

THE HOT AIR DIFFUSER

Chapter Newsletter

February 2019



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March CHAPTER MEETING

Presentation

System Comparisons for Natural Refrigerants in Commercial Systems

When natural refrigerants were new to commercial refrigeration, the competitive landscape for system selection was between traditional system types that used synthetic refrigerants or natural refrigerant technologies. Now that natural refrigerant technologies are mainstream, we've begun to see the system selection process shift to comparisons between the various natural refrigerants. How do carbon dioxide, ammonia, and propane compare to each other in terms of market penetration, cost, energy efficiency, and performance? We will provide insights from an engineering consultants perspective.

Speaker: Dustin Lilya PE, DC Engineering

Dustin is a graduate of the University of Idaho with a variety of experience including stints at both Micron and Supervalu before joining the team at DC Engineering in 2011. At DC Dustin served as the Department Manager of Energy Services for 7 years until taking on the role of Specialty Services Production Manager in 2018 where he manages a team of energy specialists, commissioning agents, refrigeration engineers and designers. Dustin is also very active with the "R" in ASHRAE as a member of the Society Refrigeration Committee.

Please Register online at:

www.idahoashrae.com

WHEN: March 13 2019 | 11:45am to 1:00pm MST

WHERE: Idaho Power | 1221 W. Idaho St. | Boise, ID 83702

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

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PRESIDENT'S MESSAGE



Daniel C. Russell, PE, HFDP

Hello Idaho Chapter Members, February has been a great month...except not enough snow in my opinion.

This month we had a great visit from an ASHRAE distinguished lecturer, Pam Duffy who generated a record turn-out for our 2-hour morning technical workshop format leading up to the lunch chapter meeting in Boise. The VRF topic continues to be popular regardless of format.

Those of you that were able to stick around for the chapter meeting had the benefit of our first non-technical talk of the year with some insights on how to better manage time and tasks in our lives. Pam offered a lot of great tips and tools and has made all of her slides available to the chapter via her website <https://www.pamduffy.com/idaho>. I encourage you to check it out!

We have had a great run of out-of-town guests to the chapter this year and there's no stopping us in March! We will be receiving a visit from our Region IX Membership Promotion (MP) Regional Vice Chair (RVC) Jonathan Smith, who will not be presenting at the chapter meeting but will be visiting the chapter to meet with the board of governors, meet some of our chapter members and visit area firms to help generate more interest in ASHRAE and encourage new member sign-ups. One Membership feature we're excited to celebrate at the March meeting is all the advancements members have made from Associate grade to full Member grade. It's not too late to make it happen and if you receiving confirmation of your upgraded members status by the day before the meeting, you'll have a chance to win a gift card up to \$50 value!!

As we continue the train of guests visiting the chapter, April will bring a couple more distinguished lecturers as keynote speakers for the Annual Technical Conference. GET REGISTERED NOW as this is setting up to be a great event, one of our best ever! Lots of great speakers, a new 3rd track of presentation options and a great new venue for our conference at The Boise Centre are all very exciting. Chris Pollow, our conference coordinator has even arranged for group rate hotel rooms for those of you coming from out of town. Make a weekend out of it, explore Boise and participate in the biggest Idaho ASHRAE event of the year!

Thanks goes out to all our chapter leaders for all their hard work and volunteer time, we couldn't do any of this without you.

See you all in a couple of weeks! - Dan



Membership News

February 2019

New Idaho chapter members since 2/1/19

- Joel Stobie (Associate Member)
- Bobby Marturello (Associate Member)
- James Holloway (Associate Member)

ASHRAE Membership Anniversaries

5 year

- David Tully

2018-2019 Honor Roll Donors

- ♦ Russel Pratt
- ♦ Randy Reed
- ♦ Brian Emtman
- ♦ Dan Russell
- ♦ Johnson Controls - Idaho
- ♦ Wesley Stanfill
- ♦ Andrew Beall
- ♦ Jeff Robenstein
- ♦ Chris Pollow
- ♦ Jerry Burstedt
- ♦ Dennis Fox
- ♦ Idaho Power Company

Membership RVC Visit

Jonathan Smith, our ASHRAE Region IX Membership Promotion Vice Chair will be visiting Boise for our March monthly chapter meeting. He will also be visiting several engineering firms in the area during his visit. Contact chapter membership promotion chair Brian Emtman (brian.emtman@ctagroup.com) if you would like additional details about scheduling a visit from Jonathan for your firm, and be sure to introduce yourself to him at the meeting!



HISTORY LESSON

February 2019

Five Years Ago

The chapter president was Dennis Fox. The meeting was held on February 12, 2013 at the Idaho Power Building. The program was a presentation on how to get a pilot's license by Jim Hudson, a certified flight instructor at the T-Craft Aero Club in Nampa, ID.

Ten Years Ago

The chapter president was Jeff Fulcher. The meeting was held on February 13, 2009, at the Idaho Power Building. The program was a presentation on ways to reduce annual energy usage for indoor pools and water parks in the dry western regions of the U.S. using a combination of exhaust air heat reclaim and evaporative cooling, while enhancing indoor air quality and comfort compared to conventional pool dehumidifiers.

Fifteen Years Ago

The chapter president was Matthew May. The meeting was held on February 13, 2004, at the Doubletree Riverside. Lee Vernam, Paco Pumps, gave a Technical Session presentation before the meeting on pump operation and efficiency. The meeting presentation was also by Lee Vernam, on pump efficiency and proper operation.

Twenty Years Ago

The chapter president was Brent Robertson. The meeting was held on February 12, 1999, at the Doubletree Riverside. Dr. Jeff Burton gave a presentation on indoor air quality. A 3 hour Technical Session prior to the meeting on IAQ and HVAC was also given by Dr. Jeff Burton.

Twenty Five Years Ago

The chapter president was Roger Albers. The meeting was held on February 11, 1994, at Edwards Restaurant. The meeting included a panel discussion entitled "How long can we continue to build until codes won't let us any more?"

Thirty Years Ago

The chapter president was Pat House. The meeting was held on Friday, February 10, 1989, at the Kings Table Restaurant. Chris Powell, Bonneville Blueprint Supply, gave a presentation describing reproduction and other services provided by his company with a focus to expand knowledge of available CADD systems.



Pieces of ASHRAE and HVAC&R History

Furnaces and Steam Systems

Ronald Howell, Fellow

Early forms of refrigeration included the use of snow, pond and lake ice, chemical mixture cooling to form freezing baths, and the manufacture of ice by evaporative and radiation cooling of water on clear nights.

By the 18th century, certain mixtures were known to lower temperatures. One such mixture, calcium chloride and snow, was introduced for commercial use. This particular mixture made possible a temperature down to -27 deg. F. In Great Britain, machines using chemical mixtures to produce low temperatures were introduced. However, by the time these machines were ready for commercial exploitation, mechanical ice-making processes had been perfected to such an extent that chemical mixture freezing was rendered obsolete except for such batch processes as ice cream making.

In 1748, in Scotland, Dr. William Cullen and Joseph Black lectured on the latent heat of fusion and evaporation and “fixed air” (later identified as carbon dioxide). These discoveries served as the foundation on which modern refrigeration is based.

In 1851, Dr. John Gorrie, was granted US Patent No. 8080 for a refrigeration machine that produced ice and refrigerated air with compressed air in an open cycle. Also, in 1851, Ferdinand Carre designed the first ammonia absorption unit.

In 1853, Professor Alexander Twining of New Haven, Connecticut produced 1600 lb. of ice a day with a double acting vacuum and compression pump that used sulfuric ether as the refrigerant.

Daniel L. Holden improved the Carre machine by designing and building reciprocating compressors. These compressors were applied to ice making, brewing, and meat packing. In 1872, David Boyle developed an ammonia compression machine that produced ice.

Until 1880, mechanical refrigeration was primarily used to make ice and preserve meat and fish. Notable exceptions were the use of these machines in the United States, Europe, and Australia for beer making, oil dewaxing, and wine cooling. At this time, comfort air cooling was obtained by ice or by chilling machines that used either lake or manufactured ice.



Government Affairs News

ASHRAE IDAHO CHAPTER DAY ON THE HILL



We have completed our first Day on the Hill. We had 16 appointments with legislators of the house and senate. I believe we only had two no shows. We were able to meet with a few key legislatures. It was a huge learning event. We will be much more prepared for the next Day on the Hill. Being our first Day on the Hill I believe it was a successful event. The legislators were appreciative that we would take the time to share with them about ASHRAE and knowing that they have a resource for technical literature. We would like to express our appreciation to those that helped with the event. Ron Howell, Mike Jones, Russ Pratt and Troy James.



Government Affairs News



Executive Department
State of Idaho

The Office of the Governor
Proclamation

State Capitol
Boise

WHEREAS, we recognize engineers during this National Engineers Week, particularly their scientific and technical knowledge and skills and how they contribute to and move society forward in creative and innovative ways; and

WHEREAS, engineers face the major technological challenges of our time – from rebuilding after the devastation of natural disasters, connecting communities of varying sizes and geographies, preserving our natural resources and designing the systems and solutions that keep Idaho and our country competitive in the global marketplace today and into the future; and

WHEREAS, engineers are inspiring our young math and science students to realize the practical power of their knowledge; and

WHEREAS, we will look more than ever to engineers and their expertise to meet the challenges of the twenty-first century, from artificial intelligence to cybersecurity to helping Idaho grow its talented and educated workforce through ongoing mentorship;

NOW, THEREFORE, I, BRAD LITTLE, Governor of the State of Idaho, do hereby proclaim February 19 through February 23, 2019, to be

ENGINEERS WEEK

in Idaho.



Lawrence Denney

LAWRENCE DENNEY
SECRETARY OF STATE

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Idaho at the Capitol in Boise on this 19th day of February, in the year of our Lord two thousand and nineteen and of the Independence of the United States of America the two hundred forty-third and of the Statehood of Idaho the one hundred twenty-ninth.

Brad Little

BRAD LITTLE
GOVERNOR

ASHRAE Certification and You



Michael S. Jones – PE, BCxP, CEM

I've found that many in our local chapter aren't aware of the specific certifications that our organization has available. These certifications can help validate your skillset in certain arenas, while helping to stand out with employers and clients. To-date, there are a total of 4 ASHRAE certified folks in the State of Idaho, myself included. We are part of the 2,750 internationally who have found value in ASHRAE certifications.

Currently there are 7 certifications available that can help with career advancement or support with approaching clients. They range from commissioning certifications to Healthcare facility design. The four in our state include BCxP, BEMP and HFDP. Two of these certifications are ANSI accredited (BCxP and BEMP) with one also recognized (BCxP) by the US Department of Energy as meeting the Better Buildings Workforce Guidelines (BBWG). I can personally attest to the fact that the ASHRAE

BCxP certification has helped my career and helped to secure jobs for my company that required certification in addition to licensure.

A second local certified chapter member and contributor Tim Johnson had this to say about his Building Energy Modeling Professional Certification (BEMP). *"I received the ASHRAE Building Energy Modeling Professional (BEMP) certification in 2012. It was a good way to validate my skills and show proficiency to potential clients. Since I received the certification, it has started to become recognized by several jurisdictions as an alternative to a PE or AIA stamp for energy code calculations."*

The 7 certifications available include:

OPMP – Operations & Performance Management

HFDP – Health Care Facility Design Professional

HBDP – High Performance Building Design Professional

CHD – Certified HVAC Designer

BEMP – Building Energy Modeling Professional

BEAP – Building Energy Assessment Professional

BCxP – Building Commissioning Professional

As you can see, these certifications aren't intended to cover one aspect of the ASHRAE world. Depending on the industry you are in, or are hoping to get into there is an ASHRAE certification for it. These certifications help validate your skills and set you or your company apart. Just ask another ASHRAE certified chapter representative at the next chapter meeting; our local Chapter President Dan Russell (HFDP).

In closing, I'd like to welcome our newest Idaho based certification achievement. Mr. Tom Wolgamot has recently received his BCxP ASHRE certification. Congrats Tom!

If you or someone in your network would like to learn more about ASHRAE certifications, please visit

<https://www.ashrae.org/professional-development/ashrae-certification/certification-types>



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Annual Business Card Ad on Website: **\$50**



Professional Development Hours

Professional Development Hours are now available at
ASHRAE monthly meetings!



ATTENTION: ASHRAE MEMBERS		
The Chapter is now accepting advertisements in the monthly newsletter.		
<u>Sponsorship Rates are as follows:</u>		
	Per Issue	Annual (12⁶ issues)
Business Card	\$10.00	\$50.00
Quarter Page	\$25.00	\$200.00 \$150
Half Page	\$40.00	\$225.00 \$240
Full Page	\$60.00	\$360.00 \$360

Member Questionnaire

[Click Here!](#)

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EXAMPLE:

Engineering Company-Mechanical Engineer I Position now open

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- For quarter, half, or full page job advertisements see above for pricing

Issues registering for monthly meetings?



Please contact Brian Emtman

brianemtman@ctagroup.com

Interested in becoming more involved with your local ASHRAE Chapter? Please contact Dan Russell @

dan@norbryhn.com

for more information.



