

President's Message

By Dan Brothers

Hello everyone, welcome to February; another winter month down, only 2 (3? 4?) more to go, although it sure hasn't felt much like it. We have a great meeting this month: ASHRAE Society President, David Underwood, is coming for a visit. It is very rare for an ASHRAE president to be Canadian, but one born in Saskatchewan is likely a Society first. Mr. Underwood, who now lives in Toronto, is a great speaker and he's excited to be coming, so I hope to see you at Memories Fine Dining. See Jared's article for his biography.

Also on Tuesday, Janel will be handing out certificates to thank you for your donations from last year. If you were kind enough to donate money, we'll drag you up front for a photo. Wear something nice.

Thank you to Connor Tant and Kyle Bottorff who presented to us at January's meeting. Connor is an Engineer in Training with Southampton Trane telling us about his work experience so far, and Kyle works for Fulton Boilers, in Syracuse, New York. It was a very well informed technical talk with some good discussions about hydronic system design.

In March, we have a speaker on refrigeration systems. Being in a cold climate, refrigeration is a topic that commonly gets glossed over, but it is an energy hog that deserves good design standards. We are also going to try to have a seminar on refrigeration system design. This will be a good educational opportunity for anyone who has or might be designing such a system. We'll have more info on that at the meeting.

Meeting Notice

Tuesday, February 9, 2016

Memories Fine Dining Restaurant & Lounge

1717 Victoria Ave
Regina, SK

Cocktails begin at 5:00PM

Speaker: *David Underwood -
Presidential Visit*

7 in 7 Presenter: *Natash Bellows -
WSP Canada Inc.*

Upcoming Events

March 9, 2016
*Greg Scrivenger -
Refrigeration*

April 2016
Student Night

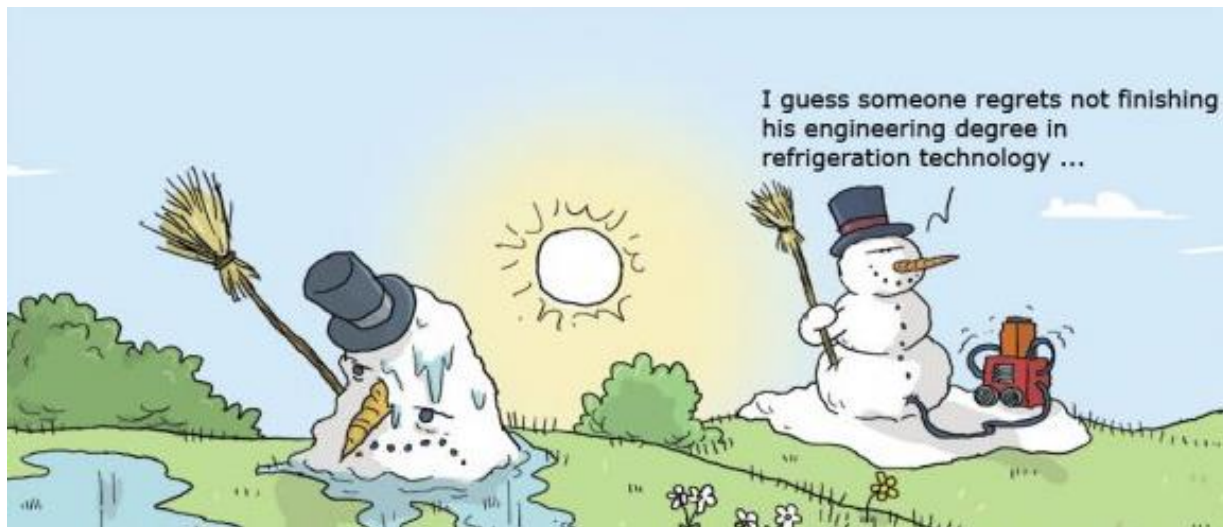
In this Issue

Presidential Address	1
Historian's Message	3
Vice President's Message	5
Tech Talk	6
Meeting and Events	8
Chapter Board of Governors	9
Regional Executive	10
Society Executive	11

President's Message - Continued

Saturday, March 19th is the John Ross Bonspiel in Edmonton. It's a one day curling tournament hosted by the Northern Alberta Chapter. We've had a hard time in previous years attracting enough to put a team in, but the few who have gone have had a great time. See this link: <http://ashraenac.org/john-ross-open-2014> for some pictures from the 2014 tournament. The Chapter will help with travel and accommodation expenses. Get in touch with me if you're interested: dan@rjengland.com

The ASHRAE Winter Conference was held in Orlando a couple weeks ago. I wasn't able to make it, but apparently our Chapter was well represented. I did get to Chicago last year, and highly recommend everyone who hasn't been to go to the Conference at least once. Between the technical sessions and trade show, you can learn a lot of valuable material in just a few days. Next year it's in Las Vegas, so put a bug in your boss' ear early.



Committee Chair Reports

Historian's Message

By Bob England

This article follows on from the article in the November 2015 newsletter with more excerpts from the 1993 Regina Chapter History document. The information below was from what was then known as the Saskatchewan Chapter's first year of existence.

1962-1963 : President - Bob Yoneda

In the beginning there was a nucleus of ASHRAE members located in Saskatchewan who decided to form a chapter that was to be known as the Saskatchewan Chapter. The first organizational meeting was held October 25, 1962, with the first Board of Governors meeting held the next week on Thursday, November 1.

The first Board of Governors were:

- President : R.S. (Bob) Yoneda
- Vice-President : William (Bill) Herr
- Secretary : R. J. (Reg) Briggs
- Treasurer : Toar Springstein
- Director : Don Daniels
- Director : Lynn Wilkinson
- Director : George Green

Monthly meetings then as now [in 1993] were held at the Assiniboia Club. Meals were \$1.75 and drinks \$0.50.

Membership fees were \$20.00 for Regina members with a prepaid meal plan, and \$5.00 for Saskatoon members (with meals \$2.00 extra). Meetings were to be the third Thursday of the month but changed part way through the year to the Wednesday following the third Monday; this was changed to coincide with the Manitoba Chapters meetings so the same guest speaker could arrange to speak to both chapters on succeeding nights.

The first guest speaker, on January 16, 1963, was James Keen of Yost Keen and Associates, who spoke on the mechanical design of the Saskatchewan Power Corporation Building.

Committee Chair Reports - Continued

The Saskatchewan Chapter was presented its Charter on March 22, 1963, by John Fox, the first Canadian ASHRAE President. Saskatchewan became the 96th chapter, and the 9th in Region II (Region II was made up of all the Canadian Chapters except British Columbia). Mr. Fox presented a gavel to Bob Yoneda as the Charter President on behalf of the Las Vegas Chapter, the last newly formed ASHRAE chapter. A banner was presented on behalf of the Montreal Chapter. Head table guests were Mayor H. P. Baker, John Fox, John Ross, Percy Butler, Ed & Mrs. Deeves, Ed & Mrs. Cole, Ken McCartney, Vass Carroll, Bob & Mrs. Yoneda, Bill & Mrs. Sheppit.

John Ross the Director and Regional Chairman Region II presented a curling trophy in his name to be awarded for annual competition between the Prairie Chapters to foster a spirit of fellowship among the Western Chapters. The first winners were Carl Balzer, Lynn Wilkinson, Doug Adair, and Jeff Deepröse of Regina. A dance and social evening followed the competition.

Saskatchewan Chapter delegates to the May 3rd, 1963, Region II CRC in Banff were Bill Herr (delegate) and Bob Yoneda (alternate).

The first annual golf tournament was held in June at Katepwa with a barbecue following at Don Daniels cottage.

The 62/63 Chapter Officers were asked to remain in office for the following year.

There were approximately 30 ASHRAE Society members with 40 to 45 on the Chapter's local list.

Committee Chair Reports – Continued

Vice President's Message

By Jared Larson

I am excited to have David Underwood, P.Eng visit our chapter next week. Before he became president I have had many opportunities to talk to him. His inspiration for and cultivating community in ASHRAE has really challenged how we go about our work. I think one of the first times I met him was when I had my rider shirt on. He recognized the logo and we talked about Saskatchewan. He later informed me that he attended elementary school in Whitewood, Saskatchewan. It is an excellent influence to society when we have not just a Canadian President, but a former Saskatchewan resident.

If you are only going to attend one meeting this year (shame on you, but) this is the one to attend. Come out and represent our chapter! Also, watch for his article in the Leader Post, he is getting an interview by Bruce Johnstone.

You can also read David Underwood's article in the August 2015 journal.

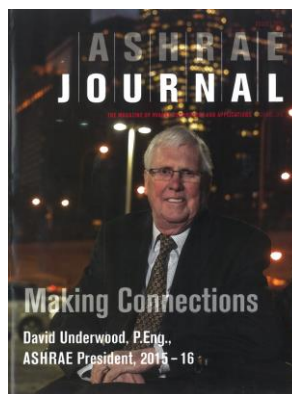
I am also looking forward to Natasha Bellows' presentation for the 7 in 7.

Refrigeration Seminar

We will be hosting a cool seminar on refrigeration in March. Greg Scrivener will be doing a half day on the anatomy of refrigeration circuits, VRV, and troubleshooting common problems with refrigeration. The flyer will be sent out early next week.

Awards

Contact me if you or your firm is interested in submitting a project for an award. There are multiple categories, and I will help walk you through the steps.



Delaying Filter Maintenance: How Much is it Costing You?

Author: Nancy Zimmerman
CAFS, Senior Research Scientist, Kimberly-Clark* Filtration Products

Regularly changing filters may not be high on your agenda. But when you look at how much intentionally or unintentionally delaying filter maintenance is costing you in terms of increased energy use, it suddenly becomes much more important.

Fact: *The cost of energy to push air through a filter usually exceeds the cost of the actual filter.*

Delayed filter maintenance causes the filter to run more days at peak energy usage. That means it doesn't take long for peak usage cost to offset any savings in filter price. (See figure 3.)

Typical Life-Cycle Costs of Filter System

- 18% Filter Price and Installation
- 81% Energy Consumption
- 1% Filter Disposal

Filter price and installation represent only 1/5 of total filtration costs. But delaying the purchase of filters seems attractive because the savings appear to be immediate and tangible.

Energy use isn't as tangible. But it is the largest operating cost involved in filtration. It is also your biggest opportunity to save money.

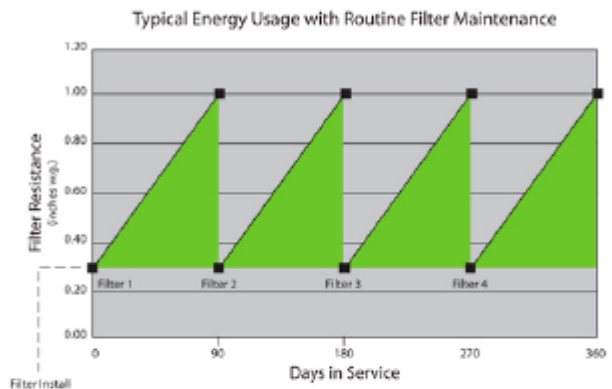
Fact: *Filters play a major role in the energy consumed in operating the HVAC system in your building.*

It gets down to physics. Energy used is directly proportional to the airflow resistance of your filters. The more resistance, due to clogged filters, the more energy is used to push air through them.

Resistance typically increases as filters remove more and more contaminants from the air. This filtration is essential for air quality and protection of HVAC equipment. But it comes at an extremely high cost when filter maintenance is delayed.

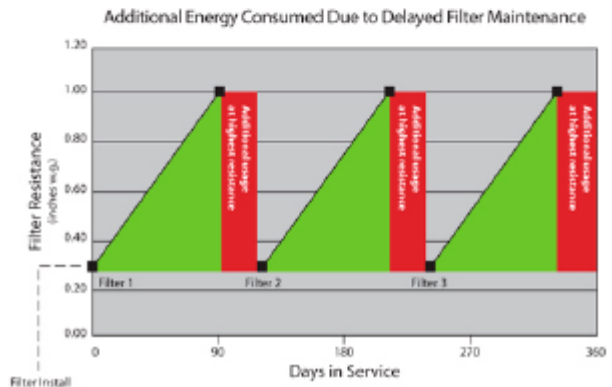
Figures 1 and 2 show typical loading curve schematics of routine maintenance (four cycles) versus delayed maintenance (three cycles).

Figure 1



In Figure 2, the red area shows the additional period of highest energy consumption.

Figure 2



Tech Talk - Continued

Figure 3 summarizes the total cost of a delayed versus routine filter maintenance approach. The energy cost of an extra month of usage is so high because the filters are operating at their highest airflow resistance.

Figure 3

Total Cost Comparison Routine Versus Delayed Maintenance Schedule for Filter Change Outs				
	Regular Scheduled Maintenance	Delayed Maintenance		Impact
Initial Investment - Filter Cost <small>assumes \$6 per filter; 100 filters in system</small>	\$2,400	\$1,800	\$600	savings
Energy Consumption (kWh) <small>assumes average ΔP is 0.84"wg</small>	227,660	259,600	31,940	Additional kWh
Energy Cost of System <small>at \$0.076/kWh</small>	\$15,936	\$18,172	\$2,236	Additional cost
Total Cost	\$18,336	\$19,972	\$1,636	Total add'l cost
CO₂ emissions (pounds) <small>at 1.354 pounds/kWh (U.S. EPA DOE determined value)</small>	308,000	351,000	43,000	Additional CO ₂



While energy cost is one major factor, environmental impact is another cost to consider.

Fact: Delaying filter maintenance increases energy production and CO₂ emissions.

According to the U.S. Environmental Information Administration, 1.354 pounds of CO₂ are released into the atmosphere for every 1 kWh of electricity produced. The extra energy consumed by dirty filters drives up energy production and greenhouse gas emissions.

The bottom line: delayed filter maintenance may be extremely costly to your company – and our environment.

Energy Consumption =

$$\frac{Q \times \Delta P \times t}{n \times 1000}$$

where:

Energy Consumption in kilowatt hours (kWh)
 Q = airflow in cubic meters/second (m³/s)
 ΔP = the average pressure drop across the filter in Pascals (Pa)
 T = the time the fan is in operation in hours (hrs)
 n = the product of the fan, motor, and drive efficiency in %

2015-2016 Meetings and Events

September 23, 2015

Tour of RRI Roughrider Stadium

Speaker: Chad Arcand

Bushwakker Brewpub

October 13, 2015

ASHRAE 90.1 Seminar

Double Tree Hotel

October 13, 2015

Speaker: Chris Mathis –

ASHRAE 90.1 Flyover

Double Tree Hotel

November 10, 2015

Speaker: Dan O'Brien –

Halton Kitchen Equipment

The Chimney

December 4, 2015

Christmas Social – Brent Butt

Casino Regina Show Lounge

January 13, 2016

Speaker: Kyle Bottorff - Hydronic Design and
Control Strategies for Condensing Boilers

Lakeshore Restaurant

January 25-27, 2016

ASHRAE Winter Conference

Orlando, FL

February 9, 2016

Speaker: David Underwood – Presidential Visit

Hotel Saskatchewan

March 9, 2016

Speaker: Greg Scrivener – Refrigeration

Location TBD

April 2016

Student Night

Location TBD

May 2016

Speaker: TBD

Location TBD

June 23, 2016

ASHRAE Research Golf Tournament



2015-2016 ASHRAE Regina Chapter Board of Governors

President

Dan Brothers
R.J. England Consulting
president@ashraeregina.org

Treasurer

Brad Huber
Cypress Sales Partnership
treasurer@ashraeregina.org

Past President & Research Promotion

Janel Walter
HDA Engineering Ltd.
research@ashraeregina.org

Ways & Means

Wayne Tkach
MacPherson Engineering Inc.
waysandmeans@ashraeregina.org

President Elect & Programs Chair

Jared Larson
MacPherson Engineering Inc.
cttc@ashraeregina.org

Historian

Bob England
R J England Consulting Ltd.
historian@ashraeregina.org

Membership Promotion

Jason Danyliw
H.V.A.C. Sales Ltd.
membership@ashraeregina.org

GGAC

TBD

Secretary

Kris Pockett
Kris Pockett Construction
secretary@ashraeregina.org

Newsletter

Josh Thomas
Cypress Sales Partnership
newsletter@ashraeregina.org

Student Activities

TBD

YEA Chair

Natasha Bellows
WSP Canada Inc.
yea@ashraeregina.org

Contact us at:

ashraeregina@gmail.com

Visit us at:

<http://regina.ashraechapters.org/>

2015-2016 ASHRAE Society Executive

President

David Underwood
Oakville, ON

Vice President

Patricia Graef
Fort Myers, FL

President-Elect

Timothy Wentz
Lincoln, NE

Vice President

Charles Gullledge III
Greensboro, NC

Treasurer

Bjarne Olesen
Kongens Lyngby, Denmark

Vice President

James Vallort
Chicago, IL

Vice President

Walid Chakroun
Safat, Kuwait

Secretary

Jeff Littleton
Atlanta, GA

2015-2016 ASHRAE Regional Executive

Director & Regional Chair

Keith Yelton
Portland, OR

Treasurer

Tom Jacknisky
Edmond, AB

Assistant Regional Chair

Kevin Marple
Beaverton, OR

CRC Chair

Ryan MacGillivray
Saskatoon, SK

Regional Members Council Representative

Russ Lavitt
Winnipeg, MD

RP PVC

Ruth Armstrong
Eagle River, AK

Chapter Technology Transfer

Heric Holmes
Regina, SK

GGAC RVC

Jeff Hurd
Anchorage, AK

Nominating Committee Member

Eileen Jensen
Portland, OR

Regional Historian

Doug LeCren
Anchorage, AK

Student Activities

Michael Nafzgar
Spokane, WA

Membership Promotion RVC

Bruce Dobbs
Portland, OR

Nominating Committee Alternate

Rob Craddock
Regina, SK

YEA Regional Chair

Gregory Jernstrom
Anchorage, AK

Young Engineers in ASHRAE (YEA) is a community focused on engaging young HVAC professionals by welcoming them to the larger global ASHRAE society.

Come join us for a fun night of bowling and networking!

Who: all YEA Regina members (ASHRAE members under age 35)

What: Phantom Bowling

Where: GoldenMile Bowling Lanes

**When: Friday February 19th
7 - 9 pm**

RSVP to yea@ashraeregina.org



**YEA
REGINA
game face on**