

Capital Communiqué

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
MARCH, 1994

PROGRAM

DATE: March 15, 1994

THEME: RESEARCH / RESEARCH SCIENTISTS

SPEAKER: SHERIF BARAKAT, Ph.D., P.Eng.

Building Performance Laboratory, Institute for Research in Construction, National Research Council of Canada.

SUBJECT: ASHRAE RESEARCH PROCESS AND CANADA'S CONTRIBUTION

This brief presentation will outline current ASHRAE research priorities and highlight the process by which research projects are initiated and awarded through the Technical Committee structure. A brief summary of current Canadian contributions to ASHRAE research funds and contracts will also be covered.

SPEAKER: JACK R. MAWHINNEY, P.Eng.

Senior Research Officer, National Fire Laboratory, National Research Council of Canada.

SUBJECT: SPRINKLER FIRE TESTS AND IMPLICATIONS FOR ZONED SMOKE CONTROL

This presentation will illustrate a series of experiments, jointly funded by ASHRAE and NRC, on interactions of sprinklers with shielded fires in single storey and highrise buildings. The experiments focused on measuring effects of fire, such as heat release rate, room temperature profiles, oxygen, carbon dioxide and monoxide concentrations, buoyancy pressures and smoke spread. Implications of test results on zoned smoke control system will be discussed.

SOCIAL - 17:30 Hrs

DINNER - 18:30 - 20:00 Hrs

PROGRAM - 20:00 Hrs

Phileas Fogg Metropolitan House
99 Bank Street, MacDonald Room

MENU

Tossed Salad

Braised Beef and Vegetable

Roast Potatoes

Fruit Pie

PRESIDENT'S MESSAGE

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You know your year is coming to a close when Spring is in the air, the Curling tournament is announced, the Research Committee is in high gear and the Nominating Committee is poised to oust the old board.

It is that time once again to dig Deep into your pockets and pull out those spare Loonies to support ASHRAE's Research Program. You all know how important this program is to the success and continuation of the

Society. So, please consider a contribution this year. Thanks.

On a lighter note, it's curling time and Stan & Chris have promised another exciting day. Stan has once again claimed victory before the tournament has even begun. So come out and play, if only to see Stan Sweep.

Ross McIntyre
President

ASHRAE RESEARCH PROMOTION

The Research campaign will be the highlight of this month's Chapter meeting. Members of the Research Promotion Committee will be approaching you for your financial support in the near future. Please be generous.

Why? Because of the benefits.

Who benefits from ASHRAE Research?

ASHRAE members advance themselves in the profession through use of improved technical information from research incorporated in ASHRAE publications.

Consulting engineers depend upon ASHRAE's publication of advances in technology from research, to keep themselves and their stats up-to-date on the current best practice.

Manufacturers of equipment, controls or any of the mechanical components associated with HVAC&R rely on ASHRAE standards and data presented in the Handbook series and at the Society's technical meetings.

Equipment sales companies benefit from advances in equipment design and application which are often a direct result of technical information developed, verified or updated and published by the Society.

Mechanical contractors benefit from technical advances which increases the demand for more and better mechanical equipment and systems.

Energy suppliers (electric, gas and oil) enjoy increased sales as a direct result of advances in product and system design which create greater demand for HVAC&R.

Government agencies benefit because information developed by ASHRAE Research increases design efficiency of government buildings and can be used as a basis for standards.

In other words, **everyone** benefits. That is why the Research Promotion Committee is asking **everyone** for their support.

Research Promotion Chairman,
Neil Armstrong

MARCH TABLE TOP

LES CONTRÔLES BERNARD MÉTHOT INC. will be providing a showcase of their product line, in particular:

AERCO INTERNATIONAL:

Gas Water Heater
Vapour Heat Exchanger
Vapour Generator

SOFAME INC.

Direct Contact Economizer
Direct Contact Exchanger

Les Contrôles Bernard Méthot Inc. will be represented by Mr. Michael McNamara, who will be pleased to answer your questions and provide you with further information.

Contact Paul Séguin at 228-9037 for more information on presenting a table top at upcoming meetings. The new 1993-1994 rate is \$100.00 per display. Note that we still have openings for **your** display this spring!

CURLING NOTICE

The Annual ASHRAE Curling Bonspiel will be held again this year at the Nepean Sportsplex on March 25, from 1:00 p.m. to 7:00 p.m. with a roast beef dinner to follow in the Continental Dining Lounge.

The cost will be \$170.00 per team of 4 or \$42.50 for individuals.

Please contact Randy Cavill or Chris Healey at Walmar (225-9774) to book your team.

Space is limited so book early to avoid disappointment.

Prize donations would be greatly appreciated.



ASHRAE, Ottawa Valley Chapter Board of Governors
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Publication deadline is the first Tuesday of each month

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ACTIVE ASHRAE RESEARCH PROJECTS

DETERMINATION OF WINDOW SYSTEMS U-VALUES

\$129,570.00 - ENERMODAL ENGINEERING, LTD.

HEAT PUMP/HEAT RECOVERY OPERATING EXPERIENCE

\$64,500.00 - CANETA RESEARCH INC.

EVALUATION OF SOLAR HEAT GAIN TEST METHODS

\$96,620.00 - QUEEN'S UNIVERSITY

MEASUREMENT OF TWO-PHASE REFRIGERANT LIQUID - VAPOUR MASS FLOW RATE

\$106,800.00 - McMASTER UNIVERSITY

DETERMINATION OF THE EFFECT OF CEILING SYSTEMS AND PLENUM SOUND POWER RADIATED THROUGH CEILING BY HVAC COMPONENTS

\$90,227.00 - NATIONAL RESEARCH COUNCIL

IMPACT OF STAFF TRAINING ON THE MAINTENANCE AND ENERGY COSTS OF PUBLIC AND COMMERCIAL TYPE BUILDINGS

\$51,880.00 - ENGINEERING INTERFACE, LTD.

OCCUPANT COMFORT & OFFICE THERMAL ENVIRONMENTS IN A COLD CLIMATE

\$100,190.00 - ADN, INC.

AN EVALUATION OF THE EFFECT OF CO-BASED DEMAND CONTROLLED VENTILATION STRATEGIES ON ENERGY USE AND OCCUPANT-SOURCE CONTAMINATION CONCENTRATIONS

\$52,760.00 - ENERMODAL ENGINEERING

BUILDING INSULATION SYSTEM THERMAL ANOMALIES

\$134,850.00 - ENERMODAL ENGINEERING

WIND DATA FOR DESIGN OF SMOKE CONTROL SYSTEMS

\$27,545.00 ZEPHYR NORTH

PROBABILITY OF OCCURRENCE AND EXPECTED SIZE OF SHIELDED FIRES IN SPRINKLERED BUILDINGS

\$84,864.00 - NATIONAL RESEARCH COUNCIL OF CANADA

TOTAL ASHRAE REGION 2 COMMITMENT - \$939,806.00

UPCOMING IAQ SEMINAR

Mark your calendars for an upcoming afternoon seminar on April 19th in Ottawa on IAQ Commissioning. Your Education Committee has been busy making arrangements for informed and interesting speakers to address the control and maintenance of good IAQ. See the information sheet attached.

TECHNICAL SESSION

WHEN: March 15, 1994, 16:30 to 17:30 hrs

WHERE: McDonald Cartier Room
99 Bank Street

SPEAKER: Dr. A.C.C. Warnock
National Research Council
Institute for Research in Construction

TOPIC: ASHRAE Research Project 755RP

Determination of the effect of ceiling systems and plenum sound power radiated through ceilings by HVAC components.

Noise transmitted to an occupied space from terminal air units in a ceiling plenum may result in occupant discomfort, annoyance and irritation. As a result, the space may become non-rentable and necessitate remedial modifications to the system. The discomfort may cause unnecessary absenteeism by employees.

The objective of this research is to identify those factors that determine sound transmission through a suspended ceiling system from a sound source installed close to the ceiling in the plenum above it, and to provide data for the Handbook of Fundamentals and a procedure for using it to predict room levels.

The talk will describe the problem, the plan of the research, and give some information on preliminary findings.

CHAPTER DOES NOT ACT FOR SOCIETY

The Ottawa Valley Chapter invites you to a seminar on IAQ entitled

COMMISSIONING FOR ACCEPTABLE IAQ

The seminar will be held at the Talisman Hotel on April 19, 1994. The objectives are to offer information about the most current developments in ASHRAE on indoor air quality, a great deal of which is happening right here in Ottawa, and to generate funds for our ASHRAE Chapter to support student branch activities at Ottawa and Carleton Universities and Algonquin College.

PROGRAM

13:00	Welcome by Chapter President
13:05	Opening Remarks
13:15	New CSA IAQ Manual, Contents, Application
13:45	Off-gassing Control - Presentation and Demonstration of a New NRC Computer System
14:15	New Computer System for Commissioning of Energy Efficient HVAC System Start-up Time
14:45	Test Kit for IAQ Assessment
15:15	Break
15:30	IAQ Assessment by Post Occupancy Evaluation
16:00	Panel Discussion (Operators and IAQ Authorities)
16:55	Closing Remarks
17:00	Adjournment

Please mark your calendar and call for reservations ... Only a limited number of seats are available. Early registration is \$75, at the door \$85, students \$25. Make your cheque payable to ASHRAE Ottawa Valley Chapter. To pre-register, contact Phil Mayfield, Frontec Logistics at 787-3871.

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