



Airways

Hamilton Chapter No. 037

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American Society of Heating, Refrigeration and Air Conditioning Engineers

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Our 49th Year

February 2008

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Tuesday, February 12, 2008

"Computer Room Glycol Cooling"

Feature Speaker

Shehwar Haque, P.Eng.
Ecosaire (Dectron Internationale)

Shehwar Haque, P.Eng. is Manager, Engineering and Applied Sales for Ecosaire Precision Air Conditioning Systems from Dectron Internationale.

Mr. Haque has been with Dectron Internationale since 2000. He is responsible for standard and custom product development in the Precision Cooling Industry using synergistic technologies available within the various divisions in the Dectron Group. Combining Precision A/C Technology with high sensible cooling, Gas Phase Filtration and special formulated chemical media into a single product line, thereby offering turn-key solutions, is just one example.

In addition to his Engineering functions, Mr. Haque is responsible for managing Sales and Application Engineering for both domestic and overseas markets. Prior to joining Dectron Group, Shehwar had 20 years of extensive engineering experience managing product design and development in Industrial and Commercial Refrigeration, Precision Air Conditioning Systems, Air Handlers as well as Packaged Commercial and Residential Systems.

Mr. Haque has been a member of ASHRAE since 1983 and, during that term, was responsible for setting up a Psychrometric, Calorimetric and Acoustical testing facility in collaboration with ETL Testing Laboratories (now known as Intertek Testing Services), in Courtland, NY, for the purpose of in-house and third party testing and rating of HVAC Equipment.

Mr. Haque is a Professional Engineer in the province of Ontario. He has a degree in Mechanical Engineering, specializing in HVAC and Power Plant Engineering.

Royal Hamilton Yacht Club
North End of McNab, On Hamilton Harbour

5:00 pm – Social Hour

6:00 pm – Dinner

7:00 pm – Feature Speaker

Dinner/Feature Speaker

Chapter Members - \$40.00 • Guests - \$45.00 • Students - \$15.00 • Meal Plan - \$140.00

President's Report

January's meeting was a special event held at the University of Waterloo with ASHRAE Distinguished Lecturer **Brian Monk** speaking about **Hospital Filtration Systems and Airborne Contaminant Control**. Participation from the Chapter membership was very encouraging as the audience held many new faces as well as quite a few Engineering students from the university. Special thanks go out to Dr. Michael Collins from the university for his efforts in coordinating this event as well as our two sponsors, Union Gas and Madok Manufacturing. Region 2 CTTC RVC Frederic Genest was also on hand to present awards to Enermodel Engineering and the Region of Waterloo. The award was for Canada's first LEED Gold building, an Emergency Medical Services building in Cambridge which our chapter toured in January 2006.

At the February meeting, a representative from **Ecosaire (Dectron)** will make a presentation on **Computer Room Glycol Cooling**. The meeting will be back at our regular meeting place – the Royal Hamilton Yacht Club. Please RSVP to Wilf Laman at wflaman@vaxxine.com. Note that the Technical Presentation / Table-Top Display time slot is still open for this month – please contact me should you be interested. The cost is only \$75.00 to present your technology for 15 minutes in front of a HVAC audience.

Courtesy of **Neelands Refrigeration**, the March meeting will include a tour of a local Burlington grocery retail outlet in which **state-of-the-art refrigeration equipment** has been installed. Details are to follow, so mark your calendar for March 11th.

That's it for now. Should you have any questions, comments, suggestions or concerns, please do not hesitate to call or e-mail me personally.

Warmest regards,

David Hills, A.Sc.T., President 07/08

Upcoming Events of Interest

CMX/CIPHEX 2008

March 27 – 29, 2008
Metro Toronto Convention Centre
Toronto, ON
www.cmxshow.com

Upcoming Chapter Meetings

Tuesday, Mar. 11/08

Theme: **Students/Y.E.A.**

Tour – arranged by Noel Neelands of Neelands Refrigeration – of New Style Supermarket Refrigeration Technologies.

ASHRAE Satellite Broadcast Wednesday, April 16, 2008

On April 16, 2008, ASHRAE's Chapter Technology Transfer Committee (CTTC) will present a satellite broadcast and simultaneous webcast on "**Integrated Building Design: Bringing the Pieces Together to Unleash the Power of Teamwork.**"

Online registration for site coordinators and webcast viewers begins March 1 by going to www.ashrae.org/ibdbroadcast. Registration for satellite viewers begins March 15. Information about the program and speakers is available at www.ashrae.org/ibdbroadcast.

Three PDH credits will be granted to those who view the program and then complete the Participant Reaction Form on ASHRAE's web page following the broadcast.

As an added benefit, a \$50 discount will apply to a one-year membership for anyone who joins ASHRAE as a new member in conjunction with the broadcast. Check out ASHRAE's website for more details.

Note that, as in previous years, the ASHRAE Hamilton Chapter will be hosting this satellite broadcast at the Crossroads Communication Center in Burlington. Mark it on your calendar now and plan to attend.

HISTORICAL BIO ISOTHERM ENGINEERING

Isotherm Engineering has been lead by a number of very active ASHRAE Members who have been deeply involved in the operation of the Hamilton and Toronto Chapters for many years.

The company was founded by David Underwood, P.Eng with an incorporation date of Sept. 11, 1975. The 11 years of experience working for the Trane Company of Canada Ltd. in a variety of technical sales assignments and Stannair Conditioning Ltd. as their general manager, led Mr. Underwood to the conclusion there was an unmet need in the marketplace at that time for a full line contracting business in the HVAC&R industry. David felt a full line company could provide to clients a birth to death scope and service – at the outset, engineering (technical) design services, then installation and service, finally ongoing maintenance and repair service. He felt the company should remain smaller in size so that it could deal directly with owners on their projects and not through agents and general contractors who would filter out the real needs to owners.

During the early years of the company, Isotherm had several interesting projects which were unique.

The earliest major project included HVAC, electrical and general contract work including constructing a pent house on an existing commercial tower (stories high) in downtown Toronto to improve the function of an existing system. This involved new fans, controls and the pent house for the equipment. This project required negotiation with the City of Toronto as there was a moratorium at that time on anything being constructed more than 45 Ft. above grade.

Another interesting and challenging project involved the design and project management of a new fibreglass manufacturing facility in Erin, Ontario. This project had a connected natural gas load of 10,000 cf/h of natural gas. Isotherm had to negotiate with all code authorities for mechanical approval including the Ministry of the Environment. Isotherm was originally hired to design and project manage the installation of the required services but in the end staff went to Spain where the manufacturing technology had been acquired as we were intimately involved with the process installation as well.

Isotherm Engineering also designed, supplied, and installed several large food freezers at the Ontario Food Terminal for IGA over the next several years using evolving technology.

A controlled environmental chamber to manufacture bullet proof glass was another fully integrated project, designed and built by Isotherm Engineering Ltd. This project required very close tolerance for temperature and relative humidity. There were three rooms involved. The process room 65°F , 65%rh +/-10%, a film dispensing room 32°F, 10%rh and a storage room 28°F with humidity not being important.

There were many projects carried out for a large international office furniture manufacture including many office renovations, paint room ventilation systems and a class 10,000 clean room.

However, this was a contracting business, therefore, it was necessary to enter the traditional construction bid and spec market on occasion to assure the viability of the company.

The company then elected to expand into the service business as a follow up to the project work that we did. This business was an adjunct to our construction efforts.

In 1991, Don Stepien, P.Eng. joined the firm as a full partner. He brought expertise in the field of natural gas equipment and air inflated structures. He had extensive industrial air make up experience and with this addition Isotherm Engineering Ltd. was further able to broaden our client base with extended expertise.

Mr. Stepien developed a software programme to determine the required air volume to inflate any size and configuration of air inflated structure. This programme also used other related information to allow the heating load determination and energy consumption under standard meteorological conditions.

As a result of the expanded skills, Isotherm Engineering Ltd. designed, manufactured, and installed the air inflation systems for two large air inflated structures in India.

Another interesting project was the major retrofit of all the heating systems and offices for a 500,000 ft.² facility. This project included an early version of Johnson Controls Metasys and continues to operate successfully many years after its initial installation.

In the mid 90s, a relationship with Ontario Hydro was established and many projects have been done with them in the ensuing years.

In 1997, Mr. Bill McCartney now of the Hamilton Chapter, joined the firm as a full partner. Bill brought a wealth of industrial experience related to the petro chemical industry.

Under the direction of Bill, Isotherm Engineering Ltd. has continued to work towards creative solutions for our client base. Two of his unique solutions are as follows:

1. To provide a controlled flow of hot and cold water to rollers in a gluing process for wooden furniture that allows production to continue throughout the year due to elimination of condensation on the rollers due to better temperature control.
2. To supply and install a system with controls, electric heaters and cooling to control the conditions in a bake out room with temperatures as high as 135°F. The cooling system is required as the run up temperature exceed the maximum bake out and the room requires cooling to maintain appropriate conditions.

In recent years, Mr. McCartney has developed the commissioning business which is now a major contributor to the profitability and reputation of Isotherm Engineering Ltd.

In 2003, Mr. Michael Khaw, P.Eng. joined as another full partner with a plan to purchase the shares of David Underwood by 2008. Mr. Khaw has engineering design and construction experience that fits with our service offerings.

Mr. Khaw represents the next generation of ownership of this successful design build company.

Our goal at Isotherm continues - to work directly with owners or general contractors who believe in an integrated design approach to construction and maintenance.

As founder, David Underwood has devoted countless hours to ASHRAE. He currently is: Chair of the Society Environmental Health Committee; he's a voting member of the Society Planning Committee; a member of Technology Council; a voting member of the Society Certification Committee and Secretary of ASHRAE Research Canada. He was honoured by ASHRAE by being elevated to Fellow Member status; received the Distinguished Service Award and recipient of the William J. Collins, Jr. Research Promotion Award for the most successful chapter in ASHRAE for fund raising. Dave was on the Society Board of Directors for 3 years; was President of the Toronto ASHRAE Chapter and Chair of the Society committee overseeing the Handbook of Fundamentals. Now that is some ASHRAE service. He acknowledges that the ASHRAE service has broaden his ability in the business environment.

Another partner, Bill McCartney has also had extensive ASHRAE service at the Society level, at the Regional level, and at the Chapter level. Bill was President of the Hamilton Chapter for 2 successive years followed by two years as Research Promotion Chair – a current

position. Concurrently he is Hamilton Chapter Treasurer as well as the Regional Treasurer. At the Society level, Bill is a voting member of Technical Committee [TC] 7.3 Operation and Maintenance Management, plus voting member on TC 7.9 Building Commissioning, and Task group [TG] Variable Refrigerant Flow. If this is not enough, he was selected to be Chair of 2010 Refrigeration Volume, Handbook Committee. Bill recently was given the Distinguished Service Award. As you can visualize, Bill has a full plate when he attends the Society Annual and Semi-Annual meetings. And he also helps me collecting money at the Regional Dinners held at the Society Meetings – Bill never says no when asked to help in any ASHARE function.

The youngest partner is Michael Khaw. His involvement with ASHRAE is not quite as extensive at this time but is likely to grow as he becomes aware of the depth and benefits of the ASHRAE organization. He is the current TC 7.3 Operations and Maintenance-Handbook Sub Committee Chair. At the same time, Michael is the Toronto Chapter Executive-Secretary and the Toronto Chapter CTTC Chair. In 2007, Michael won Region 2's Presidential Award of Excellence for Promoting a Sustainable World. He also won the Region 2's Allen J Hanley TEGA Award and the Toronto Chapter's John Fox Dedicated Service/Outstanding Achievement Award.

With so many ASHRAE Members leading Isotherm, their success should continue for many more years as they help clients better understand the full scope of their projects – from birth to death.

*Submitted by George Menzies, P. Eng.
Chapter Historian 07/08*

ASHRAE News Releases

[Design of Energy Efficient Datacom Facilities Focus of ASHRAE Book](#)

[ASHRAE Publishes Updated Version of Energy Efficiency Standard](#)

[ASHRAE Technology Awards Highlight Outstanding Building Projects](#)

[ASHRAE Publishes User's Manual for Standard 62.1](#)

The above are just a few headlines from the numerous news releases made in conjunction with ASHRAE's recent AHR Expo and Winter Meeting in New York. Click here for more information.



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2007 – 2008 Meeting Schedule

This year's meeting schedule is summarized below. Except for some special events, all meetings will be held at the Royal Hamilton Yacht Club, at the north end of McNab St., on the Hamilton Harbour (If you need a map, visit our web site). New products and/or services may be presented informally via a "technical session" or a "table top demonstration" prior to dinner. After dinner, the main topic of the evening is presented by the "feature speaker". If you are interested in presenting a technical session, booking table top space to promote your product and/or service or, if you have a suggestion for a feature subject and/or speaker, please contact Terry Fowler (Programs Chair). There is a charge of \$75.00 for "table top demonstration" space and this includes a business card ad for two months.

ASHRAE Hamilton Chapter Program Activity			
Date	Theme	Technical Session/ Table Top Demonstration	Feature Speaker
February 12, 2008	Membership	open	Shehwar Haque Ecosaire (Dectron Internationale) Computer Room Glycol Cooling
March 11, 2008	Students/ Y.E.A.	Noel Neelands Neelands Refrigeration Tour of New Style Supermarket Refrigeration Technologies	
April 16, 2008 (not 2 nd Tuesday)	T.E.G.A./ IAQ	ASHRAE Satellite Broadcast "Integrated Building Design – Putting the Pieces Together to Unleash the Power of Teamwork"	
May 13, 2008	Refrigeration	open	Speaker to be determined McQuay International Variable Cooling / Refrigerant Flow
June 4, 2008 (not 2 nd Tuesday)	Social/ Research	Legends on the Niagara — Battlefield Course Annual Golf Tournament	

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