

AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS INC.

LONDON CANADA CHAPTER #116

http://LondonCanada.AshraeChapters.org

NOV 27/2006

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<u>Air Distribution Options in Green</u> <u>Buildings</u>

Julian Rimmer EH Price

TOPIC:

Underfloor Air Distribution (UFAD), Displacement Ventilation (DV), and Overhead Air Distribution (OHAD) systems in green buildings and their relevance to the LEED program.

Meeting - Monday Nov 27/2006

THE LAMPLIGHTER INN, 591 Wellington Rd., London

RESEARCH & MEMBERSHIP NIGHT

London Chapter Members = \$25.00 Member's Meal Plan = \$125.00 Students = \$10.00 Others = \$35.00

CASH BAR ALL Y 5:15-Social 6:00-Dinner

ALL YOU CAN EAT BUFFET Dinner 7:15-Program





ASHRAE LONDON CANADA CHAPTER #116

http://LondonCanada.AshraeChapters.org Nov 27/2006 Page 2

President's Message

Last month Mr. Bernard Ratledge discussed system effect in fan systems and how it effects operating costs, a very enlightening presentation showing that proper installation must go hand in hand with appropriate fan selection. Please join us this month as Mr. Julian Rimmer of E.H. Price discusses air distribution options in green buildings.

November is also our Membership and Research Promotion night in which we encourage new members to join ASHRAE and our local chapter, if you know of someone who may be interested in joining, invite them out. ASHRAE Research invests many dollars in Canada in the form of funding studies and projects. In actual fact, more money is actually invested back into Canada than that which is contributed by Canadians, so please give generously.

Looking ahead, the London ASHRAE Chapter in conjunction with the Windsor Chapter have successfully attained Evans J. Lizardos, a Distinguished Lecturer who will be talking to us March 19 on "Innovative Applications to Conform to ASHRAE 90.1". Although March 19 is a Monday, it is not our normal last Monday of the month, so be sure to mark this date in your calendar and invite a friend or business associate. Having a DL in March has pushed the still "potential" mini-trade show back into April. As a committee, we are intending to proceed with a feasibility study for this event.

Hope to see you at the November 27 meeting,

Scott Turner – President scott@somersep.com London Canada Chapter President 2006-2007

4th Year HVAC Student Award

Congratulations to Corinna Bellomo, this year's 2006 recipient of the London Chapter ASHRAE award. This award is given to a 4th Year HVAC student at the University of Western Ontario symbolizes the characteristics of ASHRAE in both professional excellence and community involvement.

On top of her Mechanical Engineering studies, Corinna has been involved with local high school groups, mentoring young women to pursue a career in Engineering, and other applied sciences. Corinna, though the help of the Hellenic club, set up free tutoring for high school students.

Please join me in congratulating Corinna at an upcoming ASHRAE meeting.

Jack Maynard Student Activities Chair, London Canada Chapter 2006-2007

October Meeting Summary

Bernard Ratledge reviewed the problems associated with System Effect Factor (SAF), why it occurs, how to identify SAF, the cost of SAF and how to avoid it in the future. Mr Ratledge explained that SAF can be a ongoing cost to building operations that be able to be reduced during design and installation.







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ASHRAE LONDON CANADA CHAPTER #116

http://LondonCanada.AshraeChapters.org Nov 27/2006 Page 3

SPEAKER BIO

Julian Rimmer, EH Price

As Product Manager for the Underfloor Air Distribution, Displacement Ventilation and Radiant Systems product lines at EH Price, Julian Rimmer has extensive daily experience with the product requirements, system requirements, and characteristics of Heating, Ventilation, and Air Conditioning (HVAC) systems. Julian is charged with the development of new product, and business development of these product lines. Formerly the Design Engineering Manager for these products, Julian has an intimate knowledge of the technology as well as the performance and operational characteristics behind these products.

Over the past three years, Julian has lead Price Industries sustainable product and systems development, training internally and externally on the use of Underfloor Air Distribution (UFAD), Displacement Ventilation (DV) and Overhead Air Distribution (OHAD) systems in green buildings and their relevance to the LEED program. He has travelled to all areas in the United States and Canada to present, training and consulting on UFAD and DV projects. As a regular participant in the Center for the Built environment, and the Price representative on the US Green Building Counsel (USGBC) and the Coalition for High Performance Schools (CHPS) organizations, Julian has had extensive experience in consulting on the design of sustainable HVAC systems in many areas throughout North America.

Resource Promotion Night - Mon Nov 27, 2006

The ASHRAE Research Program is one of the most important programs in the operation of ASHRAE. ASHRAE Research Canada is a registered non-profit organization that relies on the generous contributions of its members to function.

ASHRAE Research is benefiting the HVAC&R industry in many ways. The research program helps shape and revise the ASHRAE Handbook, which is used by professionals around the world. They are incorporated into ASHRAE standards to benefit the public and the HVAC&R industry. The results are being published in many formats so ASHRAE members and the HVAC&R industry can readily find and use the data and results.

Your investment in ASHRAE Research is doubly important because ASHRAE has a policy of matching contributions dollar for dollar from the revenues generated in its Winter AHR Expo. These funds are currently funding over 71 projects around the globe valued at over \$7 million. Many of the research projects are in Canada, we also want to point out that for every dollar being contributed in Canada, about four (4) U.S. dollars are being reinvested back into Canadian HVAC&R research projects.

Members have several options to submit individual or company contributions:

- a. with their dues payment
- b. mailing directly to ASHRAE in Atlanta
- c. by forwarding their contribution to their Chapter's Research Promotion Chair
- d. or on the www.ashrae.org web site by clicking on the Contribute Online link in the left menu. (charge to a credit card in USA dollars.)

Cheques should be made to <u>ASHRAE Research Canada</u> and addressed to: ASHRAE Research Promotion, 1791 Tullie Circle, Atlanta, GA 30329

Joe Claessens

Research Chair, London Canada Chapter 2006-2007



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2005 - 2006 Research Promotion Recognition

ASHRAE Research Canada and the London ASHRAE Chapter would like to recognize and appreciate the support of last's investors:

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ASHRAE Individual Investors

Terry Arcesse John Bisset Joe Claessens Dennis Dawe Scott Edmunds Owen Glenden Peter Golem Ron Granger Scott Kuni Andrew Piatek Tom Pollard Eric Shaw Daryl Somers Scott Turner Derek Vakaras

The total investment made by London Chapter members and associates was \$11,900.00

ASHRAE NEWS

NRCan Building Energy Labelling Forum Dec 1st 2006

Natural Resources Canada's Office of Energy Efficiency is hosting a one-day forum on December 1st, 2006, in Toronto, to discuss issues related to energy labelling of buildings. I am very pleased to welcome your attendance at this important meeting. Given your acknowledged expertise in building and energy matters, I hope you will take advantage of this opportunity to learn more about building labelling and to share your views with us.

This meeting follows on the successful Experts Meeting on Energy Labelling for Buildings that we hosted on March 27-28, 2006. Discussions at that previous meeting suggested a strong mutual interest in energy label for buildings. There was considerable debate over exactly what sort of label would be most effective in the Canadian marketplace. Many questions were raised over how best to proceed. Therefore, the purpose of this forum is threefold:

to outline the progress on building energy labelling made since the first meeting;

to continue discussion on issues on which opinions diverged; and

present specific building energy labelling concepts for consideration and discussion.

In summary, the overall objective of the Building Energy Labelling Forum is to gain a clearer sense of how the building market feels about the introduction of voluntary energy-specific label and how such a label could satisfy the needs and expectations of all stakeholders.

Please note that you will be responsible for making and paying for your own travel expenses. However, we have arranged this meeting in coordination with a major building event, PM Expo, which occurs the preceding two days (November 29-30), in the expectation that you may be already planning to attend this other event.

Please respond and confirm your attendance, addressing your response directly to: D. R. Dunlop & Associates T: (613) 235-8879 dunlopdr@rogers.com

Please note that registration will be on a first-come-first-served basis.

ASHRAE, Canada Green Building Council Partner to Advance Sustainability

ATLANTA – The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Canada Green Building Council (CaGBC) will work together to advance buildings that are healthy, productive, environmentally responsible and economically viable.

The two organizations, both of whom are committed to green building and sustainable community development, have signed a memorandum of understanding.

The memorandum calls for ASHRAE and the Council to join efforts in development and maintenance of technical standards and guidelines, communications and marketing, and research and education of members and the building industry.

"This year, ASHRAE has renewed focus in working with other organizations to share and further our technical guidance," Terry Townsend, P.E., ASHRAE president, said. "Working with the CaGBC will allow us to improve on our efforts in achieving energy savings without sacrificing comfort, air quality or productivity."

Thomas Mueller, president of the CaGBC, also is enthusiastic about the new collaboration.

"The CaGBC shares ASHRAE's interest in the opportunities to evolve the technical aspects of buildings," he said. "The work we can do together in Canada will benefit not only our respective memberships but anyone interested in engaging in better building practices."

The CaGBC was established in December 2002 to promote and accelerate the design and construction of high performance buildings for livable communities. The Council advances market transformation through advocacy, education, application and development of tools, and celebration of demonstrably superior performance. The CaGBC membership represents a reach of more than 500,000 public and private sector professionals across Canada.

ASHRAE LONDON CANADA CHAPTER #116 http://LondonCanada.AshraeChapters.org



Nov 27/2006 Page 6

Educational Programs at ASHRAE '07

Health Care Design Guidance Provided in New ASHRAE Courses

ATLANTA - Guidance to help designers create safe indoor environments in health care facilities is provided in new educational courses at the AHR Exposition held in conjunction with ASHRAE's Winter Meeting.

In all, ASHRAE will conduct three professional development seminars and 14 short courses at the ASHRAE meeting, January 27-31 in Dallas. Among them are two new short courses related to health care facility design.

Health Care Facilities - Best Practice HVAC Design Considerations and Criteria introduces design considerations. A major emphasis is on the necessary considerations for various diagnostic and treatment and support areas. The course also offers guidance on how to deal with existing facilities, smoke and life safety design issues.

Health Care Facilities-Best Practice Applications of HVAC Systems introduces best practice designs, with a focus on air distribution designs for surgical and patient rooms. Various control and energy efficiency techniques for cooling and heating plants are presented along with O&M and other commissioning topics. Smoke control and life safety best practices and application issues also are covered.

Both courses are based on ASHRAE's HVAC Design Manual for Hospitals and Clinics.

"HVAC systems for hospitals and health care facilities have special requirements because of their functions and the unique susceptibility of patients," Anand Seth, P.E., design considerations course instructor, said. "Designers must create ventilation systems that minimize exposure hazards for health care providers, patients and visitors while providing a comfortable working environment."

The Professional Development Seminars organized by ASHRAE are:

- The Commissioning Process in New and Existing Buildings
- Facility/HVAC Terrorism Threat and Vulnerability Reduction
- Mechanical Insulation Training Program

Each seminar is a full day long and includes handouts.

The 3-hour ASHRAE short courses being held at the AHR Expo are offered on the following topics:

- Successful Solar Applications •
- Introduction to Ground Source Heat Pumps
- Introduction to Commercial Desiccant Dehumidification Systems •
- Leadership Skills for Engineering Leaders Situational Leadership®
- Introduction to Thermal Energy Storage Systems for Air Conditioning
- Introduction to Green Buildings and Sustainable Construction
- Complying with Requirements of ASHRAE Standard 62.1-2004
- People Skills for Engineering Leaders— Myers-Briggs Type -Indicator® (MBTI®)
- MasterFormat 2004 and HVAC Specifications
- Compliance with ASHRAE Standard 90.1-2004 HVAC Mechanical
- Designing Residential Ventilation Systems to Meet ASHRAE Standard 62.2
- Emerging Dehumidification Enhancements for DX Cooling Systems
- Health Care Facilities Best Practice HVAC Design Considerations and Criteria
- Health Care Facilities-Best Practice Applications of HVAC Systems

Professional Development Seminars award attendees 6 PDHs and .6 CEUs and earn AIA and New York and Florida recognition. Short courses award attendees 3 PDHs, .3 CEUs, 3 AIA LUs and New York and Florida recognition.

For complete course information and to register, visit www.ashrae.org/dallas.



ASHRAE Receives EPA Grant to Provide Advanced IAQ Guidance

ASHRAE – ASHRAE has received a \$510,000 grant from the U.S. Environmental Protection Agency (EPA) to provide guidance for designing and building healthier buildings with effective operation and maintenance programs that reduce exposure to toxics and asthma/allergy triggers.

The three-year grant will be used to write the Advanced Indoor Air Quality (IAQ) Design Guide for Non-Residential Buildings, which will help professionals implement high performance designs, improve indoor air quality performance, increase energy efficiency and decrease the environmental impact of exposure to air toxics in a broad range of non-residential buildings.

The grant is part of some \$4 million awarded by EPA to improve indoor air quality. ASHRAE will collaborate with the U.S. Green Building Council, the American Institute of Architects and other organizations that address indoor air quality.

"Through the guide and an associated education effort, ASHRAE will improve the long-term environmental health for building occupants by reducing their exposure to air toxics and increased productivity due to greater comfort and health of building occupants," Terry Townsend, P.E., ASHRAE president, said. "The project addresses the EPA's priority areas of indoor air pollutants, which include asthma triggers such as dust mites, pests, mold and air toxics."

"We are thrilled to be working with ASHRAE on the Advanced IAQ Design Guide." Eric Werling, EPA project officer, said. "This guide will fill a critical information need for the building industry, and ASHRAE has the experience and reputation to deliver a top-notch project."

The guide will facilitate the design process so that advanced practice can be accomplished within the constraints of typical construction and design fees.

It is expected to be published in late 2008, with an ASHRAE Professional Development Seminar based on the guide available in late 2009.

Focus on Small Retail

ASHRAE Releases Next Advanced Energy Design Guide

ATLANTA – Buildings designers are one step closer to a net-zero energy building.

Published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the Advanced Energy Design Guide for Small Retail Buildings is the second in a series of publications that cover various types of building construction. Intended for use by builders, contractors and architects, the guide covers energy-efficient design for retail buildings up to 20,000 square feet.

"The purpose of the design guide is to provide a simple, prescriptive menu of options that will result in a building using 30% less energy than those constructed in accordance with the 1999 version of ASHRAE Standard 90.1, the foundation for energy efficiency in building codes throughout the United States," said Merle McBride, chairman of the committee overseeing the book's creation. "Those looking to achieve a LEED certification from the U.S. Green Building Council (USGBC) will find this guide particularly useful."

The guide offers energy efficiency guidance in many areas, including lighting, HVAC efficiencies, windows, skylights and envelope measures. A major difference from Standard 90.1 is that the guide provides equipment efficiencies by climate zone to take into account varying environmental factors, instead of having one number for the entire United States.

The guide resulted from collaboration among ASHRAE, the Department of Energy, USGBC, Illuminating Engineering Society of North America (IESNA) and the American Institute of Architects (AIA). The retail industry provided guidance to the guide's development team to ensure building owner perspectives were considered when forming design recommendations. To help in future editions, users of the guide will be able to provide feedback via an Internet link.

The guide is part of a series of ASHRAE publications that will progress toward providing net-zero energy designs for buildings of various types. The first publication in the series focused on small office buildings, and the next energy design guide will address K-12 schools.

"This is a long-term endeavor by ASHRAE," said McBride. "ASHRAE is focusing on improving the energy efficiency of the nation's building stock, targeting where the greatest energy-saving impact can be achieved."

The cost of the Advanced Energy Design Guide for Small Retail Buildings is \$59 (\$49, 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 at www.ashrae.org.