



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

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon Oct 24/2016

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Topic

Anatomy of Industrial Refrigeration Systems

Speaker

Andrew Crowley, P. Eng
Drennan Refrigeration Inc.
Director of Engineering and Projects

Meeting - MONDAY OCT 24/2016

5:15 Social 6:15 Dinner 7:15 Presentation

PLEASE USE

PAYPAL

ADVANCED PAYMENT BEFORE MEETING

see chapter web site to register and pay
<http://LondonCanada.AshraeChapters.org>

Meeting Location

BMO Centre

295 Rectory St., London, ON

President's Message

I would like to first start by thanking everyone that came out to our first Chapter meeting. The high numbers reflect the enthusiasm that everyone of us shows towards ASHRAE. Let us keep the momentum going with our next meeting coming up on October 24th at the BMO Centre.

The theme for this chapter meeting will be membership night. We are excited that our technical speaker for this meeting is also the membership promotion committee chair for our chapter, Andrew Crowley, P.Eng. Andrew has been a great resource to our chapter and has been active on the BOG for the last couple of years. Andrew will be covering the topic "Anatomy of Industrial Refrigeration systems", where He will display and discuss real life examples of refrigeration projects.

As this month is designated the membership promotion night, I would encourage each and every member to extend the invitation to someone you know who is not already a part of ASHRAE. As the fall and cold weathers knock on our doors, it is important to reflect on the importance of ASHRAE's existence in setting up the standards of our industry. Let us share ASHRAE's story of success, what it means and how valuable it is for us, to encourage others to be part of it as well.

On that note, I would like to end by thanking three individuals that joined the Chapter BOG this year: Kate Mayberry will be part of the sustainability committee, Raed El-Khatib as the CTTC vice Chair and Luigi Cornelio will be part of the YEA committee.

Best Regards,
Khalid El-Kadri
Chapter President 2016-2017
ASHRAE London Canada Chapter

Young Engineering in ASHRAE (YEA) and Student Activities (SA)

The London YEA & SA members has scheudled to compete against Hamilton ASHRAE Chapter on Sat Nov 5 in an Ultimate Freezbee match.

If wish to participate please contact
SA Chair - Matt Moore <matthewjmoore36@gmail.com>
or
YEA Chair - Amer Djulbic <Amer.Djulbic@gmail.com>

Upcoming Meetings

(check chapter web site for latest information)

Mon Nov 28/2016

Mon Jan 23/2017 (<<< note date change due to Society Conf)

Mon Feb 27/2017

Mon Mar 27/2017

Thu April 20/2017 - Society Webcast

Integrating Control Technology and Analytics for Optimal Building Performance

Mon June 5/2017 - Golf Tournament

Other Meetings

Jan 28 to Feb 1, 2017 = ASHRAE Winter Conference - Las Vegas, NV

Jan 30 to Feb 1, 2017 = AHR Expo - Las Vegas, NV (ahrexpo.com)

June 24 to 28, 2017 = ASHRAE Annual Conference - Long Beach, CA - 2018 -

Jan 20 to 24, 2018 = ASHRAE Winter Conference - Chicago, IL

Jan 22 to 24, 2018 = AHR Expo - Chicago, IL

June 23-27, 2018 = ASHRAE Annual Conference - Houston, TX



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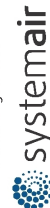


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Topic

Anatomy of Industrial Refrigeration Systems

1. Review fundamentals as applied to industrial refrigeration
2. Review of a recent industrial refrigeration project

Speaker

Andrew Crowley, P. Eng

Drennan Refrigeration Inc.
 Director of Engineering and Projects

Andrew is Director of Engineering and Projects for Drennan Refrigeration Inc. in London ON. Andrew's career has focused primarily on industrial refrigeration. Specializing in ammonia and Freon based refrigeration in the food & beverage, manufacturing, and chemical industries.

Andrew has a degree from The University of Western Ontario in Chemical & Biochemical Engineering (2005). He is a member of ASHRAE, IIAR (International Institute of Ammonia Refrigeration), and PEO. He is the current ASHRAE London Membership Promotion Chair.

Andrew began his industrial refrigeration career after graduation in 2005. He works in design, engineering, and project management for industrial refrigeration contractor Drennan Refrigeration Inc.

Past projects include engineering and project management for cold storage distribution centers, meat and poultry processing plants, bottling plants, breweries, ice rinks, and chemical manufacturing, among others.

Oct Table Top Display

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Informing colleagues about ASHRAE takes less than 1 minute now with Connect-a-Colleague. During #MarchIntoMembership contest you could win a \$500 American Express gift card when your colleagues join ASHRAE through your customized email referral. Connect-a-Colleague simply creates an automated email on your behalf and the more people you invite during the month of March, the more chances you have to win.

ASHRAE member referrals continue to be the top reason new members join. As an ASHRAE member, your referral is a very powerful tool that can benefit your colleagues, your Society, and the HVAC&R industry. Please take a minute to Connect-a-Colleague today.

Get started now: [Connect-a-Colleague
ashrae.org/connect](http://ashrae.org/connect)

ASHRAE JOB BOARD

Having trouble finding the time to search through all of the available jobs on ASHRAE Job Board? Let ASHRAE do the work for you! Create a personal job alert and new jobs that match your search criteria will be emailed directly to you.

Our Job Alerts will: match jobs to your customized criteria; notify you when potential opportunities become available; allow you to focus on other career-building activities, such as networking

Sign up for job alerts today on ASHRAE Job Board and you will be notified as soon as the jobs you want are posted!

Research

The following have contributed to ASHRAE Research so far this fiscal year.

Honor Roll level contributors will be listed in the ASHRAE Journal.

All honour roll donors will be listed in the Newsletter and on the website for the duration of the fiscal year. Donate early!

Individual Donors - \$100-\$249 (Honor Roll Level)

Tom Pollard	Ibrahim Semhat	Jordan Foster
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James Scudamore	John Freeman	Khalid El-Kadri
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Norm Clarke	Ben Oliver	Amer Djulbic
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Your name here with a personal contribution

Individual Donors - \$250-\$499 (Major Donor Level - Antique)

Jerry Lavender

Your name here....

Corporate Donors - Up to \$250

Your company name here....

Corporate Donors - \$250+ (Honor Roll Level)

Your company name here....

As the cold weather nears remember to thank ASHRAE Research for keeping your family warm at night! In fact there's currently 20 research projects underway doing just that. At any given time ASHRAE is supporting about 140 different research projects totaling about \$13 million. These projects not only directly support our industry, but continually push it forward. In Region II alone there are 10 projects with over \$600,000 worth of funding in progress. These projects are directly funded with the donations to ASHRAE Research Canada. Our goal as a chapter this year is to raise \$13,000 and we are currently 9% of the way there. When choosing where to donate this holiday season, keep in mind the one donation that not only benefits your family's wellbeing, conserves the environment and protects our future, but also directly accelerates the industry we rely on to make a living.

A couple of interesting facts that are new options to the Chapter this year... We have created a couple of endowed research funds named below. One is general endowment for the Chapter and the other is specifically for Past Chapter Presidents. When you are considering a donation to ASHRAE Research please consider making a donation to either one of these endowed research funds. Let me know if you have any questions about this or how you do this.

<http://www.ashrae.org/contribute>

Jordan Foster
Resource Promotion Chair FY2016/2017



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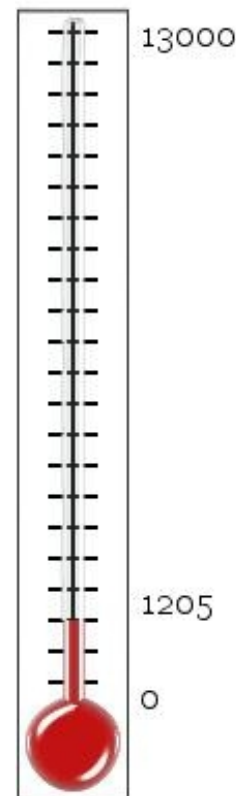
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ASHRAE Scholarships Provide Financial Assistance for 33 Students

ATLANTA – Thirty-three students receiving scholarship funds from ASHRAE are joining more than 300 others who have received financial assistance from the Society over the years. The students are accepting \$164,000 worth of financial assistance for the 2016-17 school year. Over the course of 28 years ASHRAE has awarded more than \$1.78 million to over 360 deserving undergraduate students.

“ASHRAE scholarships have a positive impact on the lives of students, often allowing them to focus more on their studies and work fewer hours at part-time jobs,” Chuck Curlin, chair of the Scholarship Trustees, said. “ASHRAE scholarships help defray some of the costs of a college education - which has gotten much more expensive in past years. The scholarships we provide not only help with the financial needs of students, but also creates a direct connection between the recipients and ASHRAE.”

Curlin notes that ASHRAE receives thank you letters each year from scholarship recipients expressing their gratitude for the scholarships. Some of these can be viewed at www.ashrae.org/scholarships, along with complete information about the program.

The 2016-17 scholarship recipients are:

Willis H. Carrier Scholarships: \$10,000 each for one year, Casey Zarger and Kristen Cole, architectural engineering, Pennsylvania State University. The scholarship was established by the Carrier Corp. in memory of its founder, who installed the world's first scientifically designed air-conditioning system.

Reuben Trane Scholarships: \$10,000 each to be awarded over two years, Danish Dhamani, mechanical engineering, Drexel University; Aldo Kusnardi, mechanical engineering, Minnesota State University; and Jacquelyn Sommers, architectural engineering, Kansas State University. The scholarship was established by the Trane Co. in memory of its founder, an innovative engineer, inventor and business executive.

The awards also include 13 one-year \$5,000 scholarships. Winners include:

Lynn G. Bellenger Engineering Technology Scholarship: Kathleen Agustin, sustainable energy and building technology, Humber College. The scholarship recognizes female undergraduate engineering technology students.

There are also several one-year \$3,000 scholarships. Winners included:

Henry Adams Scholarship: Rachel Kendall, mechanical engineering, University of Manitoba. The scholarship was established by Henry Adams, Inc. in memory of its founder, a charter member and sixth president of ASHRAE'S predecessor society, ASHVE, established in 1899.

High School Senior Scholarships: Daryl Williams, engineering, North Carolina State University; Tyler McCubbins, mechanical engineering, University of Tennessee; Anne Wellford, engineering, Trinity University; and Emily Ruble, engineering, Western Kentucky University.

For more information on ASHRAE scholarships, visit www.ashrae.org/scholarships.

Applications are now being accepted for the 2017-2018 undergraduate, regional/chapter and university-specific scholarships. The deadline is December 1, 2016.

**2017
Winter
Conference**
Jan. 28 – Feb. 1
Las Vegas, NV



**AHR
Expo**
Jan. 30 – Feb. 1
Las Vegas, NV



[Register Now for the 2017 ASHRAE Winter Conference and AHR Expo](#)

The largest gathering of HVAC&R professionals in the world is taking place January 28 – February 1 in Las Vegas. Join us at Caesars Palace and the Las Vegas Convention Center to learn the latest in technology, earn PDH's, and help guide the industry by taking part in a standards or technical committee meeting.

8 Conference Tracks | 2000+ AHR Exhibitors | 20+ ASHRAE Learning Institute Courses | Social Events | Tours | 600+ Technical Meetings

ASHRAExCHANGE

Want to stay updated with ASHRAE instantly? Log onto to ASHRAExCHANGE to ask questions, discuss industry news and connect with other engineers!

Bids Solicited for First Project in ASHRAE Flammable Refrigerants Research Program

ATLANTA – Balancing the safety of flammable refrigerants with their impact on the environment requires an immense amount of information. To provide such needed data, ASHRAE is launching the initial project in a multi-million dollar research program that will establish a more robust fact base about the properties and the use of flammable refrigerants.

The research is part of a \$5.8 million program funded by ASHRAE, the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), the U.S. Department of Energy (DOE), the Association of Home Appliance Manufacturers (AHAM), the California Air Resources Board (CARB), and Johnson Controls. This program is part of an ongoing global effort to phase down the use of high global warming potential (GWP) refrigerants and identify appropriate climate-friendly alternatives.

The program involves eight research projects, which are expected to be completed during 2017 with final results made available by the end of 2017. The findings from the projects will be used to update standards and codes that will govern the safe use of flammable refrigerants.

“ASHRAE is pleased to kick off its first project in this program,” Tim Wentz, ASHRAE president, said. “The rapidity with which technology advances building equipment and systems is creating challenges for our industry. Nowhere is this more evident than in dealing with refrigerants. This research is part of our push to harness and adapt new technologies to ensure a more sustainable future.”

The project, “Flammable Refrigerants Post-Ignition Simulation and Risk Assessment Update,” is the first of three projects being conducted by ASHRAE under this effort. The project will determine the consequences of ignition events through computer simulations. The findings will be used to update risk assessments previously funded by AHRI that determined the probability of ignition events.

The project will remain open for bid through Nov. 14, 2016. Those interested can find more information at www.ashrae.org/research.

Other projects to be funded by ASHRAE are:

RP-1807, “Guidelines for Flammable Refrigerant Handling, Transporting, Storing, and Equipment Servicing and Installation,” slated to go out for bid before the end of the year.

RP-1808, “Servicing and Installing Equipment Using Flammable Refrigerants: Assessment of Field-Made Mechanical Joints,” slated to go out to bid before the end of the year.

AHRI is funding three projects through its research arm, the Air-Conditioning, Heating and Refrigeration Technology Institute (AHRTI): AHRTI 9007, “Benchmarking Risk by Real Life Leaks and Ignitions Testing,” 9008, “Investigation of Hot Surfacing Ignition Temperature for A2L Refrigerants,” and 9009, “Leak Detection of A2L Refrigerants in HVAC&R Equipment.”

DOE is funding two projects: “Investigating the Proper Basis for Setting Charge Limits of Flammable Refrigerants for Various Types of Products” at Oak Ridge National Laboratory and “Modeling Tools for Flammability Ranking of Low-GWP Refrigerant Blends” and “Development of Method of Test for Flammable Low-GWP Refrigerants” at the National Institute of Standards and Technology.

AHAM is funding research to investigate the potential real-life leakage and performance testing of A2L refrigerants in household room air conditioners, portable air conditioners and dehumidifiers. AHAM is planning to also conduct research on A3 refrigerants in household refrigerators and freezers.

CIBSE and ASHRAE mark 40th Anniversary with Historic Agreement

LONDON – ASHRAE and the Chartered Institution of Building Services Engineers (CIBSE) have signed a partnership agreement to mark the 40th anniversary of their relationship.

Meeting in London to celebrate 40 years since the Institute of Heating and Ventilation Engineers and Illuminating Engineering Society merged to form CIBSE, and the start of their collaboration with ASHRAE, the two organizations signed an agreement to implement a range of new initiatives. These include: collaborating strategically on projects in each other's regions, creating a long-term staff exchange program, encouraging collaboration between regions, groups and chapters and mutually promoting the publication of new codes and standards.

While the two organizations have been working closely together for four decades, this agreement represents the first time that they have committed to a joint approach in promoting the mutual global interests of CIBSE and ASHRAE, and agreed to a raft of activities and goals to promote a more sustainable world.

Alongside a wider commitment to improve knowledge sharing between the two organizations, including jointly presenting work to industry, members and legislators, the agreement also formalized a commitment to working at a grass-roots level. This includes encouraging cooperation between ASHRAE chapters and CIBSE Regions, coordinating the programs of similar groups such as Women in Building Services Engineering (WiBSE) and Women in ASHRAE (WiA), as well as aligning activity for the young engineers of both organisations and working together on emerging topics such as legionella, resiliency and cyber-security.

John Field, President of the Chartered Institution of Building Services Engineers, said: "It is a tremendous honor to be able to sign this agreement and start a new era of even closer cooperation between our institutions. This is an unprecedented opportunity to spread the benefits of our work together through every level of our organizations. Building services engineers are doing some of the most important work on the planet, and our two organizations have done invaluable work over the last 40 years to raise standards across our industries and across the world. With this agreement in place, I look forward to continuing this work for many more decades to come."

"Collaboration and sharing of knowledge are key to advancing the built environment industry," Tim Wentz, ASHRAE president, said. "ASHRAE's partnership with CIBSE over the last 40 years has proven to be an invaluable collaboration for our respective members and the industry at large. Our joint work through conferences, publications and education has greatly added to the worldwide best practices databank of innovative and successful technologies. I am pleased to celebrate this milestone and look forward to many more."

To help commemorate the 40th anniversary of collaboration and the signing of the new agreement, CIBSE and ASHRAE also hosted a seminar titled 'Defining, delivering and assuring building environments that are truly fit for use,' held at Gustave Tuck Lecture Theatre, University College London. A rare opportunity to hear from leading speakers from two of the world's most influential built environment-related bodies, the sessions considered how the skills and intelligence available to designers should be applied to ensure that built environments are not only environmentally-appropriate but also reflect the needs and wellbeing of occupants.

###

About CIBSE

CIBSE publishes Guidance and Codes which provide best practice advice and are internationally recognised as authoritative design guidance for building services. The CIBSE Knowledge Portal, which makes Guidance available online to all CIBSE members, is the leading systematic engineering resource for the building services sector. For more information about the Institution please visit www.cibse.org

About ASHRAE

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its more than 56,000 members worldwide focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today. More information can be found at www.ashrae.org/news



ASHRAE FALL COURSES

Commissioning

Commissioning Process in New & Existing Buildings

Part 1 - Mon, October 24, 2016, 1:00 pm to 4:00 pm, EDT

Part 2 - Wed, October 26, 2016, 2016, 1:00 pm to 4:00 pm, EDT

Instructor: Rick Casault, P.E., Member ASHRAE

Environmental Quality

Updated! Troubleshooting Humidity Control Problems (IAQ Practices)

Tues, October 25, 2016, 1:00 pm to 4:00 pm, EDT

Instructor: Lew Harriman, P.E., Member ASHRAE, HBDP, LEED® AP

Energy Efficiency

Basics of Combined Heat & Power (ES Practices)

Wed, October 19, 2016, 1:00 pm to 4:00 pm, EDT

Instructors: Lucas Hyman, P.E., Member ASHRAE, LEED®

Combined Heat & Power: Creating Efficiency through Design & Operations (ES Practices)

Thurs, October 20, 2016, 1:00 pm to 4:00 pm, EDT

Instructors: Lucas Hyman, P.E., Member ASHRAE, LEED® AP

HVAC Applications

Updated! Design of Commercial Ground Source Heat Pumps

Mon, November 7, 2016, 1:00 pm to 4:00 pm, EST

Instructor: Steve Kavanaugh, Member ASHRAE

Standards & Guidelines

NEW! Fundamental Requirements of Standard 62.1-2016 (IAQ Practices)

Wed, November 9, 2016, 1:00 pm to 4:00 pm, EST

Instructor: Hoy Bohanon, P.E., Member ASHRAE, BEAP, LEED® AP

ASHRAE RESEARCH: HELPING YOU SURVIVE WINTER



Research Projects Keeping You Warm This Winter

- 1196-RP - Develop Software to Calculate the Application Seasonal Efficiency of Commercial Space Heating Boiler Systems Based on ASHRAE Standard 155P
- 1267-RP - Development of an ASHRAE Design Manual for District Heating and Cooling Systems
- 1322-RP - Productivity and Perception Based Evaluation of Indoor Noise
- 1385-RP - Development of Design Tools for Surface Water Heat Pump Systems (SWHP)
- 1458-RP - Modeling Person-to-Person Contaminant Transport in a Mechanical Ventilation Space
- 1478-RP - Measuring Air-tightness of Mid- and High-rise Non-residential Buildings
- 1504-RP - Extension of the Clothing Insulation Database for Standard 55 and ISO 7730 to Provide data for Non-Western Clothing Ensembles
- 1544-RP - Establishing Benchmark Levels and Patterns of Commercial Building Hot Water Use
- 1550-RP - Thermal Performance of Insulating Coatings on Piping and Ductwork
- 1564-RP - Measurement of Oil Retention in the Microchannel Heat Exchanger
- 1613-RP - Update Climatic Design Data in Chapter 14 of the 2013 Handbook of Fundamentals
- 1624-RP - Effective Energy-Efficient School Classroom Ventilation for Temperate Zones
- 1646-RP - Measurements of Thermal Conductivity of Pipe Insulations at Below Ambient Temperatures and in Wet Condensing Conditions with Moisture Ingress
- 1674-RP - Research to Support the Revision to Ground Source Heat Pump: Design of Geothermal Systems for Commercial and Institutional Buildings (ASHRAE 1997)
- 1699-RP - Update Climatic Design Data in Chapter 14 of the 2017 Handbook of Fundamentals
- GIA 13-14 - Air-Side Economizer Low-Limits Effect on Energy and Thermal Comfort
- GIA 13-14 - Assessing the Performance of Buildings Due to Extreme Weather and Climate Change
- GIA 14-15 - Development and evaluation of novel membrane liquid desiccant air conditioning systems for hot-humid and cold-dry climates
- GIA 14-15 - Integrating thermal energy storage into hybrid solar assisted heat pump systems for residential houses in cold climate
- GIA 14-15 - Numerical and experimental investigation of control schemes for small scale ammonia water absorption heat pumps

For more information on these projects, visit:

<https://www.ashrae.org/standards-research-technology/research#researchproject>

