

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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Sept 29/2008

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Newsletter

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TOPIC:

FAN VIBRATION ANALYSIS and BALANCING

DAVID HILLIS
Green-Hill Mechanical Services Ltd.
and
Baymar Supply Ltd

Meeting - Mon Sept 29/2008

London Chapter Members = \$30.00
Meal Plan Rate = \$150.00
Students = \$10.00 Others = \$40.00

THE LAMPLIGHTER INN, 591 Wellington Rd., London
CASH BAR ALL YOU CAN EAT BUFFET
5:15-Social 6:00-Dinner 7:15-Program





President's Message

It is hard to believe that summer has come and gone, and now fall has arrived. I hope that everyone had a good, productive summer, and as we move forward - that 2008 is remembered by all as a positive year.

Our annual golf tournament at Forest City National in June of 2008 was a tremendous success, and was attended by a record 156 golfers – a great time was had by all. We all need to take a moment and thank Hugh Palser for outdoing himself once again in organizing this excellent event.

This past August, the ASHRAE Montreal Chapter hosted the Region II CRC (Chapters Regional Conference) at the Hyatt Regency Hotel in downtown Montreal. The CRC was well attended by the nine region chapters, including London's chapter officers. The workshops attended by our members help by providing ideas and guidance for developing our individual and collective skills in the interest of furthering ASHRAE's mission and ideals within our industry. The London Chapter came just short of achieving its personal financial target for 2007/2008 in the Research Promotion area, but assisted the ASHRAE Region II in meeting their target, which in turn helped ASHRAE Society in meeting and exceeding its Research Promotion target of \$2,000,000.00 for the 2007/2008 fiscal year.

This is a very significant event for ASHRAE, as in previous years, they have failed to make that target. ASHRAE Society, Region II, and our Chapter wishes to thank everyone for their contributions and assistance with this process that every year brings back to Canada more than what we contribute in research money and grants to assist Canadians in our industry. For example, in this past year, a UWO Mechanical Engineering Student – Brian Coulter received the ASHRAE Memorial Scholarship Award from Society. Also, during this past summer our Student Chair, along with a member of the UWO Engineering Faculty attended a Student Branch Workshop presented by ASHRAE Society in Atlanta, Georgia. This year we hope as a result to welcome the newly formed "UWO – ASHRAE London Chapter Student Branch" into our local chapter. More to come on this great news event.

This month (September 29th) at our London Chapter meeting, we will be hearing and seeing a presentation on Vibration Analysis, including a couple of very interesting demonstrations using electronic vibration test equipment, and will also learn about the causes of noise and vibration transmission through different materials. The presentation will be given By David Hillis from Windsor.

We look forward to seeing you in attendance at our monthly meetings, and look forward to our members participating, and even volunteering to help with the various local chapter functions that take place during the year. We welcome your suggestions and comments – please feel free to contact myself, or any of the London Chapter Officers listed on this newsletter – we appreciate your input.

See you on the 29th of September.

Eric Shaw
ASHRAE London Canada Chapter President

Pete Edmiston
Branch Manager



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Speaker Bio

DAVID HILLIS:

Born and Raised in Windsor, Ontario he started work early in the family business: GREEN-HILL MECHANICAL SERVICES LIMITED - which was the Warranty and Services Company set up to accommodate the AMERICAN STANDARD / CANADIAN SIROCCO Fan Lines after they closed in 1968. David's father, Mr. Thomas Hillis was SIROCCO's SERVICE MANAGER. Mr. Hillis was exposed to fan work at age 12 from light work in the plant. He learned Vibration Analysis and Dynamic Balancing at age 14 at IRD. David worked part-time throughout his school years and full-time afterward.

Mr Hillis started his first business, AIR MAINTENANCE COMPANY LIMITED in 1984 which performed Vibration Analysis, Balancing & Fan Diagnostics. He then bought GREEN-HILL MECHANICAL SERVICES LTD which refurbished and serviced fans throughout North America.

In 1994, he bought VALLEY PROCESS SPECIALTIES LTD. a light engineering house, in Sarnia. In 2005 David started VALLEYGREEN TECHNICAL SPECIALTIES LTD. to accommodate fan services without the shop facility. Dave works closely with BAYMAR SUPPLY LTD., as their Mechanical Draft Fan Sales Specialist.

Dave was in the CANADIAN NAVAL RESERVE, at HMCS HUNTER, in Windsor for 18 years. He has sat on several Community Boards. He just finished CHAIR of the WINDSOR YMCA and a ROTARY CLUB PRESIDENCY. Most recent, he has taken up a Director position with the SOCIETY FOR MAINTENANCE & REPAIR PROFESSIONALS - DETROIT CHAPTER. He still sits boards of the YMCA.

Daryl Somers, CET

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Upcoming Meetings & Events

Mon Oct 27, 2008

Variable Refrigerant Flow

ASHRAE LONDON

2007/08 Financial Summary

Starting Balance (Aug 1/2007) \$ 16,127.17

Income

Meal Plans & Door Fees	\$ 3,910.00
Golf Tournament Revenues	\$23,900.00
ASHRAE Membership Dues	\$ 1,976.00
Misc	\$ 1,200.00
	<u>\$ 30,986.00</u>

Expenses

Monthly Meetings	\$ 7,218.13
CRC	\$ 2,426.81
Golf Tournament	\$ 15,865.05
Misc	\$ 3,736.18
	<u>\$ (29,246.17)</u>

Ending Balance (June 31/2008) \$ 17,867.00

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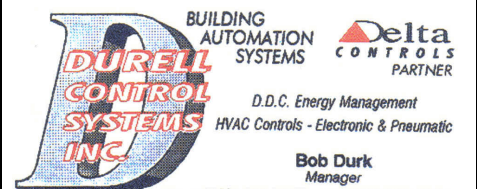
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2008/2009 FISCAL OUTLOOK

Another year of ASHRAE activities before us & the London ASHRAE Chapter is starting with a strong balance sheet to support our chapter activities.

Expected cost increases across all activities have put pressure on our existing financial model to maintain a balanced budget. To offset the cost increases the following changes have been accepted by the ASHRAE London board of governors for implementation in 2008/2009.

- ASHRAE London Golf Tournament will offer members and suppliers the opportunity to sponsor golf holes
- The ASHRAE monthly dinner rates will be raised:
 - Meal Plan will be \$150
 - Chapter Member meals will be \$30
 - Guest meals will be \$40

The ASHRAE London Chapter will continue to support community and school events that promote ASHRAE awareness including:

- ASHRAE Award
- ASHRAE Research
- ASHRAE Student Memberships for students wishing to join

The ASHRAE London Chapter will support two student nights to promote ASHRAE awareness to young Engineers & Technologists. It is expected these student nights will be cash neutral due to the generous support of our members who sponsor students. Please feel free to contact me if you or your organization wishes to sponsor a student for the upcoming 2008.2009.

I am looking forward to another great year.

Jack Maynard
London Chapter Treasurer

ASHRAE LONDON BUDGET 2008-2009

BANK BALANCE, August 25th 2008		\$ 17,867.00
Cash Inflows		
ASHRAE Monthly Meeting Revenues	\$ 5,630.00	
Golf Tournament Revenues	\$ 26,100.00	
ASHRAE Membership Chapter Dues	\$ 3,000.00	
Promotional Advertisements	\$ 1,200.00	
		\$ 35,930.00
Cash Outflows		
ASHRAE & Community Involvement		
ASHRAE Award, University of Western Ontario	\$ 1,000.00	
ASHRAE Research, Chapter Donation	\$ 1,000.00	
ASHRAE Student Sponsorship	\$ 400.00	
ASHRAE & Community Involvement Total	\$ 2,400.00	
ASHRAE Monthly Meeting Expense	\$ 7,607.00	
CRC & ASHRAE Regional Expense	\$ 6,831.00	
Golf Tournament Expense	\$ 18,517.00	
ASHRAE Board of Government Functions	\$ 300.00	
Miscellaneous ASHRAE Business Expense	\$ 500.00	
Total Expenses		\$ (36,155.00)
Budgeted Bank Balance, August 25th 2009		\$ 17,642.00

**Data Center Case Studies Focus of ASHRAE Book**

ATLANTA – Data centers are becoming increasingly more difficult to adequately cool, due to increased datacom performance that results in increased heat dissipation.

Even though performance has increased at a more rapid rate than power, the power required and the resulting heat dissipated by the datacom equipment is putting a strain on data centers.

Case studies and guidance on cooling data centers is available in a new book from ASHRAE, *High Density Data Centers – Case Studies and Best Practices*.

"In the struggle to improve the thermal management characteristics of data centers, it is important to assess today's data center designs," Roger Schmidt said. "This book provides case studies of high density data centers and a range of ventilation schemes that demonstrate how loads can be cooled using a number of different approaches."

Schmidt is a member of ASHRAE's technical committee on mission control facilities, technology spaces and electronic equipment, which wrote the book.

Case studies featured in the book include the National Center for Environmental Prediction, the IBM Test Facility in Poughkeepsie, N.Y., the San Diego Supercomputer Center, the Lawrence Livermore National Lab Data Center, the NYC Financial Services Data Center, the Georgia Institute of Technology Data Center, the Cedars-Sinai Medical Center Data Center and the Hewlett-Packard Richardson Datacool™ Data Center.

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 *Design Considerations for Datacom Equipment Centers*, *Best Practices for Datacom Facility Energy Efficiency*, *Thermal Guidelines for Data Processing Environments*, *Liquid Cooling Guidelines for Datacom Equipment Centers*, *Datacom Equipment Power Trends and Cooling Applications*, and *Structural and Vibration Guidelines for Datacom Equipment Centers*.

The cost of *High Density Data Centers – Case Studies and Best Practices* is \$54 (ASHRAE members, \$43). To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit at www.ashrae.org/bookstore.

New Publication Provides Energy Efficiency Guidance for Warehouses

ATLANTA – The latest publication in the Advanced Energy Design Guide series will help guide the construction of warehouses using off-the-shelf technology that can cut energy use 30 percent or more annually.

The Advanced Energy Design Guide for Small Warehouses and Self-Storage Buildings, published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers, gives guidance to architects, engineers and others on building design teams on how to use best design practices to create energy-saving warehouses. Written in partnership with The American Institute of Architects, the Illuminating Engineering Society of North America, the U.S. Green Building Council, and the U.S. Department of Energy, the book is available for free in electronic form at www.ashrae.org/freeaedg. Hard copies are available for purchase in the ASHRAE Bookstore through the same Web page. The Metal Buildings Manufacturers Association (MBMA) contributed to the book's authorship.

The book, intended for use by contractors, designers and owners of small warehouse buildings, covers an integrated design process for delivering energy efficient warehouses as well as sets of prescriptive requirements for efficient warehouses in each climate zone. Case studies of exemplary warehouse designs are also provided, as well as detailed "how-to" design guidance to help guide construction teams. Recommendations cover the subject areas of building envelope, lighting and daylighting, HVAC and service water heating.

The Guide covers warehouses up to 50,000 square feet and self-storage buildings that use unitary heating and air-conditioning equipment. Warehouse and storage buildings represent a significant amount of commercial floorspace in the United States and account for nearly 8 percent of energy use of in commercial buildings.

"The Guide provides a clear, straightforward prescriptive path to meeting the 30% target savings," says Ron Jarnagin, chair of the committee that wrote the publication. "Recommendations are easy to apply, allowing contractors, consulting engineers, architects, and designers to easily achieve advanced levels of energy savings without having to resort to detailed calculations or analyses."

The cost of the print version of Advanced Energy Design Guide for Warehouses and Self-Storage Buildings is \$59 (\$47 members). To download the free electronic version, please visit www.ashrae.org/freeaedg.

To order a print copy of the book, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit at www.ashrae.org/bookstore.



ASHRAE President to Provide Testimony on Green Buildings to U.S. House Committee

ATLANTA – ASHRAE's work in providing advanced energy guidance will be highlighted in upcoming Congressional testimony.

ASHRAE President Kent Peterson, P.E., is slated to speak Wednesday, May 14, at a hearing, Building Green, Saving Green: Constructing Sustainable and Energy-Efficient Buildings, before the Select Committee on Energy Independence and Global Warming of the U.S. House of Representatives.

"As Congress examines all sources and causes of global warming emissions, it must consider how the buildings we work and live in can contribute to reduce the impact of climate change," Rep. Edward Markey (Mass.), chair of the committee, said. "ASHRAE's standards offer a foundation for energy-efficient buildings, and the Committee is interested in how building codes can be used to increase the number of green buildings throughout the nation."

Peterson will talk about ASHRAE's role in writing standards for adoption into building codes and its work in developing guidance that goes beyond minimum requirements in building codes.

"Today's buildings mortgage our energy and environmental future," Peterson said. "In the past, Standard 90.1 and other guidance from ASHRAE focused on minimum requirements to save energy. Recognizing that we must do more, ASHRAE is looking ahead to producing advanced energy design guidance, with the goal of net-zero energy buildings. We welcome the opportunity to stress the need for a more energy efficient future before the House Committee."

Standard 161-2007 Published - ASHRAE Publishes Nation's First Airplane Cabin Air Quality Standard

ATLANTA - Proper air quality is essential for general health and well-being in indoor spaces. Recognizing this, most people will take steps to address air quality in their homes and workplaces, but what about when on board an airplane when passengers have no control in a very high-density environment?

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) addresses air cabin air quality in its new Standard 161-2007, Air Quality Within Commercial Aircraft. The standard, which covers issues such as temperature, cabin pressure, air contaminants and ventilation rates, can be voluntarily adopted by individual airlines or the Federal Aviation Administration (FAA), or advocated for by airline passenger and employee groups.

"Compliance with this standard will go a long ways toward ensuring good air quality for passengers and crews," says Byron Jones, chair of the committee that wrote the standard. "Aircraft passengers and crew make up a wide cross section of the general population, ranging from the very young to the very old, from the healthy to infirm. And unlike many other indoor environments, occupants do not have the ability to remove themselves from the environment, which is at a lower pressure and relative humidity than that found in many other environments. Standard 161 will help create a healthier, more enjoyable ride for the great variety of passengers on board."

The standard also addresses chemical, physical and biological contaminants that could affect air quality as well. Methods of testing are provided for ensuring compliance with the standard's requirements.

Standard 161 applies to commercial passenger air-carrier aircraft carrying 20 or more passengers. It is intended to apply to all phases of flight operations and to ground operations when the aircraft is occupied by passengers or crew members.

The cost of Standard 161-2007, Air Quality Within Commercial Aircraft, is \$54 (\$43 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; or visit www.ashrae.org/bookstore.

Changes Proposed for ASHRAE Standards, Guidelines

ATLANTA – ASHRAE is currently accepting public input on more than 35 proposed addenda to standards as well as a proposal to withdraw Standard 52.1.

Addendum to various standards, including 15 (refrigerate safety), 34 (classification of refrigerants), 55 (thermal comfort), 90.1 (energy efficiency), 62.1 (ventilation), 62.2 (residential ventilation), and 135 (BACnet) are open for review, as are seven standards and one guideline. Complete information can be found at www.ashrae.org/publicreviews.

Among them is the proposed withdrawal of ASHRAE Standard 52.1-1992, Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter.

The most important features of this standard, dust-holding capacity and arrestance, have been incorporated into Standard 52.2-2008, Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size. The only unique features remaining in Standard 52.1 are the dust-spot efficiency tests – now replaced particle-size efficiency tests in 52.2 – and a renewable filter test not used by the industry for decades, according to Monroe Britt, committee chair.

Among the proposed addenda to Standard 90.1 is addendum ap, which would modify the requirements for demand control ventilation; adding the demand controlled ventilation requirements to the simplified approach in order to keep the stringency of this path the same as the mandatory plus prescriptive path of compliance. Also proposed is a change to addendum af to modify energy savings requirements to recognized varied piping material pressure drops.

Six proposed addenda to Standard 62.1 are open for comment, including a proposal regarding outdoor air cleaning. Addendum 62.1c adds significant air cleaning requirements in many locations within the United States. Regarding particulate matter 2.5 micrometers and smaller, for buildings in those U.S. locations established as non-attainment for PM2.5 by the U.S. Environmental Protection Agency, 62.1c would require that the ventilation system include particle filters rated at least MERV 11 (installed between the outdoor air intake and the occupied zone). Regarding ozone air cleaning, the proposed addendum would require that the ventilation system include ozone air cleaners rated for at least 40% ozone removal efficiency.