

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

LONDON CANADA CHAPTER #116 LondonCanada.AshraeChapters.org

JAN 30/2006

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<u>Program</u>

LEAKAGE LESS CONTROLS Microprocessor based fuel:air control system on commercial power burners. John Paleczny Yorkland Controls - London Office

Retrofit conventional cams and jackshaft "mechanical linkage systems" with a "linkage-less" direct mount servo system and microprocessor based controller for greater accuracy and efficiency on the burners, with less environmental impact. The system includes configuration software, main controller, and independent servo motors for combustion air, main gas, secondary fuel, and flue gas recirculation if required. Typical fuel savings range from 5 to 15% with this system.

Meeting - Monday Jan 30/2006

THE LAMPLIGHTER INN - THE OAK ROOM 591 Wellington Rd., London

>>> NEW LOWER RATES FOR MEMBERS <<<

London Chapter Members = \$25.00 Students = FREE Others = \$35.00 (for January Meeting)

STUDENT NIGHT

CASH BAR ALL YOU CAN EAT BUFFET 5:15-Social 6:00-Dinner 7:15-Program

If you plan on attending, and are not contacted by the telephone committee, please advise: Scott Turner (ph:652-1977 scott@somersep.com)



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President's Message

Although it has been almost a month since the break, I hope everyone had a great Holiday Season, and I would like to welcome everyone back. We hope that one of your New Year resolutions is to try and be more active in this year's ASHRAE activities.

The first half of the ASHRAE year is now behind us, and we are hitting full stride for the second half. Our second half promises to be an exciting program, with a tour in March, our Distinguished Lecturer in April and the Golf Tournament in early June. Your Board of Governors has been working hard to make the year a success. We are always looking for your opinion, suggestions and feedback to improve our chapter and ensure that our members are getting what they except from ASHRAE

The January Chapter meeting will be our second Student Activities night for the season. The speaker's topic is "Linkageless Controls". We encourage all students to attend.

By the time we have our January meeting the ASHRAE winter meeting and AHR Expo in Chicago will have ended. I know there are many members of the London ASHRAE Chapter attending. Hopefully we will have a few volunteers to speak briefly at the meeting on their experience in Chicago.

I look forward to seeing you at the meeting.

Joe Claessens London Canada Chapter President

Speakers Bio

John Paleczny Yorkland Controls Ltd. (www.yorkland.net)

Since 1991, Mr Paleczny has worked for Johnson Controls System Products, and Emerson Climate Technologies – Division of Emerson Electric – both sales SW Ontario and Niagara peninsula. Joined Yorkland Controls in 2004.

January Student Night

It is student night once again and we would like to invite all students to come out to our monthly meeting on Monday January 30th. The cost to students on this night is FREE! Members, please make an extra effort to welcome students by inviting them to your dinner table or introducing yourself sometime throughout the night; this may also be a good opportunity to scout out your next future employee!

Jamie Whitty Student Activities Chair, London Canada Chapter



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November Meeting Summary

In November Craig Fishbach of Florida Heat Pump came to see us with an overview of Geothermal Heat Pump Technology and Applications. Green Building Design and LEED Certification has renewed interest in heat pumps as their efficiencies exceed the requirements of ASHRAE 90.1 as well as their ability to use environmentally friendly refrigerants.

Be sure to join us in January as John Paleczny from Yorkland Controls talks to us about linkage-less controls and the use of direct mount servo systems and microprocessor based controllers to greater improve accuracy and efficiencies of mechanical equipment.

<u>LEED Credits Now Available for Energy Design</u> <u>Guide Use</u>

Designers can now earn credit under Leadership in Energy and Environmental Design (LEED) certification for use of the Advanced Energy Design Guide for Small Office Buildings. The inclusion of the design guide will help designers achieve LEED certification, offered by the U.S. Green Building Council.

"The small office design guide clearly meets the overall goal of LEED in that it accelerates the development and implementation of green building practices," Lee Burgett, P.E., ASHRAE president, said. "The design guide series is intended to provide prescriptive guidance to bring us 30 percent closer to a net zero-energy building, meaning those that use equal or less energy than they produce on an annual basis. Our goal is to provide the technical resources needed to assist the HVAC&R industry in creating the most sustainable buildings possible."

Specifically, the design guide has been added in LEED-NC 2.1 and the upcoming LEED-NC 2.2 as a prescriptive compliance path to achieve LEED-NC Energy and Atmosphere Credit 1, Optimize Energy Performance (EAc1), credit.

LEED-NC EAc1 is intended to reduce environmental impacts associated with excessive energy use by awarding LEED credit to buildings that achieve increasing levels of energy performance above ANSI/ASHRAE/IESNA Standard 90.1-1999.

The guide establishes a previously unavailable prescriptive compliance path and enables small office design teams to earn LEED-NC EAc1 points without incurring the costs associated with whole building energy simulation. Small office buildings that successfully demonstrate compliance with the guide will be awarded 4 LEED EAc1 points.

The guide was developed by a committee representing a diverse group of energy professionals drawn from ASHRAE, the American Institute of Architects (AIA), the New Buildings Institute (NBI), the Illuminating Engineering Society of North America (IESNA) and the Department of Energy (DOE).

The cost of the Advanced Energy Design Guide for Small Office Buildings is \$59 (\$47, ASHRAE member).

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the ASHRAE.org Bookstore at www.ashrae.org.



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ASHRAE Energy Design Guide Earns Award from Green Building Council

A guide written to make sustainable design easier has earned a leadership award from the U.S. Green Building Council (USGBC).

The Advanced Energy Design Guide for Small Office Buildings is a recipient of a USGBC 2005 Leadership Award, which recognizes outstanding individuals and organizations that signify vision, leadership and commitment to the evolution of green building design and construction.

The guide received the Research Award for being "a significant contribution helping to advance green building." The guide was developed by a committee representing a diverse group of energy professionals drawn from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the American Institute of Architects (AIA), the New Buildings Institute (NBI), the Illuminating Engineering Society of North America (IESNA) and the Department of Energy (DOE).

"The Advanced Energy Design Guide developed by ASHRAE and its partner organizations is another tool in the 'green' toolkit, which users need to build a sustainable future," ASHRAE president Lee Burgett, P.E., said. "We thank the USGBC for recognizing our efforts."

"The U.S. Green Building Council's Leadership Awards are presented for leadership in promoting green building design and construction," Rick Fedrizzi, president, CEO and founding chair, USGBC, said. "The Advanced Energy Design Guide for Small Office Buildings is a seminal resource for the green building industry, and is highly deserving of this prestigious award."

The award is the second for the book, which earlier this year was recognized by the Alliance to Save Energy as part of its annual Stars of Energy Efficiency Awards program. The Alliance recognized ASHRAE for its "exemplary illustration of and commitment to energy-efficient policy and practice."

The guide provides a sensible, hands on approach to design through use of products that are practical and commercially available as "off-the-shelf" technology from major manufacturers.

ASHRAE, AIA, IESNA and the U.S. Green Building Council are currently developing the second guide in the series, which will focus on small retail/mercantile spaces.

The cost of the Advanced Energy Design Guide for Small Office Buildings is \$59 (\$47, ASHRAE member).

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the ASHRAE.org Bookstore at www.ashrae.org.

ASHRAE Energy Design Guide, ASHRAE Journal Earn Awards from SBIC

The Advanced Energy Design Guide for Small Office Buildings published by ASHRAE has been recognized with its third award related to sustainability.

Also recognized with an award from the Sustainable Buildings Industry Council is a sustainability supplement to ASHRAE Journal.

The ASHRAE Journal supplement, Building for the Future, and the design guide both received honorable mention from the Sustainability Buildings Industry Council as part of its Best Sustainable Practice Awards. The publications were recognized in the educational initiatives category.

"These two publications are part of ASHRAE's technical resources that provide the engineering basis for sustainable buildings," Lee Burgett, P.E., ASHRAE president, said. "ASHRAE is pleased to be recognized for its efforts in engineering for sustainability."

Building for the Future is an annual supplement to ASHRAE Journal addressing several sustainable design issues for greater energy efficiency and responsible use of the earth's resources. It was published in the September 2005 issue.

The design guide was developed by a committee representing a diverse group of energy professionals drawn from ASHRAE, the American Institute of Architects (AIA), the New Buildings Institute (NBI), the Illuminating Engineering Society of North America (IESNA) and the Department of Energy (DOE).

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CLIMA 2007 to be held in Helsinki, Finland

Creating wellbeing in indoor environments in an environmentally sustainable manner is the theme of CLIMA 2007.

The conference, organized by the Federation of European Heating and Air-Conditioning Associations (REHVA) and endorsed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), will be held June 10-14, 2007, in Helsinki, Finland. A call for papers will be announced in February with abstracts due in October.

Main themes will be energy performance of buildings, energy efficient heating and cooling systems, ventilation, indoor environment, health and productivity, ecological domestic water and waste systems, building energy management systems, and intelligent buildings.

ASHRAE has been a cosponsor of CLIMA since 1985.

For more information, visit www.ashrae.org/clima2007, or contact info@clima2007.org.

Design Needs of Datacom Facilities Addressed by ASHRAE

An overview of the design needs for data centers and telecommunication facilities is available in a new publication from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

"The datacom industry is faced with tough technical challenges such as high density cooling and the lack of vendor neutral material," said Don Beaty, chair of ASHRAE's technical committee on mission control facilities, technology spaces and electronic equipment, which wrote the book.

Design Considerations for Datacom Equipment Centers provides an overview of the design needs, such as heat loads, of datacom facilities. The book is divided into two parts. Datacom Facility Basics includes chapters on datacom design criteria, HVAC load, computer room cooling, including both air and liquid cooling, and air distribution. Other Considerations includes chapters on ancillary spaces, contamination, acoustical noise emissions, structural and seismic design and testing, fire detection and suppression, commissioning, availability and redundancy, and energy efficiency.

The book is part of the ASHRAE Datacom Series, developed to provide a more comprehensive treatment of datacom cooling and related subjects. Other books in the series are ASHRAE's Thermal Guidelines for Data Processing Environments and Datacom Equipment Power Trends and Cooling Applications.

The cost of Design Considerations for Datacom Equipment Centers is \$54 (ASHRAE members, \$43).

To order this or any of the books in the series, 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.

ASHRAE, founded in 1894, is an international organization of 55,000 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.





TECHNOLOGY COUNCIL

MEMBERS FIRST!

TECH COUNCIL NEWS ASHRAE Technology is for ASHRAE Members. Members come first.

This is the second of Tech Council's quarterly briefings. You will find information from all the committees that report to ASHRAE's Technology Council. Our goal is to make the work of the technical side of ASHRAE open to all ASHRAE members. Page 2 of this newsletter lists the questions we received from our first newsletter and our responses. *We ask that you look this over and give us feedback. Please direct any questions on any topic or feedback on this newsletter to Hugh McMillan, Vice-Chair, Tech Council at hugh_mc@mail.ashrae.org.*

STANDARDS NEWS

How can you tell what is the latest version of any of Code-Intended continuous maintenance standards? Under the new policy of the Standards Committee, you will always know when these documents are updated. Since July 1, the code-intended standards under continuous maintenance have been on a three year republication schedule. The next fully published version of Standards 15, 34, 52.2, 62.1, 62.2, 90.1, 90.2 and 140 will occur in 2007. Next March, a supplement of all addenda approved since the 2004 versions were released will be published. These addenda will become effective with the supplement date of approval by the ASHRAE BOD and ANSI. This means you can expect something to be coming out on these standards every 18 months. We are striving to make the business of keeping up with code-intended standards more predictable and less costly for our Members and the public.

TECHNICAL ACTIVITIES NEWS

TAC is considering a proposal to form a new Task Group (TG) that is concerned with all exergetic aspects of energy and power consumption of building comfort and service systems and equipment, assessment of their impact on the environment, and development of analysis techniques, methodologies and solutions for environmentally safer low-exergy buildings. Exergy is defined by ASHRAE as an expression for the loss of available energy due to the creation of entropy in irreversible systems or processes. The energy loss in a system or component is determined by multiplying the absolute temperature of the surroundings by the entropy increase. This TG will help pave a road for a more comprehensive set of scientific and technical actions in order to further develop a more environmentally safe building technology and new HVAC systems while the commitment of ASHRAE towards sustainability is facilitated.

RESEARCH ADMINISTRATION NEWS

A color brochure summarizing ASHRAE's 2005-2010 Research Strategic Plan is now posted on the "Research" page of ashrae.org. The brochure details all five Opportunity themes, 28 goals associated with the five themes and a partial listing of potential project topics that may help address these goals. The strategic plan is primarily intended to help guide the 98 TCs within ASHRAE towards achieving broad and ambitious goals set by the Society as a whole for research. How well a particular topic supports the strategic plan will count towards forty-five percent of the review criteria used to evaluate all research topics proposed by the TCs. Find the Research Strategic Plan at:http://www.ashrae.org/content/ASHRAE/ASHRAE/ArticleAltFormat/2005928112649_347.pdf

ENVIRONMENTAL HEALTH NEWS

Planning for the Ventilation Workshop to review research that has been or is being conducted on the effect of ventilation rates on health in multiple types of indoor environments, including offices, schools, residences and day care is well underway. The purpose of the project will be to determine the current state of knowledge to develop priorities for additional research that may be needed.

REFRIGERATION NEWS

REF has posted two documents to our website: "Tips on Hosting a Successful Refrigeration Focused ASHRAE Chapter Meeting" and "Training in Refrigeration". The first was written to provide chapter level people help on setting up a refrigeration focused chapter meeting that would draw more than 3 people by giving contacts at other organizations and a list of timely topics. The latter document is a continuously updated list of all North American based training programs on industrial (ammonia) refrigeration. REF intends to keep both up-to-date and promote their use at regional and local levels.

MEMBERS FIRST! FEEDBACK

QUESTION 1

CTTC has liaison assigned to each TC Section. Liaisons attend section breakfasts but are not respected. The purpose of CTTC is to strengthen the ties between the grassroots and technology side of ASHRAE.

<u>RESPONSE</u>

The Technical Activities Committee (TAC) will work with TCs to insure that liaison relationship is respected. While time is limited at the section breakfasts, the TCs understand the importance of this liaison. In the interest of time, it would be helpful if the CTTC liaison could bring any information they wish to share in written form to distribute to the TC chairs.

QUESTION 2

A significant proportion of ASHRAE members do not know how to join a TC.

RESPONSE

There is a good discussion on how to join a technical committee on ashrae.org. It can be accessed at:

http://www.ashrae.org/template/AssetDetail/assetid/23231

QUESTION 3

Research Promotion RVCs do not understand the process by which a research proposal becomes and project and how the results of the research are implemented. The result of this lack of knowledge is lack of focus in the Research Promotion campaign.

RESPONSE

Certainly we want all members to understand how the ASHRAE research process works. An overview is reported here, but we strongly recommend that RVCs and other interested parties visit the <u>www.ashrae.org</u> website. Choose the "Standards and Technology" link on the home page and scroll to "Research." Within the research section, you will find the "Research Digest" along with several interesting references to all the research activities - past, present, and future. The Digest contains a complete flow chart that will elaborate on what we are reporting with this note.

ASHRAE *Technical Committees (TC) play the lead role in all research projects*, whether generated within the TC, an Unsolicited Research Project (URP), or requested from an individual through his local Chapter and Region. If the research request comes from outside TC membership, and it falls within the Strategic Research Plan (also on the website), one or more TCs are asked to champion the work. There are 98 TCs organized into 10 Sections.

Key documents requiring RAC, Tech Council, and, in some cases, ASHRAE Board of Director approval are (1) the Research Topic Acceptance Request (RTAR); (2) the Work Statement prepared as a result of the approved RTAR in the Implementation Plan; (3) the Tentative Research Proposal (TRP) which leads to obtaining bids from contractors; and (4) the recommendation of contractor from a Project Evaluation Subcommittee (PES) appointed by the TC. Once the project is initiated with an entity, the TC has a Project Monitoring Subcommittee (PMS) that ensures the work remains on course toward the objectives, timely, and within the contracted costs. *Technology Transfer is achieved through publication in ASHRAE Handbooks, ASHRAE Standards, special publications, ASHRAE transactions and/or Research Bulletins*.

Very recently, our society has prepared and published a Strategic Research Plan that was prepared with input from the broad membership. This plan will be updated every five (5) years. A big factor in evaluating the merits of proposed research will be its fit in the Strategic Research Plan. The plan is organized into five (5) research opportunity themes: (1) Energy and Resources, (2) Indoor Environmental Quality, (3) Tools and Applications, (4) Equipment, Components and Materials, and (5) Education and Outreach. To understand some of the specific goals within these themes, we urge you to visit the research link at the <u>www.ashrae.org</u>.

You will find much more detailed information on how research projects are chosen and how they are implemented and used in the vastly improved research website. We urge all interested parties to take a look.