



Airways

Hamilton Chapter No. 037

American Society of Heating, Refrigeration and Air Conditioning Engineers

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Tuesday October 8, 2002

Variable Frequency Drives

Tonight's Speaker

Our speaker will be Mr. George Galea from Leeson Canada, Industrial Controls Group. George graduated from DeVry Institute of Technology. His expertise started out a number of years ago when he joined the Canadian Armed Forces as a Radio Operator. He was with them for 11 1/2 years and retired as a Sergeant.

George has control experience including PLC's, AC/DC Drives, sensors, motors vision and PID loop control. He has been commissioning, starting up systems as well as providing on site instruction for Leeson Canada. He has traveled extensively throughout North America and internationally as far away as Indonesia.

George also teaches Senior Refrigeration Students at Mohawk College and Senior Apprentices at the Joint Training and Apprenticeship Centre for Local 787.

We hope to couple a Variable Frequency Device to a fan with a scope meter, and a digital video camera so that we can visualize what happens to the electrical characteristics before and after installation of a VFD as well rpm control of the fan with respect to horsepower.

We also hope to discuss in very practical terms "How to install a drive system successfully", and what options are required and what questions to ask before selecting and purchasing a VFD.



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

5:00 PM Social Hour & Technical Session
6:00 PM Dinner & Business Meeting
7:00 PM Technical Program / Speaker Presentation

Chapter Members \$ 25.00 • Guests \$ 30.00 • Students \$ 20.00 • Meal Plan \$ 110.00

Chapter History

Hamilton Chapter Member: George Robb – Historical Bio

George is our immediate past President in the Chapter – twice over – serving from July 2000 to August 2002.

George was born in Edinburgh Scotland and moved to Grimbsy Ontario. He graduated from Grimbsy High School in the early '60s and went on to the University of Waterloo graduating as a Mechanical Engineer in '68. Upon graduation, he joined Proctor & Gamble and was involved in plant engineering and maintenance.

At P & G, some of his assignments involved HVAC. Soon George was hooked and acquired a special interest in controls and building automation. When a job opportunity at Honeywell came up, George applied and was given the job as a sales engineer for the Commercial Building Controls Division. George became even more focused in HVAC as Honeywell provided specialty training which allowed him to expand his interest in controls. This led into the design of large building HVAC systems. During the early 70's, controls were pneumatic, electric and now evolving into electronic. The controls engineer had many options available and had to continually update his skills in this rapidly changing control technology.

In 1975, one of George's major assignments was the design of HVAC controls and fire alarms for the CN Tower in Toronto which until recently was the tallest free standing structure in the world.

In 1980, George left Honeywell as their Senior Sales Representative to move into a new career – contracting, with Sutherland Schultz, in construction management. He set up a new energy management division and became Manager of this EMS Division. George was involved in many interesting projects such as the major upgrade of Nortel in Brampton in 1998. Some 700,000 square feet of high tech HVAC systems were installed at this Nortel's operation. He worked at Sutherland Schultz for eleven years before moving on to Stantec in 1991

At Stantec Consulting Limited, George was Senior Project manager where he was involved in all phases of sales, design, and project management. George liked this consulting aspect of HVAC and in 1993 formed his own consulting business – Robb Engineering Limited in Waterloo Ontario. The company is a mechanical consulting engineering firm which specializes in energy efficient design, energy management, and controls and instrumentation. One of his first major projects was a 1994 upgrade of the Babcock Wilcox Office in Cambridge. George designed a low energy variable air volume system.



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In 1996, George designed and installed a new high pressure natural gas fuelling station for the City of Kitchener's new NG buses.

George joined ASHRAE in February 1994 as a full Society Member. He joined the Hamilton Chapter about that time and became active in the chapter program development. In 2000, George became President of the Chapter. This year George will be Chair of the Chapter Research Promotion Committee. He will be asking all of us for investments in ASHRAE Canadian research.

When interviewed this summer, George noted that ASHRAE has been instrumental in expanding his skills in HVAC. As well, it has broadened his professional and personal contacts and has been helpful in expanding Robb Engineering's clientele. I've heard this comment from most of the ASHRAE members featured in the bios done this past year.

George has and is involved in many other activities as well. For some 7 years at Sutherland and Schultz, George was Chair of the United Way Campaign. And for 15 years, George has been Associate Warden for the Ritual of the Calling of An Engineer – Camp 15 (U of W). He continues in this role today. For 2 years, '91 to '93, George was President of the University of Waterloo Engineering Alumni Association.

In George's consulting practice, he has been and continues to be supported by a strong partner – both on and off the job – Jane Robb who many of us know. She is proud to be part of his success. Jane has been our host for many ASHRAE events especially the past few Chapter Summer Summits where we enjoyed the Robb's outstanding hospitality.

We look forward to George being active in ASHRAE for many more years especially in the Cambridge area.

George Menzies, Hamilton Chapter Historian 02/03

Did you say that you wanted to sit in the "GOLDS"?

Attention all ASHRAE members who would like to bring guests to an ASHRAE meeting.

Special "ASHRAE" meeting "GUEST DINNER TICKETS" are available at the special price of \$100.00 for a book of 4 tickets.

These tickets allow you to treat a special friend or customer to a meeting. They will work even though you may not be able to attend!

These special tickets will insure that your guest is properly introduced to ASHRAE.

Pick up yours today! Contact a member to the executive or see your sales rep at the next meeting!!

Steve Glover, Hamilton Chapter T.E.G.A. Chair

ASHRAE Research

Our campaign for ASHRAE Research for the 2002-2003 period is officially under way. As in the past, I would hope that you would all consider a small donation to benefit ASHRAE Research.

It is important to note that all of the money contributed to ASHRAE Research comes back to be used in Canada for research projects. In fact, we actually receive more money back from ASHRAE Research to be spent in Canada than we collect.

All ASHRAE Research donators should be aware that an official Income Tax Receipt will be issued for your use in any corporate or personal tax returns.

I would like to thank the following companies and individuals who graciously donated money to the 2001-2002 ASHRAE Research Campaign. They are as follows:

C.W. O'Dell Associates
Mr. David P. Stacey
The Walter Fedy Partnership
BML Multi Trades Group Ltd. (Brantford Mechanical)
Dynamic Flow Balancing Ltd.
Chicago Blower Sales of Southwestern Ontario
Delhi Industries
RCR Design Air Incorporated - Waterloo
Air Audit Incorporated
Atkinson Engineering Inc.
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Superior Boiler Works & Welding Ltd.
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Mr. Hugh Crowther
Enbridge Consumers Gas Co.
Mr. Louis Sentesy
Heco Limited
Efficiency Engineering Inc.

Mr. Richard J. Fahey
Mr. Charles M. Barrett
Mr. Chris Vangerwen
EFI Systems Group

For those of you who have not contributed to ASHRAE Research in the past, the simplest method to do so is to use the donation slot in the annual ASHRAE Membership Renewal Form. If you fill it in at this point, you will not have to think about it later on.

Thank you again to the above ASHRAE Investors. I look forward to seeing more of you contribute over the next few months.

George Robb, P. Eng, Hamilton Chapter Research Chair, 2002-2003

Where Have the Good Books Gone?

Seriously, gentlemen there are a number of books missing which were signed out by chapter members and former chapter members. We had an honor system, which was loosely kept, and there were no real rules that were enforced or followed up. We now have books outstanding for a year and more and this is not fair to other paying chapter members wishing to borrow books. Below is the list of the books that are outstanding. If you recognize the title – please bring it back. We know who have signed out the following books and request that they are returned at the next Chapter Meeting.

AMCA fan application manual(?)

C.D. 1997 Ashrae handbook (April 10/01)

Industrial Ventilation (April 10/01)

Design of Smoke Management Systems (Jan 12/99)

Engineering Manual of Automatic Controls for Commercial Buildings (Jan12/99)

HVAC Air Duct Leakage Test (Mar12/02)

111-1988 Duct Fitting Loss Coefficient Table. Still out Sept 01

**Heating & Cooling Load Calculation
Energy Conservation in Buildings (Jan 12/99)**

Guide Line 1-1996 HVAC Commissioning Process (Jan12/99)

Due to the number of books out and the length of time that they have been out we have formulated new rules as follows.

The Chapter Library Rules

Rule #1

Chapter members only may sign out a book with a dated note or Business Card.

Rule #2

Limit of sign out (2) Two chapter meetings, exception May sign outs will be returned at the September meeting.

Rule #3

Books not returned within the allotted time will be invoiced to borrower at market cost.

Rule #4

Books will not be transferred between members – exchanges of book must go through the library.

Rule #5

New books will be purchased on majority vote of the executive.

John Pollock

Upcoming Events of Interest

ASHRAE London Chapter - Monthly Meeting, Monday October 28 2002

Speaker: Don MacDonald of Phoenix Control Corp
Topic: Generic Lab Design

ASHRAE London Chapter - Monthly Meeting, November 25 2002

Speaker: Joseph Tarascio of York Engineered Systems Group
Topic: CFC Update

ISH Trade Show, October 31 to November 2, 2002

National Trade Centre, Toronto

The show covers Plumbing, Heating and Air Conditioning along with Kitchen & Bath and is the first ISH show outside of Frankfurt Germany

Information can be found at www.usa.messefrankfurt.com and www.ish-na.com

Lonworld 2002, October 31 - November 1 2002

Join hosts Echelon® Corporation and Messe Frankfurt at the Toronto Trade Center in Toronto, Canada, for LonWorld(tm) 2002. LonWorld is the principal forum for LONWORKS® technology and includes an international exhibition with simultaneously held conference. The LonWorld conference will provide 2 days of technical presentations on how to use the LONWORKS platform to maximize performance, increase revenue & profits, create new revenue opportunities, offer valuable services to existing customers, and more.

For more information on the show, please go to www.lonworldexpo.com or contact Tatiana Kvitka, LonWorld 2002, tatiana@echelon.com

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