



Airways

Hamilton Chapter No. 037

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American Society of Heating, Refrigeration and Air Conditioning Engineers

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Our 45th Year

April 2004

President

Ralph Kosir, P.,Eng.
Phone (905) 563-5400
ralph@efisystemsgroup.ca

Secretary

Michael Carr
Phone (519) 649-1700
michaelcarr@rogers.com

Treasurer

Nathan Martin
Phone (905) 681-3901
nathanm@odellassoc.com

Research Chair

George Robb, P.,Eng.
Phone (519) 885-2858
grobbs@golden.net

Membership Chair

David Hills
Phone (905) 687-9778
dhills@tmpniagara.com

Student Activities Chair

Programs Chair

Chris McClelland
Phone (905) 572-1111
hamilton@engineeredair.com

Historian

George Menzies, P.,Eng.
Phone (905) 388-1313
gmenzies@allstream.net

T.E.G.A.

Steve Glover
(905) 335-3325
steve.e.glover@jci.com

Social Chair

David Rasmussen
Phone (905) 575-5542
drasmussen
@delhi-industries.com

Webmaster

Brian Beninger, P.,Eng.
Phone (905) 563-3221
brian@beninger.ca

Newsletter Editor

Allan Antcliffe, P. Eng.
Phone (519) 756.5760
allan@madok.com

Tuesday April 13, 2004

The Energy Design Process for High-Performance Buildings

Successfully designing, constructing and operating high-performance buildings requires a team approach from the very inception of the design process. Ideally, the team would include the building owner and operator, building designers, equipment suppliers and contractors. Regardless of the composition of the team, the design process is critical. This presentation will give details of a process that focuses on energy efficiency. Actual high-performance buildings which have been designed using the suggested process will be shown as examples.

Tonight's Speaker:

RICHARD B. HAYTER, Ph.D., P.E.
Associate Dean of Engineering For External Affairs
Kansas State University, Manhattan, KS

Dr. Richard B. Hayter was the 1995/96 President of the American Society of Heating, Refrigerating and Air-Conditioning Engineers. He is a member of the ASHRAE Nominating Committee, Resource Development Committee, Board Policy Committee on Standards, and serves on the Board of Trustees of the ASHRAE Foundation and the ASHRAE Learning Institute. His ASHRAE awards include the Distinguished Service Award, the Region IX Hall of Honor, the Ralph G. Nevins Award for Physiology and Human Environment, the John F. James Award for International Activities, and the ASHRAE-Alco Medal for Distinguished Public Service. He is an ASHRAE Fellow.



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

5:00 PM Tour of the new Hamilton Federal Building
55 Bay St. (meet in lobby)

7:00 PM Dinner / Speaker Presentation

Chapter Members \$ 27.00 • Guests \$ 32.00 • Students \$ 20.00 • Meal Plan \$ 130.00

RICHARD B. HAYTER, Ph.D., P.E. (cont'd)

Professor Hayter is Associate Dean of Engineering for External Affairs at Kansas State University. A licensed professional engineer, he received his B.S. in Mechanical Engineering from South Dakota State University; and his M.S. and Ph.D. from Kansas State University. Prior to his present position, he served in the U.S. Air Force and was executive vice president of an engineering consulting firm specializing in energy management in commercial and industrial buildings.



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Jack M. Fitzmaurice, P.Eng.

Tel: 905-681-3901
Fax: 905-681-0688
Coll: 905-546-6600
Email: cwodell@direct.com

1038 Cooke Blvd., Unit 3
Burlington, Ontario
L7T 4A8



EFI SYSTEMS GROUP
5140 Meadowood Lane
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Ralph J. Kosir, P. Eng.
Sales Engineer

905 563-5400
Fax: 905 563-5401

www.efisystemsgroup.com
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Tour the new Hamilton Federal Building

The Tuesday, April 13th presentation – "The Energy Design Process for High-Performance Buildings" – will be preceded by a tour of the new Hamilton Federal Building. Meet in the lobby at 55 Bay Street at 5:00 PM.

Bill C-45 Amends Criminal Code re Liability for Safety

As a result of the deaths of 26 miners at Westray, NS in 1992 and the deaths of 2 youths during "Take Our Kids To Work Day", the government introduced Bill C-45 which became **effective March 31, 2004.**

Now those persons who are responsible for directing the work of others are under a legal duty to take reasonable steps to prevent bodily harm to any employee and public safety. This expands the class of personnel, whose acts or omissions are attributable to a corporation, to now include all employees, agents and contractors. Fines are dramatically increased. Under Bill C-45, the supervisor and/or senior officers that allowed the youths to access the vehicles that crashed while joyriding could now be charged with criminal negligence for endangering the public. The fine would be \$100,000 to one million.

Safety conferences this year are running sessions on Bill C-45 – "Your new liability in the workplace", but the subject is not difficult to comprehend. If you supervise, you now have a legal liability to ensure the safety of your workers, contractors and students or other visitors to your facility.

George Menzies, Hamilton Chapter Historian 03/04

Canada's Energy Efficiency Awards

The Canadian government through its Office of Energy Efficiency (OEE) offers programs and financial incentives to promote energy-efficient technologies and practices. The activities are managed by NRCan's Office of Energy Efficiency.

This space Could Be Yours!

**Business Card Ad
\$75 For one year**

If you are interested, contact Brian Beninger
brian@beninger.ca

This space Could Be Yours!

**Double Size Ad
Business or Product Advertising**

**\$150 For one year
(includes \$15 Setup Change)**

**Changes can be made any time for an
additional \$15 setup charge**

If you are interested, contact Brian Beninger
brian@beninger.ca

Canada's Energy Efficiency Awards (cont'd)

In the latest Time Canada magazine, this year's winners were announced. The government website provides more detail. We have a couple from our area:

Enermodal Engineering – Project: University of Ottawa Biology Building

Enermodal worked with Shore Tribe Irwin architects, R.J.McKee Engineering and Cole & Associates to create a new energy efficient biology building. Energy saving innovations includes a curtain wall with thickened thermal breaks, insulated interior spandrels and growth chambers to recover waste heat. Stephen Carpenter, Enermodal President, noted that with this design, this building consumes 73% less energy than a traditionally equipped building saving the university \$270,000 a year so payback would be less than 2 years.

Robin Sano, University of Waterloo – Gas-Electric Feasibility Study

Robin's project was to study the feasibility of replacing gas-powered vehicles with a gas-electric hybrid auto. Although more expensive, the hybrid reduces gas emissions by as much as 90%. A Toyota Prius hybrid was compared with a Volvo. The cars were leased at a comparable cost for university staff. The hybrid consumes less gas and costs less overall to own. The project's success may result in the university considering hybrids for future car purchases.

Submitted by TEGA Co-Chair George Menzies

Energuide Fireplace Efficiency Rating for Gas Fireplaces

On March 15 Natural Resources Canada (NRCan), the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI), and the Hearth, Patio and Barbecue Association of Canada (HPBAC) announced a new rating program. The EnerGuide Fireplace Efficiency Rating for Gas Fireplaces is based on test results under the new Canadian Standards Association P.4.1-02 standard, introduced in Canada in 2003. This standard is the first in North America for testing and validating the energy efficiency of gas

fireplaces.

"An important step in the consumer-awareness process is to provide hearth retailers and heating, ventilation and air conditioning contractors with program knowledge to share with the consumer during the purchase decision," said John Murphy, HRAI chair.

Submitted by TEGA Co-Chair George Menzies

Axijet High Plume Blower System

An article on an Axijet High Plume Blower System was submitted in .pdf format and I was unable to incorporate it directly into the Airways document. The

article is attached to the end of the Airways document.

Submitted by Ralph Kosir, President 03/04

ASHRAE Hamilton Chapter Golf Tournament Wednesday, June 9, 2004

Last year's tournament was a partial success. We had a number of late cancellations that dropped our normal numbers considerably. On a positive note, the weather was superb and the food, once again, was excellent.

The golf entry form is being sent out earlier this year in hopes we can reach our target of 88 golfers. If I find the numbers are low, I will be approaching our two closest Chapters, Toronto and London to fill these vacancies. The Whirlpool will again allow us to go off with a split T format, meaning less time to wait until all golfers are finished.

Again we will be having Hole Sponsorships at a cost of \$100. If you were one of our 8 sponsors last year and

your sign is still in good condition, you can bring it and sponsor a hole at a cost of \$25.00. Anyone wishing to sponsor a hole – please contact me by phone or fax at (905) 575-5542. Also indicate which hole you wish to sponsor.

This announcement will not be forwarded to Toronto and London until next month let's keep this a Hamilton Chapter tournament!

Please complete and return the attached registration form.

David Rasmussen, Social Chair 03/04

Horse Races at Flamboro Downs Sunday, April 18, 2004

**BRING A FRIEND
OPEN TO ANYONE 19 AND OVER
COST – \$25.00 PER PERSON**

The price includes:

- ♣ Roast Beef Buffet,
- ♥ Racing Program,
- ♦ free parking and
- ♣ a race named after ASHRAE.

Plus a Player Rewards Representative will speak at 5:45 pm on "How to Bet On the Horse Races" and will answer all your questions.

Please arrive between 5:15 pm and 5:30 pm.

Each person will receive \$10.00 in the form of a gift certificate to cash at the Slots located on the ground level. To receive your \$10.00 you must own a "Winners Circle Card". If you don't have one, you must line up and obtain one for FREE [Government Photo ID (Passport or Driver's License) is required – NO EXCEPTIONS

To secure your reservation:

Complete the attached registration form and fax it to David Rasmussen at (905) 575-5542.

Then mail the form –with your cheque (payable to ASHRAE Hamilton Chapter – to:

David Rasmussen, 8-1300 Upper Ottawa St., Hamilton, Ontario, L8W 1M8.

David Rasmussen, Social Chair 03/04

Message From The Editor

In this, my first attempt at constructing your *Airways* newsletter, I would like to do two things. First, I want to thank Brian Beninger for the admirable job he has done with *Airways* over the past number of years and for helping me to phase into the role. Second, I want to

encourage you to e-mail me with any (constructive) criticism or suggestions for improvement as we go along.

Allan Antcliffe, Airways Editor 04/05

2003 - 2004 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, North end of McNab St. on Hamilton Harbour - If you need a map, check out our web site at <http://www.vaxxine.com/ashrae/>**. During the 5:00 PM to 6:00 PM Social Hour, a half hour "technical session" on the basics of a particular subject relating to our industry is presented. If a session sounds interesting to you, feel free to attend. Presentations are made by our members and this forum is open to all who wish to share his or her expertise. New products and/or services are presented informally via a "table top demonstration". After dinner, the main topic of the evening is presented by a "feature speaker". If you are interested in presenting a technical session, booking the table top space to promote your product or service or, if you have a suggestion for a feature subject and/or speaker, please contact Chris McClelland, our Programs Chair. There is a charge of \$ 75.00 for "Table Top" demonstration space and this includes a business card ad for two months.

2003 – 2004 ASHRAE HAMILTON CHAPTER PROGRAM ACTIVITY				
Month/Date	Theme	Tech Session 5:00 – 6:00 p.m.	Table Top Presentation	Guest Speaker/Main Topic
April 13, 2004	DL	Tour of the New Hamilton Federal Building 5:00 PM	Distinguished Lecturer – Richard Hayter The Energy Design Process for High Performance Buildings Joined by London & Toronto Chapters	
May 11, 2004	History	ASHRAE Current Operations	History of the Chapter	Brian Monk of Circul-Aire Current Trends in Design and Installation of Filtration Systems for Building HVAC Security
June 9, 2004	Research	Annual Golf Tournament @ Whirlpool		
September 14, 2004	Programs	Under Floor Air Distribution	York	Gas Fired Refrigeration

Airways Newsletter Editor:
Allan Antcliffe
Madok Manufacturing Limited
50 Morrell St., Brantford, Ontario N3T 4J5
Phone (519) 756-5760
Fax (519) 756-5768
E-Mail allan@madok.com

Hamilton Chapter Mailing Address:
59 Abbey Close
Ancaster, Ontario L9G 4K8
Phone (905) 648-7030
Fax (905) 648-9220

ASHRAE Hamilton Chapter
<http://www.vaxxine.com/ashrae/>

ASHRAE HAMILTON CHAPTER

GOLF TOURNAMENT REGISTRATION

DATE: WEDNESDAY JUNE 9, 2004
LOCATION: WHIRLPOOL NIAGARA FALLS, ONTARIO
COST: \$150.00 PER PERSON
INCLUDES: 18 HOLES ON ONE THE BEST COURSES IN NIAGARA
ONE POWER CART PER TWO GOLFERS
LUNCH AFTER YOU FINISH 9 HOLES
BUFFET SUPPER

**PLEASE COMPLETE THE FOLLOWING AND FAX OR E-MAIL.
WE ARE RESTRICTED TO THE FIRST 88 GOLFERS**

___PLAYER 1. _____ ___PLAYER 2. _____

___PLAYER 3. _____ ___PLAYER 4. _____

PLEASE INDICATE BEFORE EACH PLAYER THE SIZE OF VEST
THEY WEAR.....AS THIS WILL BE THE PRIZE GIVEN OUT.
ie: S M L XL XXL

PREFERRED TEE OFF TIME (Starting at 12:10 pm) _____

Designated Contact: _____

Phone: _____ Fax: _____

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PHONE OR FAX: (905) 575-5542
E MAIL: drasmussen@delhi-industries.com

ASHRAE HAMILTON CHAPTER

FLAMBORO DOWNS HORSE RACES REGISTRATION

DATE: SUNDAY APRIL 18, 2004

LOCATION: FLAMBORO DOWNS

COST: \$25.00 PER PERSON

INCLUDES: ROAST BEEF BUFFET
RACING PROGRAM
FREE PARKING
A RACE NAMED AFTER ASHRAE
"HOW TO BET ON THE HORSE RACES" PRESENTATION

NAME **WINNER CIRCLE CARD #**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

MAIN CONTACT: _____

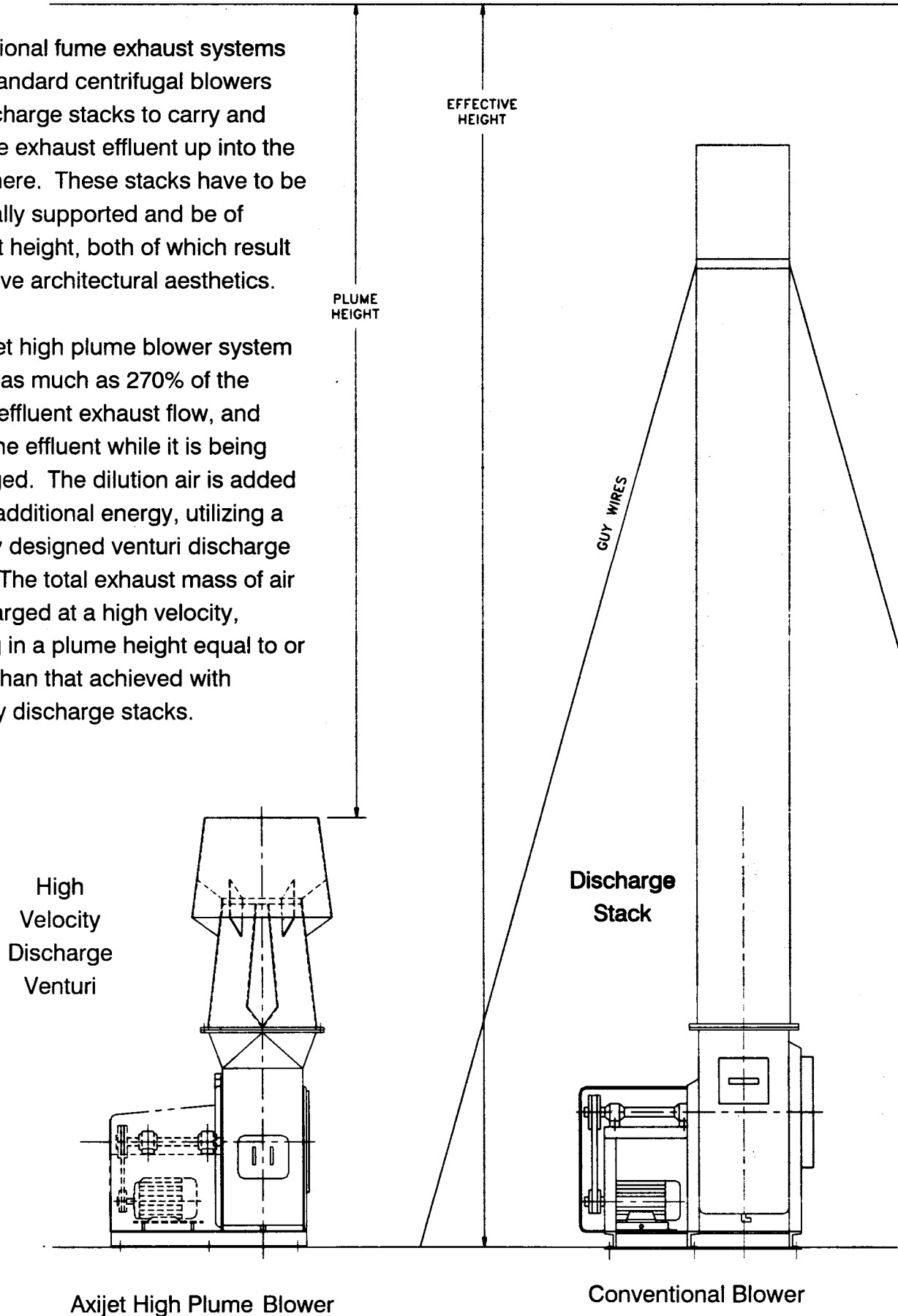
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FAX: _____

**Space is limited to the first 40 people that are paid.
Cheques must be received prior to April 15th.
No Exceptions.**

Conventional fume exhaust systems utilize standard centrifugal blowers with discharge stacks to carry and direct the exhaust effluent up into the atmosphere. These stacks have to be structurally supported and be of sufficient height, both of which result in negative architectural aesthetics.

The Axijet high plume blower system entrains as much as 270% of the primary effluent exhaust flow, and dilutes the effluent while it is being discharged. The dilution air is added without additional energy, utilizing a specially designed venturi discharge nozzle. The total exhaust mass of air is discharged at a high velocity, resulting in a plume height equal to or greater than that achieved with unsightly discharge stacks.



Axijet High Plume Blower

Conventional Blower