

Pile of Bones

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January 2009

President's Message

by Ted Cooke

Happy New Year!

I trust you all had a wonderful holiday and found time to reflect on this past year with happy fondness while looking forward to the exciting year to come. I, after imbibing in some holiday cheer, made a New Year's Resolution to make no New Year's Resolutions and in so doing managed to break my New Year's Resolution the moment I made it. I hope that those who made resolutions are doing much better or, at least, were wise enough to choose an achievable resolution.

Last month's meeting was our Christmas function at the U of R Owl which was quite well attended. I wanted to thank both Trevor Hobman and Neil Paskwitz for organizing the event. The food was excellent though it paled in comparison to the company, the pool and the phenomenal fooze-ball skills exhibited by a few.

At this month's meeting our main speaker is Duane Rothstein covering the new release of ASHRAE standard 62.1 Ventilation for

Acceptable Indoor Air Quality and the modifications made therein. Following supper we will also have Dianna Miller of NRCan give a presentation on NRCan's Building's Division and its initiatives and incentive programs.

Technical Program for January

Happy New Year! I hope everyone enjoyed the Holiday Season and was able to have a nice break (even though the temperature was mostly frigid!).

This month we are pleased to have with us Duane Rothstein from McQuay International to give a presentation on ASHRAE Standard 62.1 – 2007 – Ventilation for Acceptable Indoor Quality. The presentation will discuss the general design requirements of Standard 62.1 along with an introduction to the Ventilation Rate Procedure and Indoor Air Quality Procedure used to calculate the minimum airflow requirements for buildings.

This will be a good opportunity for any HVAC designer types to refine their engineering skills and to gain a better understanding of the ASHRAE 62.1 Standard.

Meeting Notice!

**Wednesday
January 14, 2009**

**Hotel Saskatchewan
Radisson Plaza
2125 Victoria Ave
Regina**

- 5:00 – Social / Cocktails**
- 5:30 – Duane Rothstein
ASHRAE Standard 62.1 –
2007 – Ventilation for
Acceptable Indoor Air
Quality**
- 6:30 – Dinner**
- 7:15 – Dianna Miller on
NRCan's programs and
training offerings**
- 7:45 - Chapter Meeting**

For more information on Duane Rothstein refer to the Chapter Technology Chair Report.

We are also pleased to have with us Dianna Millar who is the Senior Officer, Buildings Division with the Office of Energy Conservation, Natural Resources Canada. Dianna will present some of the programs and training offerings of NRCan's Buildings Division, particularly ways that NRCan is working to help make commercial and institutional

buildings more efficient. NRCan's centerpiece at this point is retrofit incentive, which is of interest to many ASHRAE members working on retrofit activities.

We look forward to seeing you on Wednesday.

ASHRAE Calendar of Events



For more information on the ASHRAE Conference, please visit: www.ashrae.org/chicago

2008/2009 Meetings and Events Schedule

January 14, 2009: Duane Rothstein – McQuay International – ASHRAE Standard 62.1-2007 Ventilation for Acceptable Indoor Air Quality; Dianna Millar – NRCan Buildings Division – Office of Energy Conservation

February 11, 2009: ASHRAE Distinguished Lecturer – Robert Baker - Green Maintenance Needed to Keep HVAC Systems Green

March 11, 2009: ASHRAE Distinguished Lecturer – Will Stoecker – The World of Industrial Refrigeration

April 15, 2009: Student night

May 13, 2009: Condensing & Cast Iron Boiler Technologies & Applications - Louis Garas and Keith Farrell

June, 2009: ASHRAE Research golf tournament

Committee Chair Reports

President Elect and Chapter Technology Transfer Chair

by Greg Fluter

Thank you to Trevor Hobman and Neil Paskewitz for organizing this year's Christmas Social at the Owl. The event was well attended and we all enjoyed a few drinks, a great meal (especially the desert!), socializing and even a bit of pool and foosball.

This month we have Duane Rothstein from McQuay International presenting on ASHRAE Standard 62.1 – 2007 – Ventilation for Acceptable Indoor Quality. Duane Rothstein is an Applications Engineer for McQuay International, a Manufacturer of HVAC Equipment. He is a ventilation and IAQ specialist. His current duties include development and optimizing HVAC applications. Duane has a Bachelor's degree in Mechanical Engineering from Minnesota State University, Mankato and has his EIT certificate. Duane is also an ASHRAE Associate Member and serves as member of ASHRAE Standing Product Committee SSPC 62.1 Ventilation for Acceptable Indoor Air Quality, member of the Professional Development Committee and corresponding member of TC 5.5 Air-to-Air Energy Recovery.

Please note that next month we have a program change. For February's meeting we were able to obtain a speaker from the ASHRAE Distinguished Lecturer Program. Robert Baker will be with and the title of his presentation is "Green Maintenance Needed to Keep HVAC Systems Green". Please mark the date on your calendars as I'm sure it will be a great presentation.

Membership Promotion Chair

by Rob Craddock

ASHRAE is preparing for the winter meeting, in Chicago. The ASHRAE Winter Conference runs Jan. 24-28, 2009, and the AHR Expo takes place Jan. 26-28. For more information on the ASHRAE Conference, please visit www.ashrae.org/chicago. The Technical Program theme is Sustainable Urban Design.

If you are not a member or your membership is delinquent and want to attend the meetings. Please call me or go to www.ashrae.org and join or renew your membership and you will save on your registration.

At this point of the ASHRAE year we have 3 membership applications and I have a couple of people

that have expressed interest in joining who I will follow up with in the next couple of weeks. If there is anyone you think should be a member and is not yet please let me know and I will contact them.

See you Wednesday.

Student Activites

by Jason Danyliw

The Regina ASHRAE Chapter website is currently in the process of undergoing a redesign. The website is near completion, and with the help of the two SIAST students and a web designer, we hope to have the website up and running very shortly. Please feel free to contact me at <mailto:jason@skhvac.com> with any suggestions on information to be included in the website. We will pass along the detailed information on the site shortly when it is available for use.

The University of Regina Engineering faculty is in need of any ASHRAE Fundamental handbooks for use with class studies. Please feel free to contact me at <mailto:jason@skhvac.com> if you have any spare or old handbooks (hardcopy or CD's) that you would like to donate to the University, and I will make arrangements to get the handbooks to Marie Iwaniw at the University of Regina.

The April ASHRAE Regina Chapter meeting is the Student Night. This is where selected fourth year University of Regina engineering students will present their ASHRAE-related fourth year engineering projects during the meeting, they will be judged on predetermined criteria, and awards presented for their hard work. There will be more detailed information on this meeting in the months to come.

Vice president – Newsletter

by Dean Nagel

Regina Chapter Email Address:

<mailto:ashraeregina@accesscomm.ca>

Regina Chapter Website Address:

Currently Under Construction

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is an

international membership organization founded to advance the arts and sciences of heating, ventilation, air conditioning, refrigeration and related issues.

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ASHRAE Learning Institute

The ASHRAE Learning Institute is offering on-line courses. [Online Courses Registration Form](#) Please see attached information.

ASHRAE Satellite Broadcast To Cover 'Green' IAQ

ATLANTA—The April 22 ASHRAE satellite broadcast and webcast, *Clean, Lean, and Green—IAQ for Sustainable Buildings*, will encourage the building community to use good IAQ practices to create a more sustainable built environment. The broadcast will highlight the guidance provided by the *IAQ Guide: Best Practices for Design, Construction, and Commissioning*, which ASHRAE helped to develop. There is no fee for registration.

SRC and SaskEnergy are looking for a potential Saskatchewan host building to demonstrate natural gas absorption heat pumps

SaskEnergy/SRC – Natural Gas Absorption Heat Pump Project

By Shawn Wedewer, SRC - Building Performance
SaskEnergy and SRC are looking for one eligible host building to perform a trial utilizing Natural Gas Absorption Heat Pumps (NGAHP) in Saskatchewan. SRC is the project manager working on behalf of SaskEnergy. SaskEnergy is interested in installing and demonstrating geothermal NGAHP technology for buildings located in Saskatchewan. The purpose of the geothermal NGAHP demonstration is to provide a better understanding of geothermal NGAHP technology and quantify the environmental benefits of geothermal NGAHPs in Saskatchewan.

The project will provide the following incentives to the host:

- Two to five Robur Model GAHP-W-LB units will be supplied (total: 238,800 to 597,000 Btu)
- Partial Ground Loop funding up to \$15,000

Besides the incentives listed above, the host will benefit from the NGAHP system energy savings for the facility throughout the life of the project. The host will be responsible for selecting their own design team and paying for all other associated costs. The building can be new construction or involve the retrofit of an existing facility (keep in mind the 140°F output temperature which may complicate the retrofit depending on type of heating system that pre-exists in the building).

For more information please see the SRC website: http://www.src.sk.ca/html/research_technology/manufacturing/build_perform/heat_pump/index.cfm

Contact Shawn Wedewer of SRC at 787-2470 should you have any questions regarding the project.

Standard 90.1-2004 Established as National Reference Standard by DOE

ATLANTA – States must now certify that their building codes meet the requirements in ASHRAE/IESNA's 2004 energy efficiency standard, under a

ruling issued by the United States Department of Energy (DOE) that finds the standard saves more energy than an earlier version.

ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings, has been established by the DOE as the commercial building reference standard for state building energy codes under the federal Energy Policy Act.

The Act requires all states to certify that they have state energy codes in place that are at least as stringent as 90.1-2004, or justify why they cannot comply. The DOE determined that Standard 90.1-2004 saves more energy than Standard 90.1-1999, which was the previously referenced standard in the Act.

“The quantitative analysis of the energy consumption of buildings built to Standard 90.1-2004, as compared with buildings built to Standard 90.1-1999, indicates national source energy savings of approximately 13.9 percent of commercial building energy consumption. Site energy savings are estimated to be approximately 11.9 percent,” according to the ruling published in The Federal Register on Dec. 30, 2008.

“ASHRAE is committed to continually improving building energy performance, so we are pleased with this recognition that the 2004 standard saves more energy,” ASHRAE President Bill Harrison said. “ASHRAE is currently working on the 2010 version of Standard 90.1 with a goal of achieving 30 percent energy savings compared to 90.1-2004 as part of our target to achieve market-viable net-zero-energy buildings by 2015.”

“The Illuminating Engineering Society is pleased to receive the DOE's positive determination on the site and source energy savings achieved by ANSI/ASHRAE/IES Standard 90.1-2004 compared to the 1999 standard,” said Rita Harrold, IES director of technology. She also expressed the Society's appreciation for the contributions of the committee members responsible for developing the standard, which help further the goals of the sponsoring organizations, and for the diligence of

the DOE in conducting the determination.

The DOE noted that the newer version of the standard contained 13 positive impacts on energy efficiency. These impacts included changes made through the public review process in which users of the standard comment and offer guidance on proposed requirements to the standard. The positive impacts include:

- Removed explicit allowance for supply air into non-occupied isolation areas.
- Limitations of the use of dampers in closed circuit cooling towers in place of water bypass valves and piping.
- Additions of insulation requirements for buried ductwork.
- Mapping of envelope requirements to new climate zones, which led to increased stringency of envelope requirements.
- Mapping of economizer requirements to new climate zones, which led to greater geographic expansion of economizer requirements.
- Addition of requirements for ventilation fan controls.
- Lowered size range for part-load fan power limitation.
- Addition of requirements for heat pump pool heaters.
- Complete replacement of interior lighting power density allowances.
- Revised exterior lighting power density allowances.
- Addition of occupancy sensor requirements for classrooms, meeting, and lunch rooms.
- Lower retail sales lighting power allowance.
- New exit sign wattage requirement.

In addition, ASHRAE is working on providing more stringent energy guidance in a proposed standard for high-performance buildings. Being developed in partnership with IESNA and the U.S. Green Building Council, Standard 189.1, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings, will provide minimum requirements for the design of high-performance new commercial buildings and major renovation projects, addressing energy efficiency, a building's impact on the atmosphere,

sustainable sites, water use efficiency, materials and resources, and indoor environmental quality.

Since being developed in response to the energy crisis in the 1970s, Standard 90.1 now influences building designs worldwide. It has become the basis for building codes, and the standard for building design and construction throughout the United States. ASHRAE publishes a revised version of the standard every three years. The 2007 version of Standard 90.1 was released last year.

Dean Nagel
Vice President – Newsletter

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