THE HOT AIR DIFFUSER
IDAHO CHAPTER NEWSLETTER

FEBRUARY 2010 VOLUME 16 ISSUE 5

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PRESIDENT'S MESSAGE

Hello Idaho ASHRAE members,

What can ASHRAE do for you? I can answer that question, but only partially. There are many things that a membership in ASHRAE provides including the most up to date HVAC research, industry standards, professional networking, guidelines for HVAC designs, and many others. For those who get involved in ASHRAE on a chapter or national level, the rewards of membership extend even further. It is possible for local members to be involved in a variety of committees which determine the standards that get published in ASHRAE handbooks. This is just one way a local chapter member could potentially cause change in the entire industry. In my opinion, the more you put into ASHRAE the more you can get out. With that being said, I challenge each current member to bring a guest or new member to a meeting before the end of our ASHRAE year. Our local chapter and to some degree national society directly reflect what our members desire. If you want to change the way ASHRAE approaches or deals with certain issues then get involved and make a difference.

Spencer Shepard, PE
President
Idaho Chapter ASHRAE

FEBRUARY PROGRAM*

For this month's meeting Ery Djunaedy from the Integrated Design Lab here in Boise will speak about the IDL and the services they offer including daylighting analysis, energy modeling support, and energy efficiency design support. Ery has a PhD in Mechanical Engineering specializing in computational methods; he is a research scientist and the building simulation specialist at IDL.

The IDL is dedicated to the development of high performance energy efficient buildings in Idaho and Eastern Oregon. This is approached through research, education and outreach efforts with students, owners and professional design and construction teams to transform design and construction practice and keep pace with the milestones of the 2030 Challenge. Those who utilize the resources available through the IDL will design and construct buildings that are more comfortable for people, require less energy to maintain and operate, and enhance the health and productivity of inhabitants. See the IDL website at www.idlboise.com .

WHEN: **FRIDAY, February 12, 2010**
11:45AM—1PM
WHERE: **Idaho Power Bldg.**
1221 W. Idaho Street
Boise, ID

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

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WESTERN CANWELL - Ridge Ventilators

AIR DUCT
*FLEXMASTER USA – Insulated, Acoustic Flex Duct

AIR HANDLERS
*ESSICK - Evaporative Coolers
*HASTINGS - Duct Furnaces, Make-up Air
RAPID – Gas-Fired Make-up Air and Evap. Cooling
SEASONS 4 – Custom-built HVAC specialty equipments and direct replacement of existing multi-zoned, single zoned indoor and roof top units.
WESTAIRE – Indirect/Direct Evap Coolers

AIR MONITORS
AIRTEST - Gas Monitors and Transmitters

AIR / WATER FILTRATION
FLANDERS - Filters (Bag, Cartridge, HEPA), Housings
PEP FILTRATION – Commercial and Industrial Filtration
PUROFLUX - Process and Cooling Water Filtration Systems
STERNVENT - Dust Collectors

BOILERS/BURNERS
CHROMOLOX – Electric Boilers and Steam Generators
PARKER BOILER - Flexible Tube Boilers
WEBSTER - Forced Draft Burners
WEIL MCLAIN – Boilers for every application, with unmatched reliability.

COMPRESSORS
*KAESER – 3-600 HP Rotary Screw

CRITICAL AIRFLOW CONTROLS
TEK –AIR - Airflow Measurement and Control for Indoor Air Quality and Energy Consumption

ENCLOSURES
SPINNAKER – Rooftop Screening Systems, Welded Wire Partion Systems

EXHAUST SYSTEMS
VAN-PACKER – Exhausting & Venting Stacks

FANS AND BLOWERS
*ACME ENGINEERING - Roof Exhausters, Fans, Blowers
AMERICAN COOLAIR - Propeller Fans
BROAN – Ventilation Fans, Heaters and Attic Ventilation
ILG - Propeller Fans
NUTONE - Ventilation Fans, Heaters and Attic Ventilation

HEAT TRANSFER
ALFA-LAVAL - Plate Heat Exchangers
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CC SOLUTIONS – Field-Erected Cooling Towers
RENEWAIRE – Energy Recovery Ventilators
SPINNAKER – Energy Recovery Ventilators
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THERMAL – Condensers, Fluid Coolers
WATTS RADIANT - Radiant heat solutions from hydronic and electric radiant floor heating and snow melt systems

HUMIDITY CONTROL
DESERT AIRE - Refrigeration Dehumidifiers
* VAPAC - Steam Humidifiers

KITCHEN HOODS
CAPTIVE-AIRE - Nation's leading manufacturer of commercial kitchen ventilation systems
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PUMPS / WATER SPECIALTIES
BARNES - Waste Water Pumps
BLACKMER - Positive Displacement Pumps
HCI - Terminal Valve Kits
*PEERLESS - Inline, End Suction, Multi-Stage Pumps
WHEATLEY – Exp. Tanks, Heat Exchangers

SOUND / VIBRATION CONTROL
AEROSONICS, INC. - Duct Silencers
*M.W. SAUSSE – Spring Isolators

SPACE HEATERS
CHROMOLOX - Solutions for industrial heating applications
NAILOR - Electric Duct Heaters
Q-MARK – Electric Space Heating
REDD-I – Electric Space Heating
RUFFNECK - Explosion-Proof Heaters
SOLARONICS – Gas Infra-red Heaters

Stocked Lines (Boise and/or Salt Lake City)

IMPORTANT DATES

FEBRUARY 12, 2010—ASHRAE MONTHLY MEETING
FEBRUARY 14, 2010—VALENTINE'S DAY
FEBRUARY 15, 2010—PRESIDENT'S DAY
MARCH 12, 2010—ASHRAE MONTHLY MEETING
MARCH 14, 2010—DAYLIGHT SAVINGS TIME BEGINS
MARCH 17, 2010—ST. PATRICK'S DAY
MARCH 20, 2010—1ST DAY OF SPRING
APRIL 4, 2010—EASTER SUNDAY

QUOTE OF THE MONTH

"In the long run, we shape our lives, and we shape ourselves. The process never ends until we die. And the choices we make are ultimately our own responsibility. "
~ Eleanor Roosevelt (1884-1962), First Lady (1933-1945), prominent author, speaker, and politician.

HISTORY LESSON

Five Years Ago

The chapter president was Tony Sutton. The meeting was held on February 11, 2005, at Louie's in Meridian. Bruce Poe gave a presentation on LEED certification including a history of LEED and how it has grown in the construction industry.

Ten Years Ago

The chapter president was Ben Strawn. The meeting was held on February 11, 2000, at Micron. The program was a tour of Micron and a presentation on Micron's air handling systems.

Twenty Five Years Ago

The chapter president was Lee Longson. The meeting was held on February 8, 1985, at the Royal Fork Restaurant. Marilyn Schuler, Boise Redevelopment Agency, gave a presentation on prospects for progress in downtown development.

RESEARCH PROMOTION

Greetings Idaho ASHRAE members! It is now February, and we only have 4 months left on this year's RP fundraising campaign. As of January 2010, we have received $3060 in gifts from individuals and companies in our chapter. THANK YOU! This represents about 36% of our goal. The companies that have donated are Engineering Inc., Midgley-Huber, Norbryhn Equipment, Clima-Tech, Drake Plumbing and Heating, and Sabol & Rice. Individuals that have contributed are Spencer Shepard, Cameron Sprinkel, Carl Marcum, Morgan Grohs, Scott Mackay and Andrew Beall.

If you need help in making your donation, please contact me. You can contribute 24 hours a day online at www.ashrae.org/contribute using your credit or debit card. Remember that all contributions to ASHRAE Research are 100% tax deductible and that these gifts fund publications like the Handbook series (a major reason why most of us are members in the first place). Thanks for your dedication to our industry.

-Scott Mackay, Research Promotion Chair

NEWS FROM THE HOME OFFICE

New Guidance on Clearing the Indoor Air through Improved IAQ

ATLANTA – 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 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

ASHRAE Publishes Update to Principles of HVAC

ATLANTA—A new textbook designed to double as a reference manual that allows engineers to build on their knowledge of HVAC design procedures and methods has been published by ASHRAE. Principles of Heating, Ventilating and Air-Conditioning builds on much of the basic information in the 2009 ASHRAE Handbook Fundamentals and contains the most current ASHRAE procedures and definitive, yet easy to understand, treatment of building HVAC systems, from basic principles through design and operation.

The book may be used for/by: undergraduate engineering courses in the general field of HVAC, similar courses at technical institutes, continuing education and refresher short courses for engineers, adult education courses for non-engineers.

There are several significant changes in the new edition, including new values for climatic design information; new values of heating, wind and cooling and dehumidifying design conditions; improved values of thermal conductivity and resistance for common building and insulating materials; and an extensively revised chapter on residential heating and cooling load calculations.

Additionally, the chapters on system design and equipment have been significantly revised to reflect recent changes and concepts in current heating and air-conditioning system practices. Also available is Principles of HVAC Solutions Manual, which contains revised solutions to most of the problems in the Principles book.

Co-authors are Ronald Howell, Ph.D., P.E., William Coad and the late Harry Sauer Jr., Ph.D., P.E.

The cost of Principles of HVAC is $89 ($76, ASHRAE members; $58, ASHRAE student members), while the cost of the solutions manual is $59 ($50, 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, by mail at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the ASHRAE.org Bookstore.

Standard 189.1 to Provide a Strong Foundation for High-Performance Green Buildings

ATLANTA—A new standard for the design of high-performance green buildings is set to revolutionize the building industry. Published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), in conjunction with the Illuminating Engineering Society of North America (IES) and the U.S. Green Building Council (USGBC), Standard 189.1, *Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings*, is the first code-intended commercial green building standard in the United States.

The standard, published Friday, provides a long-needed green building foundation for those who strive to design, build and operate green buildings. From site location to energy use to recycling, this standard will set the foundation for green buildings through its adoption into local codes. It covers key topic

areas similar to green building rating systems: site sustainability, water use efficiency, energy ef-ficiency, indoor environmental quality and the building's impact on the atmosphere, materials and resources. For complete information on the standard, including a readable copy, visit www.ashrae.org/greenstandard.

The energy efficiency goal of Standard 189.1 is to provide significant energy reduction over that in ANSI/ASHRAE/IESNA Standard 90.1-2007. It offers a broader scope than Standard 90.1 and is intended to provide minimum requirements for the siting, design and construction of high performance, green buildings. "The far-reaching influence of the built environment necessitates action to reduce its impact," Gordon Holness, ASHRAE president, said. "Provisions in the standard can reduce negative environmental impacts through high-performance building design, construction and operations practices. Ultimately, the aim is not just energy efficiency but a balance of environmental responsibility, resource efficiency, occupant comfort and well being and community sensitivity, all while supporting the goal of sustainable development."

"IES is pleased to be a co-sponsor of this standard that will have a significant impact on requirements for high-performance green buildings and the building industry as a whole," Rita Harrold, director of technology for IES, said. "We congratulate the Project Committee for the tremendous effort and dedication of its members in the fast track development of a consensus standard. We look forward to continuing the partnership with ASHRAE and USGBC as the standard continues to evolve through future continuous maintenance proposals."

"Greening the building code is fundamental to the U.S. Green Building Council's goal of market transformation and is also a critical factor in how the building industry is working to mitigate climate change," said Brendan Owens, VP, Technical Development, U.S. Green Building Council. "We're extremely excited to see our collective efforts over the past three years come to fruition in the form of this important standard."

Standard 189.1 has been written by experts representing all areas of the building industry, including engineers, lighting designers, sustainability experts, building owners, designers, architects, code and compliance officials, utilities, materials experts and equipment manufacturers. The technical requirements in the standard were also supported by input from the building industry during the public review process.

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. The cost of Standard 189.1 is $119 ($99, ASHRAE members)

ASHRAE Specialty Conference to Focus on Improving School Facilities, Young Minds

ATLANTA- Maximizing facility performance, and thereby students potential, is at the heart of the ASHRAE High Performance K-12 School Facilities conference, to be held Mar. 1-2. 2010 in Atlanta, Ga. The conference will present an integrated approach to complying with codes and standards while achieving a cost effective high performance solution to K-12 facility design, construction and operation. Its goal is to bring together administrators, design professionals, policy makers and other administrators, design professionals, policy makers and other stakeholders to learn about the many ways to improve these facilities on operational, fiscal, engineering and administrative levels.

Sixteen percent of schools districts controllable costs are spent on energy, Ben Leppard, a member of the conference steering committee and track chair, said. By focusing on energy efficiency and high-performance goals a schools energy bills can be lowered, saving millions of dollars each year which can be redirected into facilities, teachers salaries, computers and textbooks.

Experts in the fields of acoustics, lighting, ventilation, system controls, energy efficiency and operation and maintenance will lead the stakeholders through the complex integration of systems, policies and legislation on a straightforward path to achieving high performance new and existing K-12 facilities and higher performing students.

Improved indoor air quality, acoustically designed indoor environments and high-performance lighting systems have the potential to increase student productivity, Leppard said.

Attendees of the conference may attend sessions that focus on three key areas of high-performance school facilities: ventilation systems, building systems control and acoustics.

Advance conference registration is $450 ($350 member price) and $500 onsite ($400 member price). More information can be found at www.ashrae.org/highperformanceschools.

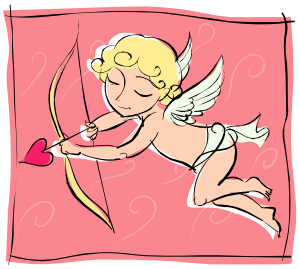
ASHRAE, founded in 1894, is an international organization of 55,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

SUDOKU OF THE MONTH

Puzzle Difficulty: DIFFICULT

Fill in the puzzle so that every row, every column, and every 3 x 3 box contains the numbers 1 through 9. (Answer in next month's newsletter.)

		2					7	
8	5						3	4
		7	8			1	5	
5				3	1		6	
				6				
	4		5	2				7
	8	3			9	7		
6	2						8	1
	9					5		



SUDOKU SOLUTION

FROM DECEMBER'S NEWSLETTER

1	4	2	8	9	3	5	7	6
6	9	3	1	5	7	4	8	2
5	7	8	2	4	6	3	9	1
9	2	6	7	8	5	1	2	4
3	8	5	4	6	1	9	2	7
4	1	7	3	2	9	6	5	8
7	3	4	9	1	2	8	6	5
8	5	9	6	7	4	2	1	3
2	6	1	5	3	8	7	4	9

JOKE OF THE MONTH

A woman was taking an afternoon nap. After she woke up, she told her husband, "I just dreamed that you gave me a diamond necklace for Valentine's day. What do you think it means?"

"You'll know tonight." he said.

That evening, the man came home with a small package and gave it to his wife. Delighted, she opened it, only to find a book entitled "The meaning of dreams."

A guy walks into a post office one day to see a middle-aged, balding man standing at the counter methodically placing "love" stamps on bright pink envelopes with hearts all over them. He then takes out a perfume bottle and starts spraying scent all over them.

His curiosity getting the better of him, he approaches the balding man and asks him what he is doing. The man say, "I'm sending out one thousand Valentine cards signed, "Guess who?"

"But why?" asks the man.

"I'm a divorce lawyer," the man replies.

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