



Pile of Bones

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President’s Message

By Alana Yip

Happy New Year! I hope everyone got to enjoy some time with family and friends.

Thanks to Wayne Tkach for organizing another great Christmas social. Although I had to miss the dinner, I heard great reviews of the food and I know I really enjoyed the Globe Theatre’s production of Sleeping Beauty. It was a great kick off to the holiday season.

This month’s meeting, on TUESDAY, January 7th, we have the privilege of hosting the ASHRAE Society President, Bill Bahnfleth, Ph.D., P.E., and have him speak to us on his Presidential theme, “Shaping the Next”. We have been very fortunate to have Presidential visits the past few years and I encourage you to come and show your support of our chapter and society.

The winter meeting is coming up on January 18-22nd in New York. I hope many of you have already registered. Together, the ASHRAE Conference and the AHR Expo combine to create the ideal atmosphere for those interested in advancing the building industry, to network, inspect the latest technology and learn about the newest practices for the built environment. There are many courses and technical tours available during the week and you can find out more information regarding the conference and expo at www.ashrae.org/newyork.

Meeting Notice

Tuesday January 7th, 2014

Hotel Saskatchewan

- 5:00 – Cocktails
- 5:45 – Speaker: ASHRAE President
- 6:45 – Supper
- 7:30 – ASHRAE Chapter Meeting

Upcoming Events

- February 12, 2014:
Devon Abellon
Radiant Cooling Energy Transfer
- March 7, 2014:
Lily Wang: *Improving Noise Concerns*
- April 9, 2014
Student Night; speaker Leslie Jonsson

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Pile of Bones

President's Message Continued

Our region, Region XI, is having their regional dinner on January 19th at 7pm in New York. The dinner is at McCormick & Schmick's. The cost is \$50 plus tip and liquor. There will be a sign up sheet at the Regions Message board in the ASHRAE Registration area, in the Headquarters Hotel, the Midtown Hilton. This is a great opportunity to visit and network with other members in our region.

Our region has also moved their website to <http://ashraeregionxi.wordpress.com/> and the regional newsletter to <http://regionxithemoose.wordpress.com/>. Take a minute to check them out and see what is going on in the region.

The ASHRAE Webcast, Buildings in Balance : IEQ and Energy Efficiency, is on April 17th and will be held in the SaskTel Auditorium. More information will follow in the coming months.

I also encourage you to take a look at our calendar of events as Janel has arranged some great speakers for the coming months.

Our campaign to raise money for ASHRAE Research is in full swing. I would like to thank all those that have already donated and encourage those that have not yet. Please contact Carla to arrange your donation. If you are curious to know how your research dollars are used please see the brochure at the following link: <http://www.ashrae.org/FileLibrary/docLib/RPBrochures/Research-brochure.pdf>



2013-2014 Meetings and Events

November 20, 2013

Distinguished Lecture:

David Underwood

Standard 90.1

Distinguished Lecturer: Lily Wang

Improving Noise Concerns in Classroom Environments

December 2013

Christmas Social

April 9, 2014

Student Night and RVC visit from Leslie Jonsson

January 7, 2014

Presidential Visit Bill Bahnfleth

April 17, 2014

ASHRAE Webcast

Energy and Water Efficiency without Compromising IEQ

January 18-22, 2014

ASHRAE Winter Conference

New York City, New York

May 1-3, 2014

Region XI CRC in Mid Columbia

February 12, 2014

Distinguished Lecture:

Devon Abellon - *Radiant Cooling*

Energy Transfer Fundamentals

May 14, 2014

Speaker: TBD

March 11, 2014

June 2014

ASHRAE Research Golf Tournament



AHRI Low-GWP AREP Conference

**January 16, 2014 • New York City
New York Hilton Midtown**

Committee Chair Reports

Programs

by Janel Walter

This month we have the pleasure of welcoming ASHRAE's president, Mr. William Bahnfleth! As ASHRAE's president, Bahnfleth chairs the Society's Board of Directors and Executive Committee. He will be speaking to us about his presidential theme; it is sure to be inspirational and informative.

William P. "Bill" Bahnfleth, Ph.D., P.E., Fellow ASHRAE, ASME Fellow, is a professor of Architectural Engineering and director of the Indoor Environment Center at The Pennsylvania State University, University Park, Pa.

Bahnfleth's Presidential Theme, "Shaping the Next," focuses on embracing our responsibility to "Our World" – fellow humans and the earth, to make buildings safe, healthy, productive, comfortable environments in harmony with nature. To do this, he believes we must develop "Ourselves" – the human resource of the professional community, and transform "Our Work" – what we do, how we do it, and who we do it with, by becoming more

global in outlook, broader in scope, and more collaborative in approach.



Bahnfleth is the son of ASHRAE Presidential Member Donald R. Bahnfleth, Fellow ASHRAE, Life Member, who served as president in 1985-86. This marks the first father/son presidency in ASHRAE's history.

He has conducted research on a diverse range of topics including ground-coupled heat transfer, variable primary flow chilled water systems, performance measurement of stratified chilled water storage tanks, optimization of diffusers for chilled water storage tanks, measurement of envelope air leakage of tall buildings, ultraviolet germicidal irradiation (UVGI) for air and surface disinfection in HVAC systems, user-friendly multizone airflow and contaminant dispersion models, metrics for predicting the impact of measures to mitigate risk from airborne indoor contaminant releases, and

others. He is the author of more than 125 articles and technical papers and author or reviser of 12 books/book chapters.

In his ASHRAE service, Bahnfleth is faculty advisor to the Pennsylvania State University – University Park Student Branch, and is an ASHRAE Distinguished Lecturer. He has chaired ASHRAE’s Technology Council, Members Council, Technical Activities Committee and Technical Committee 6.9 Thermal Storage, among others. He has served as a member of numerous committees, including recent appointments

to the CLIMA 2013 Advisory Committee, the Building Performance Alliance Ad Hoc Committee, and the Building Safety and Security Position Document Committee.

Bahnfleth was awarded both a Bachelor (1979) and Master (1980) of Science degree in mechanical engineering; a Bachelor of Music (1988) in pipe organ performance; and a doctorate in mechanical engineering (1989) from the University of Illinois at Urbana-Champaign.

What's New in ASHRAE

ASHRAE Publishes 2013 Version of Thermal Comfort Standard

Major revisions for design and measurement of comfortable spaces are included in a newly published 2013 standard from ASHRAE.

ANSI/ASHRAE Standard 55-2013, *Thermal Environmental Conditions for Human Occupancy*, combines the 2010 standard and 18 published addenda into a consolidated standard. The core of the standard in Sections 4 and 5 specifies methods to determine thermal environmental conditions (temperature, humidity, air speed and radiant effects) in buildings and other spaces that a significant proportion of the occupants will find acceptable at a certain metabolic rate and clothing level.

Section 7 of the standard includes new requirements for the measurement and evaluation of existing thermal environments and is also applicable to commissioning.

The standard has been re-written with a renewed focus on application by practitioners and use of clear, enforceable language. Requirements are now clearly stated and calculation procedures appear sequentially.

Other noteworthy additions to the standard include an allowance for the cooling effect of air movement as a way to extend the upper limit of the comfort zone in naturally conditioned spaces and addition of a predictive model for occupant clothing behavior based on extensive field research. These additions provide new methods for improving occupant comfort while minimizing energy use, according to Gwelen Paliaga, chair of the committee that wrote the standard.

Documentation requirements to show that a design meets Standard 55 are contained in Section 6 and a sample compliance form is provided in appendix J. Both of these sections are clarified and streamlined for use by owners and third party rating systems.

ASHRAE Publishes Revised Standard on Ventilation in Health Care Facilities

In some sense, designers of health care facilities must follow the same creed as health care professionals: to first do no harm. A newly revised standard for ventilation of health care facilities, can help designers by providing the minimum requirements for the design of

ventilation systems for health care facilities to provide environmental control for comfort, as well as infection and odor control.

ANSI/ASHRAE/ASHE Standard 170-2013, *Ventilation of Health Care Facilities*, was written by ASHRAE and the American Society for Healthcare Engineering (ASHE). When the standard was first published in 2008, it was the first American National Standards Institute (ANSI) standard in the nation to specifically address ventilation in health care facilities.

“Without high-quality ventilation in health care facilities, patients, health care workers and visitors can become exposed to contaminants through normal respiration of particles in the air.” Paul Ninomura, chair of the 170 committee, said. “Ventilation systems and designs for health care facilities are intended to provide a comfortable environment for patients, health care workers and visitors while diluting, capturing and exhausting airborne contaminants including potentially infectious airborne agents.”

Standard 170 has been in constant maintenance since 2008 and the past five years have provided an opportunity to review and further improve it. The revised standard features updates, changes and clarifications dealing with humidity, ducted returns, recirculating rooms units and duct lining, to name just a few refinements.

One trend that almost all classes of buildings have seen on the rise lately has been energy efficiency. Health care facilities can be energy extensive buildings and energy recovery can provide significant savings. Provisions for the application of energy recovery are now specifically addressed in 170-2013. However, as the standard stipulates, if energy recovery systems are utilized, the systems cannot allow for any cross-contamination of exhaust air back to the supply airstream. Run around coils are just one example of a system that is permitted, according to Ninomura.

The standard also addresses some issues that may reduce costs to build and operate health care facilities. Standard 170 allows relative humidities as low of 20 percent for some rooms. This may result in smaller capacity of humidification equipment, lower operating costs and reduced maintenance costs. The standard permits some use of plenum returns in outpatient facilities, which in turn may result in lower construction cost and operating costs.

Additionally, some hospitals are interested in utilizing displacement ventilation to reduce operating costs. The standard addresses the application of displacement ventilation within patient rooms.

Poorly ventilated health care facilities may increase the concentration of airborne contaminants including fungi or mold, which may cause allergic responses in even healthy workers and occupants. Considering the various occupancies and patient populations, great care must be taken in the design of health care ventilation systems.

The cost of ANSI/ASHRAE/ASHE Approved Standard 170-2013, *Ventilation of Health Care Facilities*, is \$58 (\$48, 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.

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Alana Yip
SaskTel
alana.yip@sasktel.net

Past President & Research Promotion

Carla Spriggs
HDA Engineering Ltd.
cspriggs@hdaeng.com

President Elect & Programs Chair

Janel Walter
HDA Engineering Ltd.
jwalter@hdaeng.com

Vice President & Newsletter

Dan Brothers
R.J. England Consulting
dan@rjengland.com

Membership Promotion

Greg Fluter
MacPherson Engineering
g.fluter@mac-eng.ca

GGAC

Jason Danyliw
H.V.A.C. Sales Ltd.
jason@skhvac.com

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Kris Pockett
Kris Pockett Construction
pocket@accesscomm.ca

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Jared Larson
MacPherson Engineering
j.larson@mac-eng.ca

Treasurer

Brad Huber
Cypress Sales
b.huber@cypresssales.com

Way & Means

Wayne Tkach
MacPherson Engineering
w.tkach@mac-eng.ca

Historian

Bob England
R J England Consulting Ltd.
rje.bob@sasktel.net

Contact us at:

ashraeregina@gmail.com

Visit us at:

<http://regina.ashraechapters.org/>

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