials: Tools for High Performance Building Designers takes place at ASHRAE Headquarters in Atlanta, Ga.

The workshop addresses the skill set that will be required by designers of the future; techniques to interact effectively with all design partners in an integrated design team; the economics of sustainable buildings; and the skills needed to design high-performance buildings, to name just a few.

"HVAC Design Essentials is ideal for engineers looking to learn about the latest tools and technology in the high-performance building industry, but is also beneficial for those new to the field who want to give themselves an edge," Filza Walters, professional development committee chair said. "Facilities managers involved in new construction or technicians who would like to gain design knowledge are also encouraged to attend."

The course is led by ASHRAE members Julia Keen and Joel Primeau, both are licensed engineers and ASHRAE Certified High Performance Building Design Professionals. Keen is associate professor of architectural engineering and construction science at Kansas State University, Manhattan. Primeau is director of sustainable design at Genivar, in Ontario, Canada.

In addition to updates on the most cutting-edge green HVAC&R tools and technology, attendees receive a copy of Standard 189.1, Standard for the Design of High Performance Green Buildings Except Low Rise Residential, and the 189.1 User's Manual. Professional Development Hours and Continuing Education Units are also available.

Register early to save: Advance conference registration is $1,189 ($939 member price) and $1,239 after April 15 ($989 member price). A company discount is available for $889 per person when three or more from the same employer enroll at the same time. More information can be found at www.ashrae.org/hvacdesign.

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