



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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Jan 28/2008

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ph: 519-451-5100
kgilroy@price-hvac.com

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ph: 519-681-1977
scott@somersep.com

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ph: 519-471-9382
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Tom Pollard
ph: 519-685-2570
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TOPIC:

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“KNOWLEDGE”

MR GARTH DENISON
SPORRAN VALVE - DIVISION OF PARKER
HANNIFIN CANADA
Sr. Product Application Engineer

Meeting - Mon Jan 28/2008

THE LAMPLIGHTER INN, 591 Wellington Rd., London

London Chapter Members = \$25.00
Students = FREE Others = \$35.00

HISTORY & STUDENT NIGHT

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





President's Message

I would like to welcome everyone back in 2008 and hope the holiday season was good to you & your family. I'm confident that you'll find our upcoming 2008 schedule of events to be as enjoyable & informative as the first half of our chapter program. Our November meeting on the Green Globes Environmental Assessment System for Building was a fine way to end 2007. Mr. Daryl Boyce of Carlton University provided an excellent overview on the benefits of using Green Globes during building design and how it compared to the more widely-known LEED system for green building assessment.

I would like to extend an invitation to all members to come & join us on January 28th to kick off our 2008 schedule of events. Mr. Garth Denison, Senior Product Application Engineer for Sporlan Valve will be presenting important facts on the refrigerant R-410A. Garth is a well-known and respected expert in the field of refrigeration. He has presented & written several articles on all aspects of refrigeration over the years and I consider our chapter very fortunate to have him speaking to us this month. For other upcoming speakers, topics and dates, please check out the London ASHRAE website, at <http://LondonCanada.AshraeChapters.org>.

The ASHRAE Society Winter Meeting and AHR Expo Show is currently underway in New York this week. I know a few members of the London ASHRAE Chapter are attending the event. I have asked Mr. Eric Shaw, our Chapter Vice-President, to provide us with a brief summary on the Winter Meeting during our meeting. As well, Tom Pollard has offered to speak on the HVACR Heritage Centre Canada, a group of individual striving to preserve and promote the HVACR industry. I expect both talks to be very enlightening.

This month's meeting will also be our second Student Activities night for the season. We are hoping that several engineering student from the University of Western Ontario will be able to attend on Monday. I would ask all members to take the time to welcome the students and invite them to sit with you & your colleagues during dinner. Meeting ASHRAE members is a great way for the students to find out more about ASHRAE and the industry we work in.

With that, I hope to see you all on January 28th.

Scott Edmunds
ASHRAE London President

Speakers Bio

Garth Denison
Sporlan Valve - Division of Parker Hannifin Canada.
Sr. Product Application Engineer

Garth Denison has had some 42 years of experience in the refrigeration and air conditioning industry and is one of the most sought after speakers in North America. His topics range from Refrigerants to Lubricants in Refrigeration, refrigerant controls, and compressor technology in refrigeration and air conditioning.

Garth retired from DuPont Canada in 2002 as Senior Technical Consultant, Fluoroproducts Division, and then accepted a position with Sporlan Canada.

Pete Edmiston
Branch Manager

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Nov 2007 Meeting Summary

Green Globes Presentation

by Darryl Boyce of Carleton University

On November 26th, 2007, Darryl Boyce of Carleton University came to speak to the London Chapter of ASHRAE on the topic of the Green Globes Design Rating System.

He gave an overview of the Green Globes system explaining that the Green Globes Design is both a guide to integrating green design principles, and an assessment tool that uses an "on-line" questionnaire to produce recommendations and a report.

He explained that the objectives of Green Globes are to:

- Evaluate energy and environmental performance of buildings.
- Encourage peer reviews of design and management practices.
- Increase awareness of environmental issues amongst building owners, designers and managers.
- Provide action plans for improvement at varying stages of project delivery.
- Provide certification and awards for green building design and management.

He explained the similarities and the differences between the LEED Building design system, and the Green Globes system, and how he felt that the Green Globes system was a better representation of what the building owner/operator would want to see in the planning/building design stage – right through to the completion of construction.

The meeting was well attended by the membership, and some invited guests and new faces as well.

Eric Shaw
ASHRAE London Vice-President & Program Chair

HVACR Heritage Centre Canada

visit www.hhc-canada.net

HVACR Heritage Centre Canada is to preserve and record the history of the heating, ventilating, air conditioning and refrigeration technologies and their essential contributions to Canada's rich heritage and way of life.

Upcoming Meetings & Events

Mon Feb 25/2008 ASHRAE London Chapter Meeting
CFD Analysis in HVACR Applications
Mr. Paul J. MacDonald - ANSYS Canada Ltd.

Mon March 31/2008 ASHRAE London Chapter Meeting
Global Warming - Differing Perspectives
Mr Victor Goldschmidt - Northport MI *ASHRAE DISTINGUISHED LECTURER*

Wed April 16, 2008 Chapter Technology Transfer Committee Satellite Broadcast/Webcast
The broadcast will focus on "Integrated Building Design."
Watch for additional information regarding the Broadcast/Webcast via ASHRAE Insights and www.ashrae.org.

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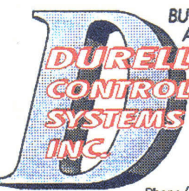
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**08' ASHRAE****Refrigerated Shipping Celebrated in ASHRAE Technical Program Session**

ATLANTA – Londoners enjoying a lamb chop dinner tonight should take time to celebrate a milestone anniversary in the history of refrigeration.

This year marks the 125th anniversary of the first frozen shipment of meat from New Zealand to Europe. In 1882, the Dunedin carried 3,521 sheep and 449 lamb carcasses, arriving in London in good condition after a 98-day voyage.

“Early attempts to meet the English demand by exporting canned meat failed, as it was an unreliable product disliked by the English population,” Dr. Richard Love, lecturer, Massey University, New Zealand, said. “Fortunately, worldwide technology was being developed at this time, and there were several candidate technologies available, such as absorption systems, mechanical compression systems and air-cycle systems, to ensure successful refrigerated shipping.”

Love will share findings from his historical research, Early Refrigerated Meat Shipping from New Zealand, in the poster session at ASHRAE's 2008 Winter Meeting, Jan. 19-23, New York City. The poster session is held from 11 a.m.-1 p.m. Jan. 22 at the New York Hilton.

The Dunedin used an air-cycle refrigeration system, which was seen as more reliable than a mechanical compression system on an ocean voyage, as it could not suffer from refrigerant leaks, according to Love. In the decades that followed, carbon dioxide- and ammonia-based mechanical compression systems became much more popular.

“Today, New Zealand still exports a large amount of frozen product around the world – 92 percent of New Zealand lamb is exported, and meat exports comprise about 14 percent,” Love said. “Refrigerated shipping remains an important technology for the country.”

For more information about the ASHRAE meeting, Jan. 19-23, New York Hilton, visit www.ashrae.org/newyork.

Held with the ASHRAE Winter Meeting is the ASHRAE co-sponsored International Air-Conditioning, Heating, Refrigerating Exposition, Jan. 22-24, at Javits Convention Center. For more information, visit www.ahrexpo.com.

ASHRAE Studies Heat, Moisture Production Rates of Swine, Houses

ATLANTA – The proverbial “little pig who stayed home” will be assured of good indoor environmental quality under proposed research from ASHRAE.

The Society is funding research to update heat and moisture production rates from pigs and their housing facilities, which are the foundation for effective design and operation of HVAC&R systems.

“Without proper heat and moisture production values, ventilation systems will be inadequately designed and operated, resulting in unsuitable building environments for animals and workers,” said Lingying Zhao, Ph.D., a member of ASHRAE's technical committee on plant and animal environment, which is sponsoring the project. “Incorrect data about those values also can create potential moisture buildup that could lead to premature building failure.”

The project is one of 16 currently out for bid by ASHRAE. Complete information on all of the projects and bid submittal information can be found at www.ashrae.org/research.

Currently available data on heat and moisture production rates is nearly 50 years old. Since that time, swine production has undergone significant changes in terms of genetic potential, nutrition, housing strategies and production systems, all of which affect swine heat and moisture production rate.

New feeds, for example, can affect the heat production rate from the actions of eating, digestion, and absorption and utilization of the nutrients. The amount pigs are fed today on a regular basis has changed throughout the years as well as differences in the nutrients contained in today's feed.

Types of housing also impacts swine heat and moisture production rates. Although pigs have a few sweat glands, they mainly stay cool due to other moisture sources in their pen evaporating from their skin, according to Zhao.

There are several other projects out for bid including:

1216-RFP, Inlet Installation Effects on Bi/Airfoil Centrifugal Fans, Air & Sound, sponsored by TC 5.1.

1267-RFP, Development of an ASHRAE Design Manual for District Heating and Cooling Systems, sponsored by TC 6.2.

1345-RFP, Waterside Fouling Performance of Brazed-Plate Type Condensers in Cooling Tower Applications, sponsored by TC 8.5.

1356-RFP, Methodology to Measure Thermal Performance of Pipe Insulation at Below-Ambient Temperatures, sponsored by TC 1.8.

1387-RFP, Thermal Energy Storage Design for Emergency Cooling, sponsored by TC 6.9.

1408-RFP, The Effect of Lining Length on the Insertion Loss of Acoustical Duct Liner in Sheet Metal Ductwork, sponsored by TC 2.6.

1418-RFP, Indoor Environment Modeling, sponsored by TC 4.10.

1475-RFP, Updating Heat and Moisture Production Rates of Modern Swine and Their Housing Systems, sponsored by TC 2.2.

1480-RFP, Island Hood Energy Consumption and Energy Reduction Strategies, sponsored by TC 5.10.

1481-RFP, Economic Data Base In Support of Standard 90.2, sponsored by Standing Standards Project Committee 90.2.

1482-RFP, Update to Measurements of Office Equipment Heat Gain Data, sponsored by TC 4.1.

1484-RFP, Energy and Performance of Secondary Coolant Low-Temperature Refrigeration Systems, sponsored by TC 3.1.

1486-RFP, Fault Detection and Diagnostics for Centrifugal Chillers - Phase III: Online-Time Implementation, sponsored by TC 7.5.

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.



ASHRAE Launches New Magazine Dedicated to High-Performing Buildings

ATLANTA - ASHRAE has launched a new magazine to help decision-makers in the building community learn about the latest developments in innovative technologies and energy-efficient design and operation.

Targeted at building owners, facility managers, architects and engineers, High Performing Buildings features working case studies of exemplary buildings developed by leading practitioners in the sustainability movement.

Also included is a "lessons learned" section in each article where building designers and operators explain what went right, what went wrong, how problems were resolved and what could have been done better.

"It is essential that ASHRAE share both the technologies and measured performance of high-performance buildings to change the status quo and help transform the building industry to a more sustainable built environment," said Kent Peterson, ASHRAE president.

ASHRAE's goal is to advance the concept of integrated building design with a focus on measured building performance, not just design of sustainable buildings. The cases studies featured will provide performance data, verifying actual sustainability performance.

The cover story of the first issue focuses on Heifer International. By providing gifts of livestock and plants to financially disadvantaged families around the world, Heifer International teaches sustainability by showing recipients how to use those gifts wisely.

The importance of passing on the gift of sustainability is also highlighted in the organization's Arkansas headquarters, which features earth-friendly designs such as a constructed wetlands, a gray-water tower and energy-saving techniques.

"One thing that Heifer understands is that if we are going to have a lasting impact on world hunger, everything we do must be sustainable - that is, the means for production of food and income must renew the environment and not deplete it," Jo Luck, Heifer's CEO and president, said. "In conceiving and constructing our new office building, we are striving to live up to the aspirations of Heifer's own mission of ending hunger and saving the earth."

To learn more or to subscribe, visit www.HPBmagazine.org. The quarterly magazine will be distributed via print and digitally.

Database of Building, Equipment Owning, Operating Costs Provided by ASHRAE

ATLANTA – Every day, engineers are asked to advise building owners and managers on strategic decisions involving the life cycle and functionality of buildings.

In the past, lack of valid data has left engineers without a solid basis for making these decisions.

A new free online database from ASHRAE provides engineers with equipment service life and annual maintenance costs for a variety of building types and HVAC systems. The database can be accessed at www.ashrae.org/database.

It contains more than 300 building types and more than 38,000 pieces of equipment with service life data.

The database allows users to access up-to-date information to determine a range of statistical values for equipment owning and operating costs. With this, ASHRAE is providing the necessary methods and information to assist in using life-cycle analysis techniques to help select the most appropriate HVAC system for a specific application.

"Life-cycle evaluations provide the most effective method for determining the best value of HVAC system alternatives," said Lynn Bellenger, chair of ASHRAE's Technology Council. "In order to facilitate the use of life-cycle analysis techniques by decision makers, the necessary data must be available, current and correctly applied. This database provides that needed data."

As part of the project, users are encouraged to contribute their own service life and maintenance cost data, further expanding the utility of this tool. Over a period of time, this input will provide sufficient service life and maintenance cost data to allow the comparative analysis of many different HVAC systems types in a broad variety of applications. Data can be entered by logging into the database and registering, which is free.

Information from the database also is used to update the ASHRAE Handbook. Chapter 36, Owning and Operating Costs, of the 2007 ASHRAE Handbook, HVAC Applications, contains median equipment service life data from the first 163 commercial buildings that were used to seed the database, with updates to come as the database grows.

The database is the result of ASHRAE research project 1237, Interactive Web-based Owning and Operating Cost Database, sponsored by ASHRAE's technical committee 7.8, Owning and Operating Costs.

ASHRAE Seeks Papers on Sustainable Urban Design

ATLANTA – ASHRAE is seeking papers focused on sustainable urban design for its 2009 Winter Meeting, Jan. 24-28, Chicago.

Papers and programs should present the latest developments in sustainability as applied to systems and equipment, application of their use in different types of buildings and, especially, the impact on urban settings. Topics include energy conservation, indoor environmental quality, application of ASHRAE guidance to achieve high-performing sustainable results, and international sustainability efforts.

The deadline for paper submittal is April 4. Submit papers online at mc.manuscriptcentral.com/ashrae or contact Mary McGee, meeting program administrator, at mmcgee@ashrae.org for more information. The deadline for other technical program submissions is Aug. 8.

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ASHRAE Publishes User's Manual for Standard 62.1

ATLANTA – A manual to help users navigate the changes in ASHRAE's 2007 ventilation standard is now available.

The Standard 62.1-2007 User's Manual provides users with a better understanding of the design, installation and operation requirements in ANSI/ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality.

The standard, published last year, contains new requirements for separation of environmental tobacco smoke (ETS) spaces from ETS-free spaces, clarification of humidity control design requirements, and the inclusion of new rates for high-rise residential occupancies.

"The manual provides guidance for designers and contractors to clarify the requirements, explains why the requirements are included (in some cases), and how to comply," Roger Hedrick, vice chair of the 62.1 committee, said.

The cost of the user's manual is \$69 (\$55, 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, or visit at www.ashrae.org/bookstore.

ASHRAE to Host Satellite Broadcast on Integrated Building Design

ATLANTA - A free satellite broadcast and Webcast, Integrated Building Design: Bringing the Pieces Together to Unleash the Power of Teamwork, will be held from 1-4 p.m. EDT on April 16. The ASHRAE program focuses on whole-building integrated design.

"The broadcast explains what you and other members of the building team must do to advance high-performance buildings with improved design, construction and operations processes," said Bill Williams, chair of the event. "Buildings that meet the needs of occupants and truly achieve sustainability objectives can only be created if the building community shares its knowledge and experiences."

Online registration opens March 1 for satellite broadcast site coordinators and Webcast participants. Registration for satellite downlink viewers opens March 15. For more information, visit www.ashrae.org/IBDbroadcast. Registration is free.

New Datacom Book Offers Structural and Vibration Guidelines

ATLANTA - Shock and vibration can be problems for datacom facilities, causing equipment and structures to degrade over time. With a new publication from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, datacom design teams and equipment manufacturers can learn how to prevent such issues from occurring.

Structural and Vibration Guidelines for Datacom Equipment Centers is the fifth publication in the ASHRAE Datacom Series.

Shock and vibration sources can include internal equipment that transmit vibration to their surroundings as well as external sources such as trains, construction activities, airports, earthquakes and weather events. To control these sources, datacom equipment centers must consider the performance of the building structure; the building infrastructure such as power, cooling, flooring and ceiling systems; and the equipment itself, including servers, storage and network equipment.

"This book discusses datacom equipment as well as a building's structure and infrastructure in a holistic way while providing best practices for their design and installation," says Rudy Notohardjono, vice chair of the book's committee. "Since structural systems are increasingly integrated and specialized to meet the needs of data centers, it is important for not only designers but also owners and operators to know the basics of structure and vibration."

The cost of Structural and Vibration Guidelines for Datacom Equipment Centers, is \$48 (\$38 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 at www.ashrae.org/bookstore.

ASHRAE Continues Building Community of HVAC&R

ATLANTA – Eighty-five years after creating its first chapter outside the United States, ASHRAE has chartered its 170th chapter, based in Indonesia.

"ASHRAE recognizes that technology developed outside North America enhances our knowledge base," Kent Peterson, ASHRAE president, said. "One way we can share that knowledge is by bringing members together via chapters, which allows them to work together, share ideas, and advance the standards of practice to improve the built environment. We see our chapter program as a way to build the community of HVAC&R."

ASHRAE's continued growth is part of its overall strategic plan, which calls for the Society to be a global leader in the HVAC&R community.

In addition to chapters in the United States, Puerto Rico, Canada and Mexico, ASHRAE has chapters in Brazil, Argentina, Singapore, Hong Kong, Malaysia, Taiwan, Philippines, Thailand, India, Saudi Arabia, Egypt, Lebanon, Kuwait, Greece, Sri Lanka, Pakistan, the United Arab Emirates, Portugal, Romania, Poland, Bahrain, Spain and Indonesia.

ASHRAE formed its first non-U.S. chapter in Toronto in 1922. The first chapter outside North America was formed in Singapore in 1984.

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