ASHRAE BLUEPRINT

October 2012

ASHRAE South Dakota Chapter

PRESIDENT'S MESSAGE
Bob Everson

Chapter Meeting: Wednesday, October 3th, 2012 @ Westward Ho
Social 5-5:30 PM, Dinner 5:30 PM, Program 6-7:00 PM

RSVP at the link below no later than Friday, September 28th.
http://www.surveymonkey.com/s/GYZC6MY

Please use SurveyMonkey via the link above to give us a count on the meals for the meeting.

Last month's program was interesting, and the presenter, Mr. Lawerance, did a real good job presenting on ASHRAE 189.1 for the Plain Green '12 Conference the next day. Thanks to Mark Grebner for coordinating that. That also gave us points toward PAOE.

The open BOG spot has been filled by Michael Heeney. Thanks Michael!

If any members have information to place on our website, please contact Ryan Jervik, our Chapter Webmaster, to place on the site. Rob Marshall also has the ability to place information on our Facebook page, so please let him know if you have anything that should be placed on it.

This month is the first of our two student months, and our membership night. Let's have a good turnout. Our program will be on humidity and chilled beams. Rob Marshall worked with Semco to insure we had a good quality program for our membership. Please show your support by attending Wednesday night October 3rd.

The BOG will meet prior to the general meeting.

See you at the "Ho'.

ASHRAE BLUEPRINT

CTTC
Ryan O'Connor

This month we are pleased to welcome Matt Pemberton, to speak about *The Importance of Humidity Control in Chilled Beam Design*. Please see his biography information below.

Description: Chilled beam cooling products are designed for use in non-residential applications where there is a high cooling load and/or rooms that require individual temperature control. Chilled beams combine sensible cooling with dehumidified ventilation air to reduce energy usage, improve comfort levels, and reduce the architectural impact of ductwork and other mechanical systems.

While chilled beams are an extremely efficient method of handling the space sensible load, care must be taken in the proper calculation of the latent load. Proper calculation of the latent load, combined with the inherent decoupling of sensible load vs. latent load in a chilled beam system, will produce one of the most energy efficient building HVAC systems available.

Bullet points: Discussion will include:

- A focus on chilled beams and how they function.
- Overview of the controls and components of a chilled beam system
- A brief discussion on the different components that make up a building latent load
- Latent load calculations and associated DOAS equipment used in effective chilled beam systems.

Name: Matt Pemberton
Title: North East Regional Manager
Email: matt.pemberton@flaktwoods.com
Phone: 573-886-1174
Cell: 573-289-9628
Website: www.semcohvac.com

Speaker Bio:

With a Bachelors degree from Columbia College., Matt has worked for SEMCO since 2005 in two separate capacities. From 2005-2007, Matt worked as an inside support technician and in 2008 moved to the role of regional manager for the North East territory. For 7 ½ years, Matt has worked with systems designs involving energy recovery and dedicated outdoor air systems. Along with DOAS system, chilled beams and applied/unitary single/dual wheel unit designs, Matt has spent time with wheel applications in non-lab and laboratory environments. With the inclusion of the chilled beam product into SEMCO's product offering, after the acquisition of SEMCO by Fläkt Woods, Matt has been working on systems designs for chilled beams including the DOAS designs. Matt is a member of the St. Louis Chapter ASHRAE and LEED Green Associate with GBCI.

ASHRAE BLUEPRINT

The 2012-2013 South Dakota Chapter ASHRAE Line-up:

Sept 13	Evening	Thomas Lawrence – The Basics of High Performance Building Design *ASHRAE Distinguished Lecturer*
Oct 3	**Evening (Student Night)**	**Matt Pemberton, SEMCO** ***Humidity Control in Chilled Beam Design***
Nov 7	Noon	T.B.D.
Dec 5	Noon	T.B.D.
Jan 2	Evening	T.B.D.
Feb	Valentine	
Mar 6	Evening	
April 3	Evening (student night)	T.B.D.
May	Fishing	
June	Golf	

Membership
Keith Luke

If you know of anyone that may be interested in joining ASHRAE, be sure to tell them about ASHRAE and invite them to a meeting. Membership information can be found at www.ashrae.org/members/ or call Keith at 605-996-7548 with questions.

History
Kacie Schneider

50 Years Ago
A 100% dues increase was approved at the beginning of the 1962-63 chapter year; dues were set at $2.00 per year. The policy of having the chapter president serve as CRC delegate and the vice-president as the alternate delegate was established during the '62-63 year. The purpose was to provide continuity of information from year to year.

At the time, Region IX CRC's were held in the spring, and the '62-'63 meeting was held in April in Omaha. Chapter Vice-President Dave Rosenstein presented a paper entitled "Medium-Temperature Water Systems with Primary and Secondary Pumping" at that meeting.

From ASHRAE HQ:

Jodi Scott

For Release:
August 27, 2012

Contact: Jodi Scott
Public Relations
678-539-1140
jscott@ashrae.org

Lighting, Equipment Efficiency Changes to Energy Standard Open for Public Comment

ATLANTA – Proposed changes to the ASHRAE/IES energy standard would improve lighting and equipment efficiencies.

Seventeen addenda to ANSI/ASHRAE/IES Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings, are currently open for public review. For more information, visit www.ashrae.org/publicreviews.

Among them are five proposed changes related to HVAC&R equipment efficiencies. These include addendum bp, which would add minimum efficiencies for evaporative condensers used in ammonia based refrigeration systems, and updates references to cooling tower standards published by the Cooling Technology Institute.

“The scope of Standard 90.1 was expanded in the 2010 edition to cover many new building types, including supermarkets and cold storage warehouses,” Frank Morrison, committee member, said. “As part of this expanded scope, the 90.1 committee worked with stakeholders to establish minimum efficiencies for evaporative condensers often used in the ammonia refrigeration systems found in these facilities.”

Specifically, the proposed requirements of addendum bp will help users to select energy efficient evaporative condensers as well as encourage manufacturers to develop more energy efficient designs in the future. It is also anticipated that future editions will incorporate requirements for an independent, third-party thermal performance certification program for evaporate condensers, which has proven successful for both open and closed circuit cooling towers.

The other addenda related to equipment efficiencies are:

- Addendum bi, which would harmonize the minimum energy efficiencies of 3-phase air-cooled commercial air conditioners and heat pumps less than 65,000 Btu/h with the efficiencies adopted by the U.S. Department of Energy (DOE) for residential central air conditioners.
- Addendum bj, which would re-establish the product class for small duct high velocity air conditioners and heat pumps. The minimum energy efficiency levels proposed are 11 seasonable energy efficiency ratio (SEER) for air conditioners and 11 SEER/6.8 heating seasonal performance factor (HSPF) for heat pumps which are identical to the efficiencies established by DOE for single-phase residential small duct, high velocity (SDHV) products.
- Addendum bk, which would amend the minimum energy efficiency requirements for standard-size packaged terminal air conditioners and raises the minimum energy efficiency ratio (EER) to the same level as the packaged terminal heat pumps. This new minimum efficiency will become effective on Jan. 1, 2015.
- Addendum bo, which would modify service water heating efficiency requirements in Standard 90.1 for electric water heaters, heat pump pool heaters and oil storage water heaters.

Also among the proposed changes to the standard is addendum bh, which would modify the long-standing interior space-by-space lighting power density (LPD) tables for a variety of purposes, according to Eric Richman, chair of the lighting subcommittee. This includes an adjustment to some of the space type LPDs (some go up and some go down) based on the light level design recommendations found in the new 10th edition Lighting Handbook published by the Illuminating Engineering Society (IES).

The addendum also introduces a set of LPDs for specific spaces that are predominantly occupied by seniors in permanent living facilities. These new LPDs will partially address increasing ageing population issues to ensure that these spaces receive appropriate allowances for the needs of the ageing eye. The revision also adds several new generic space type listings, including copy rooms and computer rooms, to address suggestions from users that some common items were missing.

Other addenda currently open for public review are addenda ac, bg, bl, bn, bq, bt, bu, bv, bw, bx and br.