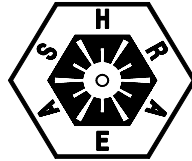


THE BADGERAIRE

AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS, INC.

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A PUBLICATION OF THE WISCONSIN CHAPTER OF ASHRAE

Volume Number VIII – May, 2007

May Program – An Evening with Julian de Bullet from McQuay Thursday, May 17, 2007

On May 17th, 2007 the Wisconsin ASHRAE Chapter will be putting on two programs, the first on Energy Analysis: Option or Necessity and a second on Green HVAC Design. Our first program will, Energy Analysis, will review several aspects of building design to see how changes affect both the capital cost and especially the operating cost of the building. These include light design, diversity, HVAC system selection and design parameters to name a few. The second program, Green HVAC Design, will explore the different choices that must be made to ensure an efficient design by comparing different systems to see how the design can comply with Green design concepts. An exploration of Life cycle calculations will complete the seminar.

Program Location

Charcoal Grille
15375 W. Greenfield Ave.
New Berlin, WI

Registration & Social Hour:	4:00 p.m. – 4:30 p.m.
Technical Session:	4:30 p.m. – 5:30 p.m.
Dinner:	5:30 p.m. – 6:30 p.m.
Main Program:	6:30 p.m. – 7:30 p.m.

Prices:

The program cost of \$20.00 will include a dinner. Checks should be made payable to the "Wisconsin Chapter of ASHRAE."

PLEASE MAKE YOUR RESERVATIONS ONLINE AT WWW.ASHRAE-WI.ORG OR TELEPHONE YOUR RESERVATION TO MAGGIE ROLL @ 414.778.7422. PLEASE HAVE YOUR RESERVATIONS IN BY CLOSE OF BUSINESS, MONDAY, MAY 14, 2007.

THANK YOU



PRESIDENT'S COLUMN

Hello everyone. I hope this newsletter finds you in good spirits as we near the end of our 2006-2007 ASHRAE year. I would like to start this month's column off by thanking Mark Lentz, of Lentz Engineering Associates, for presenting a very interesting and informative program on the implications of ASHRAE Standards 62.1 and 90.1 with respect to VAV systems at our April meeting. I believe all of those in attendance found the presentation to be very thought provoking. I would also like to thank Jim Werket, of PureChoice for presenting a technical session regarding demand controlled ventilation.

I have been looking forward to our May program all year. Julian de Bullet, Director of Industry Relations for McQuay will be presenting both a technical session and a main program. Mr. de Bullet is an ASHRAE distinguished lecturer and is a past Society Vice-President. The technical session before dinner will be "Energy Analysis, Option or Necessity." The main program will be "Green HVAC Design." In speaking with Mr. de Bullet it sounds as though the Technical Session program will lead into the main program very well. I would strongly encourage anyone who is able to attend as it is not a regular occurrence that we have a Distinguished Lecturer as our speaker.

The chapter is going to be holding a June meeting this year separate from the golf outing. This meeting will double as a social function for members and their family and friends. The meeting will be a tour of the ice-making system at the Pettit National Ice Center and ice skating along with food and social time will be included. I hope you will all consider attending

On a personal note, I would like to thank all of you for allowing me to serve in the role of Wisconsin Chapter President over this past year. As a number of you already know my wife,

Becky, and I will be moving to Chicago within the next month. Becky is graduating from Marquette's School of Dentistry and has taken a residency position with a hospital in Chicago. It has been a pleasure getting to know many of you over the past few years and I look forward to the possibility of getting to work in the Milwaukee area again in the future.

If you have questions about any of the information in this newsletter please feel free to contact me at any time. I look forward to seeing some of you at CRC, and the rest of you at our meeting on May 17th. Thank you.

Corey Metzger

Wisconsin Chapter of ASHRAE President
corey-metzger@mchsi.com

WINTER COOLING TOWER OPERATION

Year-round operation of cooling towers is often desirable to 1) meet process loads or 2) to provide "free cooling" for certain HVAC systems. Operation of cooling towers in winter presents certain challenges best addressed in the design phase of the project.

It is unrealistic, in most cases, to expect that no ice will ever form. However, systems can be designed which manage the accumulation of ice so that 1) thermal capacity is not compromised, and 2) any accumulation does not cause damage to the tower or cause a hazard to the building or its occupants. For applications involving winter tower operation, Fluid Handling Inc. recommends that designers specify the following:

1. Induced draft style towers with propeller fans. This style of tower can be operated with fans in reverse rotation to create a de-ice cycle to clear ice that does form.
2. Inverter duty fan motors with associated variable frequency drives (VFD's) to

control them. VFD's provide excellent part load control and energy savings, plus they may be easily configured to operate fans in reverse for the de-ice cycle.

3. The warmest possible water temperature to meet the winter load. The warmer the water, the fewer the ice issues. Little ice formation generally appears at leaving water temperatures above 65 F.
4. An oversized bottom tower outlet with an indoor water sump. The design of indoor sumps is an art in itself. For details go to www.fluidh.com, then click on "Newsletter", then "Spring 2003."
5. A full-flow piping bypass around the tower. The bypass should open when the tower capacity with minimum fan speed exceeds the load, a condition that results in colder-than-desired water. When the water loop temperature recovers, the bypass is closed and flow to the tower is resumed.
6. Fan vibration switches. Fan blades can develop a coating of ice. In some cases, this results in severe vibration capable of damaging the fan or the tower. The vibration switch senses abnormal vibration level and shuts the fan down before damage results.

In addition to specifying the above items, the designer should investigate whether it is possible to shut down tower cells in multi-cell applications and divert the resulting excess water to the operating cells. Fewer fully loaded cells with water flow rates near the top of their maximum range generally result in less icing than a greater number of lightly-loaded cells. Coordination with the tower manufacturer is required.

Good design can only do so much. The owner of the tower must understand that daily ice inspections are required to determine if de-ice cycle time and frequency is adequate. With

these precautions, cooling towers may be operated successfully in cold winter climates.

JULIAN DE BULLET

Our distinguished lecturer Julian R. de Bullet has over 30 years experience in the HVAC industry. His career has concentrated on the applied use of Chilled Water and All-Air systems as a manager of applied equipment sales and as a manager of a service/performance contracting operation. Julian is currently the Director of Industry Relations for McQuay International, based in Washington D.C. and is responsible for assisting McQuay customers and McQuay sales representatives in HVAC&R system design and specification. He is a member of numerous industry associations concentrating on energy efficiency and responsible refrigerant use.

As ASHRAE Vice President (2001/2003) Julian served on the Board of Directors and the Executive Committee and was Chair of Member Council and Publishing Council. He is Past President of the National Capital Chapter and was Director and Regional Chair for ASHRAE Region III. Julian has also chaired the Professional Development Committee and is a member of the Programs and Education Council and the Society Nominating Committee.

ATTENTION

Are you looking for a new employee?
 We accept classified listings for job opportunities in the HVAC industry.
 If interested in posting a classified, please contact Maggie Roll at mroll@ringdu.com or 414.778.7422.
 The charge for a classified is \$175/month to be used towards Research Promotion and Student Activities.

For Release:
April 12, 2007

Contact: Wendy Angel
Public Relations
678-539-1216
wangel@ashrae.org

ASHRAE, ACCA Publish Load Calculation Standard

ATLANTA – A new standard that establishes minimum requirements for performing load calculations has been published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers. The standard was developed in conjunction with the Air Conditioning Contractors of America (ACCA).

ANSI/ASHRAE/ACCA Standard 183-2007, Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings, is available for purchase at www.ashrae.org/bookstore.

Proper load calculations are the first step in any design process, says Chris Wilkins, chair of the committee that wrote the standard. “Efficiency and comfort are only possible if the equipment is selected to match the load.”

The standard establishes minimum requirements for building loads that are inclusive of as many procedural methods as possible while identifying core elements that impact heat loss and gains. Requirements are non-prescriptive and are aimed at ensuring that developers of load calculation methodologies observe recognized good practices. The specifics in undertaking a load are left to the discretion of the industry professional by their selection and application of load methodologies that meet the standard.

The need for the standard was driven largely by the desire of the code enforcement community. Code references to the ASHRAE Handbook existed, making it the de facto standard.

“The industry recognized that we were the appropriate source for load calculation guidance, but the problem was that the ASHRAE Handbook was never intended to be a standard,” says Wilkins. “Standard 183 now provides an appropriate compliance reference that reconciles each organization’s needs.”

“We are pleased that the standard meets the needs of our members,” says Phil Forner, ACCA 2007 – 2008 chairman. “ACCA wants contractors to have access to the most accurate, efficient and effective design standards, and this will help contractors with commercial building load calculations.”

The cost of Standard 183-2007 is \$24 (ASHRAE members, \$19) and is available in print and download versions. To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide); fax 404-321-5478; by mail at 1791 Tullie Circle NE, Atlanta, GA 30329; or visit the Bookstore at www.ashrae.org.

HVAC ENGINEER

Tower Mechanical Services of Oshkosh, WI is a full service mechanical contractor of H.V.A.C., plumbing and pipe fitting since 1998 with annual sales between 7 to 10 million. We are currently looking to fill an opening for an HVAC Engineer due to our recent growth.

The primary requirements of an effective HVAC Engineer is an overall ability to meet the needs of commercial and light industrial clients while meeting corporate objectives. Position requirements are as follows:

Customer Service

- Design / Build market
- Plan & Spec market
- Building and maintaining client relations
- Competitive job quoting
- Effective quote follow-up
- Process and execute customer requisite
- Application and service problem solving

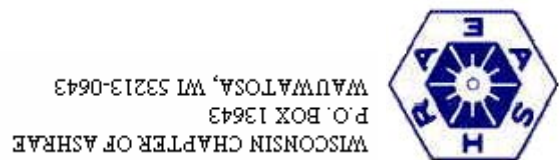
Engineering

- Heat gain/loss calculations
- Envelope compliance calculations
- Design calculations
- Equipment selection and application
- AutoCAD drafting and specification
- Submittal preparation
- Site survey

The HVAC Engineer is responsible for the design of HVAC systems with utilization of proper equipment. This necessitates a team approach with both outside and inside salespeople and/or an individual approach requiring the engineer to make field sales calls on builders and other customers. Minimum requirements for employment include: PC literacy, great communication skills and a minimum of 5 years of experience in design. Registration as a Professional Engineer or Designer is required.

All interested applicants should forward their resume in confidence to:

Tom Tease
General Manager
Tower Mechanical Services
PO Box 2552
Oshkosh, WI 54903-2552
PH: (920) 426-3005
FX: (920) 426-2927
Email: ttease@towermechanical.com



MEETING DATE / THEMES	LOCATION	TOPIC	SPEAKER
May 17, 2007 Evening Meeting	Charcoal Grill	Energy Analysis: Option or Necessity?	Julian deBullet
June 4, 2007	Muskego Lakes Country Club	Mike Stram Open Golf Tournament	
June 14 or 21st Evening Meeting	Pettit Center	Pettit Center Tour and Ice Skating	TBA

All meetings will be held the third Thursday of every month, except December.

*Please note: This is a tentative schedule; topics may be subject to change.