

BUFFALO TALES

Newsletter of the Manitoba Chapter

The Manitoba Chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers was chartered in September 1935. It is the second oldest ASHRAE Chapter in Canada. ASHRAE Manitoba is part of ASHRAE Region XI and covers ASHRAE members in Manitoba and Northwest Ontario.



Thursday October 15, 2009

ASHRAE Distinguished Lecturer

Stan Mumma

Dedicated Outdoor Air Systems (DOAS) Design and Field Experiences

Social Hour at 5:00

Dinner at 6:00

Presentation after dinner

Applications of DOAS have expanded significantly over the past 5 years. As a result, Dr. Mumma's presentation focus has shifted away from "The Reasons Engineers Are Seriously Considering Them" to "DOAS Design Field Experiences". Specific attention will be given to controls, enormously expanded equipment choices, comfort and ADPI, energy performance, humidity control, loss of air side economizers, LEED points, parallel systems, and pitfalls.

Dr. Stanley Mumma is currently Professor Emeritus of Architectural Engineering at Pennsylvania State University. Prior to joining Penn State in 1984, he was a General Motors Corporation project engineer for three years between his undergraduate studies in Mechanical Engineering at the University of Cincinnati, and his graduate work at the University of Illinois at Urbana-Champaign. Since earning his Ph.D. in Mechanical Engineering in 1974, under the mentorship of Dr. Will Stoecker, he has also held faculty positions at Ohio State University and Arizona State University. In the first third of his academic career, his research focused principally on solar and alternate energy. Then his interests changed to innovative ways of meeting ASHRAE Standard 62 in an energy efficient fashion. That work has led to his current intense interest in dedicated outdoor air systems (DOAS). He writes extensively on the subject (see <http://doas-radiant.psu.edu/papers.html>). Two of his publications were recipients of ASHRAE best paper awards. He has also received ASHRAE's Distinguished Service Award, the E.K. Campbell Award of Merit, and the grade of Fellow. Currently, Dr. Mumma is a member of several Technical Committees and the Society Publishing Committee.



President's Message - Daryl Friesen

On behalf of our Board Members I'd like to welcome all of you to ASHRAE Manitoba Chapter's 2009 – 2010 Season. It seems like summer just got underway and here we are with October just around the corner. I hope you all had an opportunity to take some time off and take advantage of what little summer we had to recharge for the long winter ahead.

As we enter the fall season, our Chapter Executive is busy planning another exciting year of programs consisting of guest technical speakers, technical tours and events to keep things interesting. The October meeting features ASHRAE Distinguished Lecturer Stanley Mumma, P. Eng. presenting on the innovative technology of Chilled Beams. As always the Board would welcome suggestions & input from the membership for places or topics that would be of interest to you all.

My thanks go out to all of the Officers, Board of Governors, and members for their hard work last year. Our Chapter is very fortunate to have many dedicated members that are willing to volunteer their time year after year as we continue to grow our Chapter. Last year our membership increased again and we enjoyed great attendance at each meeting. I look forward to trying to improve on these accomplishments again this year. I would urge each and every one of you to consider stepping forward and volunteering your time on a committee. We have so many opportunities to serve and I promise that you will benefit from your involvement.

I would like to close by asking all of you to take time out of your very busy schedules to attend our monthly dinner meetings and invite some of your colleagues and associates. I look forward to seeing you on October 15th.

Coming Events

October 20, 2009 - NRC-IRC Energy Efficiency in Buildings - New Tools and Technologies - Winnipeg Convention Centre

Organized by: Institute for Research in Construction, National Research Council Canada
Building Science Insight is a national seminar series presented annually by the National Research Council Canada Institute for Research in Construction to provide construction professionals with practical information. Each seminar focuses on technical advances in building science on a specific topic and includes the results of NRC-IRC research. This year's seminar will address the efficient use of energy in buildings through five presentations on recent research and one on issues related to energy codes.

The following topics will be addressed:

Overview of the National and Provincial Energy Codes for Buildings

This presentation will provide an overview of the development of the Model National Energy Code for Buildings 1997 and its evolution to the updated provisions planned for the National Energy Code for Buildings 2011. It will also discuss the current and future status of energy regulations for buildings in the provinces and territories and their association with the National Energy Code for Buildings 2011.

Dimmable Lighting: Energy Savings and Occupant Satisfaction

Dimming ballasts with appropriate controls can reduce lighting energy consumption as much as 50%. Personal dimming controls can produce additional energy savings of about 10%, while also improving occupant satisfaction and productivity. NRC-IRC researchers will review their research

findings in this field and predict future trends.

Energy Ratings of Window and Wall Assemblies

This presentation will summarize the procedure for window Energy Rating found in CSA Standard A-440.2 and its relationship to Natural Resources Canada's ENERGY STAR program. It will also provide examples of the results of NRC-IRC research on high-performance glazing systems and present a procedure for comparing the thermal performance of walls built with different insulation materials.

Making Buildings Responsive to Peak Energy Demand

Meeting peak electrical demand is costly, but failure to do so leads to blackouts. Building operators can help by dimming lights and changing thermostat set points and ventilation rates during peak periods. This presentation looks at the extent to which energy demand can be reduced without significantly affecting the indoor environment.

High-Performance Thermal Insulation in Building Envelopes

Although still virtually unknown in Canada, vacuum insulation panels (VIP's) have thermal resistance values up to 10 times those of conventional insulation materials. This presentation will outline NRC-IRC studies on the performance and construction of VIPs, explain how they work, and demonstrate the challenges and advantages of using them in building construction.

Energy-Efficient Roofs

Properly designed roofs can play a significant role in efforts to achieve energy efficiency and sustainability in construction. This presentation will review and clarify misunderstandings surrounding sustainable, green, reflective and high-performance roofs; present some recent research on the performance of these roofs; address environmental, durability and life-cycle issues; discuss design and construction; and encourage the use of new technologies.

Speakers: The roster of speakers includes NRC-IRC building science specialists Hakim Elmahdy, Guy Newsham, Phalguni Mukhopadhyaya, Benjamin Birt, Aziz Laouadi, Mike Swinton, Ralph Paroli and Morad Atif, technical advisors from the Canadian Codes Centre Cathleen Taraschuk, Mihailo Mihailovic and Heather Knudsen. Provincial representatives responsible for energy regulations will also be invited to address energy code issues.

Registration information and more available at:

<http://www.nrc-cnrc.gc.ca/eng/ibp/irc/bsi/09-dates.html>

ASHRAE Manitoba Website - Devin Evenson

All kinds of interesting and useful information can be found on the Manitoba Chapter website, including general chapter information, chapter contacts, activities local and abroad, Region XI and Society related information, chapter history, archived Buffalo Tales, and a growing list of links to take you onto ASHRAE related sites and topics. So the next time you're surfing the pipeline of information stop by and visit us at www.ashraemanitoba.ca.



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ASHRAE Standard 90.1 Addendum

Among other interesting addenda available for public review in ASHRAE Standard 90.1 is the following from Addendum bz

8.4.2 Electrical Energy Monitoring

8.4.2.1 Monitoring. Electrical energy usage shall be monitored separately for the total building and individual tenant spaces for interior lighting system, exterior lighting system, *HVAC systems*, and receptacle circuits. Utility grade monitors shall not be required.

Exceptions to 8.4.2.1:

a) Building/alteration permits for less than 10,000 ft² (929m²) in total area.

b) *Dwelling units*.

c) Residential buildings with less than 10,000 ft² (929m²) of common area

8.4.2.2 Recording. The electrical energy usage for the loads measured under 8.4.2.1 shall be recorded for intervals of 15 minutes, hourly, daily, monthly, and annually. 15-minute peak demand shall be recorded for the energy usage of the total building. The system shall be capable of maintaining all data collected for a minimum of 36 months.

Please see: <https://osr.ashrae.org/default.aspx> for other Standards addenda and to provide comments.

Manitoba Chapter History, We have one! Dieter Bartel

Did you know.....

- John B. Steele (1935 and 1936) and Doug Swain (1947 and 1958) were the only two ASHRAE members to serve as chapter president for more than one year?
- The Manitoba Chapter received its charter in 1935? Second oldest in the country, predated only by the Toronto Chapter.
- In 1943 the chapter board meetings were held at the residence of Paul Walsh, 145 Ash Street?
- Chapter membership numbers were 53 in 1950, with 3 pending applications?

More stories will be entered in future newsletters. If you have your own memories to share with the chapter, please don't hesitate to send them along to either Bert Phillips (phillips@unies.mb.ca) or me at dbartel@hydro.mb.ca.

In future editions of Buffalo Tales, I will be transposing some of the priceless text from the 1990 Manitoba Chapter History book for your reading enjoyment. It would be nice to have someone step up to the "plate" and update our chapter history book. Yours truly is just too busy to take this on.

If you have any thoughts as to how to celebrate our chapters 75th anniversary, please drop me a line at 360-7717.

2008 – 2009 Donations to ASHRAE Research – Sergio Almeida, Chapter RP Chair

Individuals and organizations are encouraged to contribute to Research Promotion for ASHRAE Research Canada. Canadian contributions support research in Canada. Below is a list of those individuals and companies in our Chapter area that contributed to ASHRAE's research efforts. For information on how ASHRAE Research benefits our industry and find out how you can contribute, contact me at Almeida, Sergio SA Almeida@Trane.Com.

COMPANIES (Honour Roll \$150)

Trane	2,975
Manitoba Hydro	2,000
Manitoba ASHRAE Chapter	1,645
BPL Sales Limited	1,000
Building Energy Management Manitoba Inc	1,000
E H Price Limited - Winnipeg Sales Office	1,000
E H Price Limited	1,000
Midwest Engineering Ltd	1,000
Tom Beggs Agencies Ltd	1,000
Derksen Plumbing & Heating Limited	500
Nova 3 Engineering Ltd	500
Axiom Industries, Ltd.	450
Airdronics Incorporated	250
Engineered Air - Winnipeg	250
Smith Carter Architects and Engineers Inc	250
Hydron-Aire Ltd	200
MCW Consultants Ltd	200
R G Sales Company Limited	200
Appin Associates	150

INDIVIDUALS (Honour Roll \$100)

Mr Elbert G Phillips	325
Mr Bruce P Menlove, PE	250
Mr John David Brighty	200
Mr David B McKibbin	150
Mr David M Stones, PE	150
Mr Sergio M Almeida, P.Eng.	150
Mr Corey W Nation, P.Eng, CEM	100
Mr Daryl B Friesen	100
Mr Dieter Bartel	100
Mr George A Marchildon	100
Mr Jesse S Sandhu, PEng	100
Mr Michael J Mark	100
Mr Robert G Bisson	100
Mr Robert McDowall, P Eng	100
Mr Stirling Walkes	100
Russell J Lavitt	100

ASHRAE Manitoba Chapter Officers

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ASHRAE, founded in 1894, is an international organization of 50,000 persons. Its sole objective is to advance through research, standards writing, publishing and continuing education the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve the evolving needs of the public.

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