POWUr NEWS
Saskatoon Chapter News
March 3. 2002

Meeting Notice

Tuesday
March 11, 2003

@ Saskatoon Construction Association

Speaker: Scott Jones

Topic: Geothermal Source Heat Pumps

5:30 - 6:00	Cash Bar
6:00 - 6:45	Supper
6:45 - 7:15	Chapter Meeting
7:30 - 8:30	Dinner Speaker

AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS
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CURLING UPDATE

The local **fun spiel** was held on February 22. The group was smaller than usual but the group was there for the right reasons and it was an enjoyable afternoon and evening. The winning team was comprised of Ryan MacGillivray at skip, Steve Kuzma at third/second and Brad Chisan at second/lead. Congratulations to the winners and thanks to all who participated in making it a fun event.

The **John Ross playdown** (the slightly more serious curling event) will be held on **March 22** here in Saskatoon and we'll be required to field two teams, since we are the host chapter, so if you are interested in curling and haven't yet signed up please call Jack Scott. There will be a sign up sheet circulated at the next meeting as well. There is an opportunity for anyone wishing to come out for the supper and prize presentation to do so, but again let Jack know. There will be probably a $ 16.00 charge for the meal.

RESEARCH PROMOTION

The Research promotion campaign is currently underway. We have received $ 1600 to date in donations from our membership. We would like to thank the following members for their contribution:

Associated Engineering	$ 250.00
Cypress Sales Partnership	$ 250.00
Daniels Wingerak Engineering Ltd.	$ 250.00
HVAC Sales	$ 250.00
Prairie Controls Ltd.	$ 250.00
Ken Swann	$ 150.00
Dynamic Agencies Ltd.	$ 100.00
Bob Bessant	$ 100.00

As a reminder to those who have been contacted and have graciously made a tentative agreement to contribute, please send in the invoice that you have received with your contribution as soon as possible.

Mark Van Beek
Research Promotion

Energy Answers

Rob Dumont

From Solplan Review Magazine, Box 86627, North Vancouver, BC, V7L 4L2? An annual subscription to the publication is $48.15 including GST.

What do you think about Canada's current regulations on residential ventilation?

I am not happy with the regulations. I sat on the CSA F326 committee, and must take my share of the blame for the residential ventilation standard that was produced. The standard is too complicated, and has a requirement for too much exhaust flow, which can readily back draft chimneys in many new houses.

Designers of the ventilation standard had a noble goal of improving the air quality in housesBbut in the process the standard and the systems have gotten too complicated, and the fans are usually too powerful.

The best is the enemy of the good.- In a desire to implement the best systems, good basic systems are being overlooked. Most newer houses basically have very poor ventilation, and a simple, continuous ventilation system with modest flow will greatly improve the air quality in the house.

We do have a problem with ventilation in newer houses. Most new houses are tighter, many newer furnaces reduce the air exchange (newer furnaces do not have the naturally vented chimneys that used to serve as exhaust ventilators), and greater quantities of synthetic materials (plastics, composites, new paints, etc.) are present in our houses. With less natural air exchange and more indoor pollutant sources, air quality is suffering, particularly in new homes. If you don't believe me, just visit almost any new home. Anyone with a sensitive nose will not like the odours in new houses. Many allergy-prone people will get sick in poorly ventilated new houses.

What is to be done?

Here are some thoughts about what a good residential ventilation system should do. Call them ***Dumont's Directives for Decent Ventilation***.

1. Minimize the sources of organic compound emissions. As my mother often told me:” If you don't make a mess, you won't have to clean it up." Choose interior paints, floor coverings, ceiling finishes, kitchen cabinets, vanities, etc., to minimize organic compound emissions.

2. Run the ventilation system continuously. Humans breathe continuously, and the only way to ensure adequate air exchange through all weather conditions is to have the ventilation system run continuously, as in 24 hours a day, 365 days a year. Even very leaky houses will have poor ventilation during times of the year when outdoor temperatures are the same as inside, and the wind is not blowing.

3. Provide adequate, but not excessive, amounts of ventilation. I feel that the average house should have about 30 litres/second (60 cfm) of continuous ventilation. Many of the existing systems provide twice that amount of air exchange, and the interior air in the houses in winter gets very dry. In a dry, cold climate such as we experience here in Canada, more ventilation is not better ventilation, as winter relative humidity levels will fall well below the Health Canada guideline of 30% relative humidity. Dry air adversely affects the mucous membranes in our breathing system. Larger houses will need more ventilation air.

4. Do not, under any circumstances, cause the fuel burning apparatus to back draft. A back drafting furnace, water heater, or fireplace is a health hazard. Full stop. The only way to avoid this back drafting is to do away with naturally ventilated combustion equipment. This approach has been successfully implemented in the R-2000 program. If there are no appliances that can back draft, negative pressures are not a problem. We have a long history of tall apartment buildings in this country that regularly will have negative pressures of 20 rascals or more on the lower floors due to stack effect in winter time.

I also feel that every house with combustion devices of any kind should have a carbon monoxide detector.

5. Draw the exhaust air continuously from the odour and moisture producing areas.
Bathrooms and kitchens should be the area from which the exhaust air is drawn.

6. Do not rely on the ventilation system to remove odours or smoke caused by burnt toast, or other unusual events. Virtually every house has operable windows, and these can be used to vent the kitchen in an unusual event. *Domestic kitchens are **not** commercial kitchens, and we should not confuse the two.* Designing ventilation systems that try to handle short-lived events greatly complicates the design, and is unnecessary. A re-circulating range hood along with a modest exhaust grille is adequate for almost all domestic kitchens that use electric ranges.

7. Make the system quiet and reliable. Fans should be chosen for long life, low noise and preferably should have self cleaning blades. I have noticed that axial flow fans have much less tendency to clog than forward curved fans. Forward curved centrifugal fans tend to accumulate dust and dirt in their cup-shaped blades. Many of the axial flow fans used for computer cooling are rated for 100,000 hours continuous duty, or more than 11 years.

A lot of residential exhaust equipment such as standard bathroom or kitchen fans reminds me of junky, automotive quality stuff. Most automobiles have an operating life of about 4,000 hours (less than half a year of continuous operation) [200,000 km at about 50 km/hr] after which many of the moving parts (alternators, power steering pumps, water pumps, fan bearings, etc.) need replacement. Residential ventilation equipment should have a life of at least 10 years without maintenance.

8. Remember that the best is the enemy of the good.
It is easy to add complications to ventilation systems humidity controls, variable speed fans, multi-speed fans, complicated filters and scrubbers, ionizers, charcoal filters. The big problem with all these systems is that they add tremendously to the complication of the systems, and add few, if any, real benefits. Keep it simple and it will be good.

SPEAKER BIO

Scott Jones
Sales Manager
ECONAR Energy Systems, Corp.

Mr. Jones has been involved in the geothermal industry since 1982.

Upon certification at Oklahoma State University, he became an International Ground Source Heat Pump Association Installation Trainer in 1991. Mr. Jones has trained hundreds of contractors throughout North America as well as contractors from as far away as Hungary, Norway, and South America in the installation and marketing of GeoSource Heat Pumps.

He was first elected into the International Ground Source Heat Pump Association Advisory Council in 1997 for a two year term, again in 1999. In addition, Mr. Jones served as a Manufacturers Representative for the International Ground Source Heat Pump Association (IGSHPA) Advisory Council.

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Saskatoon

Monthly Meeting Minutes
DRAFT COPY
For February 11 Meeting

Bob Daniels called meeting to order.

Motion to adopt minutes as posted in newsletter by Jack Scott.
2nd by Paul Khanna

Passed unanimously.

Old Business

Bob Daniels asked that Paul Khanna put a motion together stating that students prefer hard cover handbooks rather than the c.d.'s format proposed.

Reports

Treasurer (Tyler Majcher)

Not present.

Programs (Travis Braid)

Travis has lined up the following speakers.

March	Con Air—Geothermal heating
April	Dectron—Bio terrorism filtration systems

Research (Mark Vanbeek)

Not present.

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Membership (Jeff Frie)

Mark Desjardin and Steve Hendricks are new members.

Jeff mentioned that students may continue membership at student rate for one year after graduation.

Tega / Refrigeration (Vacant)

History (Jack Scott)

John Ross curling dates.

Local Tournament	Feb 22 at the Granite curling club from 3-6 p.m.
John Ross Tournament	March 22 at Granite curling club from 12-6 p.m.

Jack circulated sign up sheet.

Student Affairs (Paul Khanna)

Paul welcomed students.

Paul told student that they pay only $ 5.00 for supper all year if they wish to come to other meetings.

CRC Report (Jonathon French)

Not present

New Business

Bill Dean made a motion to send delegate, alternate and membership promotion to this year's CRC meeting in Seattle.

2nd Bernie Kaminski

Passed unanimously.

Bob presented Bill Dean with award for his work nomination committee.

Bill will also be nominated for Director Regional Chair.

Motion to Adjourn by Ken Ingals.

Minutes for:
A.S.H.R.A.E Board of Governors Meeting **February 3, 2003**

Bob Daniels called meeting to order.

Mike Osborn read minutes from December BOG meeting.
Motion to adopt minutes as read by Tyler Majcher.
2nd Jack Scott.

Reports

Treasurer (Tyler Majcher)

Tyler read account balances

Research (Mark Vanbeek)

Mark has 3900.00 in pledges to date.

1500.00 collected.

100% through contact list.

Membership Report (Jeff Frie)

Not present.

TEGA (Vacant)

No Report

History (Jack Scott)

Jack circulated John Ross curling tournament budget.

Student Activities (Paul Khanna)

February meeting is student night.

Programs (Travis Braid)

Not present.

CRC Report (Jonathon French)

There is at least one volunteer for each committee.

Jonathon plans to meet with committee heads in approx. 2 weeks.

New Business

Mike, Travis, Jeff and Jonathon to attend CRC.

What are technical session topics?

Bill will be nominated for RDC.

Ron Thompson is planning to visit chapter in March or April.

We still need a treasurer for next year.

Motion to Adjourn
Jeff