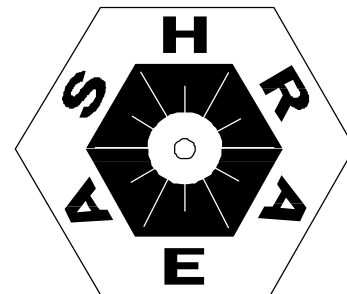
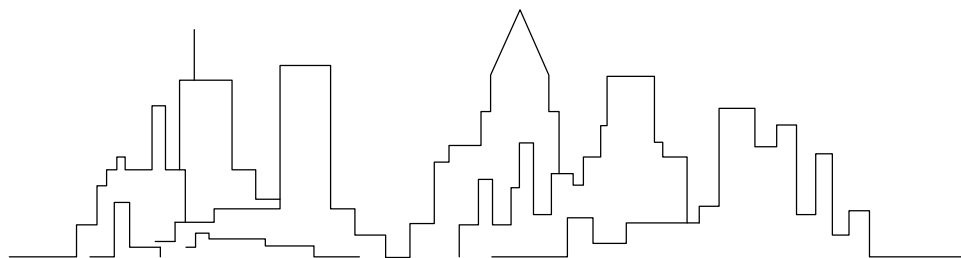


# The EXCHANGER



## Minnesota Chapter

[www.mnashrae.org](http://www.mnashrae.org)

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

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VOLUME 15 NO. 1

PUBLISHED 8 TIMES ANNUALLY

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## **Presidents Corner**

**Submitted by Paul Quirin**

Our December Chapter meeting was held at the DoubleTree Park Place hotel and covered two Technical, Energy and Governmental Activities (TEGA) related topics. We received great feedback on the topics and speakers. Mr. Nirmal Jain with the State of Minnesota discussed recent updates and changes to the state agencies that regulate construction and are responsible for the adoption of the State mechanical and energy codes. Dr. Tom Kuehn with the U of M Mechanical Engineering department summarized ASHRAE-funded research that has been completed at the U of M over recent years.

This month's Chapter meeting will be a presentation by Richard D. Hermans with the Center for Energy and The Environment. Rick is currently Chair of the Standards Committee and will be presenting a review of the standards development process and how ASHRAE interacts with the model code development organizations.

Mark your calendars for the upcoming Refrigeration Seminar on February 14, 2006. Our lunch presentation will be from an ASHRAE Distinguished Lecturer, Mr. Wayne Kirsner from Kirsner Consulting Engineering in Atlanta, GA. Mr. Kirsner will be presenting a lecture on "The Demise of the Primary-Secondary Pumping Paradigm for Chilled Water Plant Design". Mr. Kirsner has authored twelve feature articles that have appeared in HPAC engineering magazine and the ASHRAE journal. The morning seminar will feature four prominent Minnesota Chapter members speaking on a range of refrigeration related topics focusing on central plant refrigeration systems and commissioning.

The January and February meetings will mark the beginning of a new way to register for Chapter meetings. Starting immediately, in addition to registration via mail, phone or e-mail, Chapter members will be able to register for meetings over the internet through the Region VI website. Type in the following link to register for the upcoming Chapter meetings:

<http://www.ashrae6.org/meetings.php?CHAPTERNBR=052>

The regional webmaster, Benny Skelton, has worked feverishly over the past year to organize shared web services for the Chapters in Region VI and develop multiple features for each Chapter's use. See the articles included in this edition of the Exchanger. The shared web service has saved the Chapter money and will allow us to take advantage of these added features.

As another reminder, the TEGA Committee continues to seek applicants for this year's technology awards. Applications are due on February 3, 2006. Please contact the TEGA Committee Chair, Tim Manz, at 612-624-9082 for additional information and for where to submit your applications. The application form is very simple to fill-in, with more detailed information required only as the project advances to Regional or Society-level competition. The form is available at the following link:

<http://www.ashrae.org/template/AssetDetail/assetid/25424>, then go to the CTTC Award Programs Section and select the link to the "Chapter/Regional Application – Short Form".

For all Minnesota Chapter members attending the ASHRAE Winter Annual Meeting in Chicago from January 23-25, 2006, work hard and have a great time!!

## **Society Information**

### **Chapter and Regional Online Services**

Benny Skelton  
Region VI e.Committee Chair  
[webmaster@ashraae6.org](mailto:webmaster@ashraae6.org)

The Region VI e.committee has spent the last year organizing a shared web service for Chapters. While your Chapter Web address didn't change, it was moved to a shared web serve under the [www.ashrea6.org](http://www.ashrea6.org) parent site. Chapters that have successfully transferred include: Central Illinois, Illinois, Iowa, Madison, Minnesota, Mississippi Valley, Northeast Wisconsin, Rockford, St. Louis and Wisconsin Chapters. (We'll get Cedar Valley when we find out who last paid for their web address...)

Sharing a common web server has allowed us to expand resources to Chapters of all sizes while reducing overall cost. If you haven't noticed the benefits yet, you will in this Chapter year. We have listserv mail that will allow us to deliver professional newsletters and announcements to you without interference from spam filters. We have also developed an online database system that will facilitate online meeting registration. Our database is also synchronized with Society to keep your member ship records current in database is very secure behind a 128-bit SSL encryption.

We have also started a web forum [www.asharea6.org/forum](http://www.asharea6.org/forum) that is dedicated to Chapter/Regional communication. Feel free to use the forum for events in you chapter, ask questions or post comments region wide, you can even post a job opening. Check back frequently as more and more features are being added every week. If you have experience with web design or would like to learn, volunteers are needed for the Regional e.Committee. Please contact Benny at [webmaster@ashrae6.org](mailto:webmaster@ashrae6.org)

Region VI Web Sponsors  
Benny Skelton  
Region VI e.committee Chair  
Webmaster [@ashrae6.org](mailto:@ashrae6.org)

[www.ashrae6.org](http://www.ashrae6.org) now accepting Sponsors for [www.ashrae6.org](http://www.ashrae6.org) web site. [www.ashrae6.org](http://www.ashrae6.org) is the main site for CRC as well as our Regional Forum. Based on traffic from the end of the 2004-2005 year, when we had 50% of Chapters under the ashrae6 domain, we saw over 10,000 hits per month. With 10 of 12 Chapter in Region VI now operating on the ashrae6.org server, we estimate that our domain will average between 15,000 and 20,000 hits per month this year. This makes [www.ashrae6.org](http://www.ashrae6.org) a hot spot for your company logo. Sponsors are selling \$200.00 for the year and will be required to follow the ASHRAE business card sponsors requirements. We will post your logo on a banner on the web forum as well as dedicated sponsorship page. For information on becoming a sponsor, please contact Benny at [webmaster@ashrae6.org](mailto:webmaster@ashrae6.org)

## Article of Interest

WASHINGTON (Army News Service, Dec. 20, 2005) – About 500 liquid-filled cooling vests are now being tested by Humvee crews in Iraq and Kuwait.

The vests are worn under body armor and a hose from each vest is plugged into the Humvee's on-board air-conditioning system. Liquid from the vehicle's AC system circulates through the vest, cooling its wearer.

The vests were developed by the Army's Tank Automotive Research, Development & Engineering Center, known as TARDEC, in coordination with the Natick Soldier Center. They were sent to Kuwait this past summer and then forwarded to Iraq.

The Humvees with add-on armor were fitted with air conditioners after TARDEC engineers in Warren, Mich., were given the requirement to figure out how Soldiers in armored vehicles could be kept cool under the desert sun.

Some of the same engineers had designed the add-on armor kits for the M-998 and M-1025 Humvees in theater. But with the extra armor and doors

closed, temperatures inside the vehicles could reportedly reach more than 130 degrees. "It's like putting somebody in a toaster oven on low heat," said Charlie Bussee, an engineer at TARDEC.

So the engineers began "backward designing" to fit an air-conditioning system into the rear of the Humvees.

About 21,000 of the air-conditioning systems have been ordered for Humvees in theater and more than 13,750 already have the AC systems installed, Bussee said.

But even with air conditioning, temperatures inside the armored vehicles could still reach 95 degrees in the sun, Bussee said. So something more was needed.

Design of the vests actually began in the spring of 2004 said Brad Laprise of the Natick Soldier Center in Massachusetts. "We learned a lot about physiological conditions and cooling since then," Laprise said.

Each Humvee cooling kit consists of four water-filled vests known as Air Warrior Microclimatic Cooling Garments or MCGs. Fungicide-treated water is chilled by the AC system in the Humvee and circulated through the garment. A rapid-release system allows Soldiers to quickly disconnect the hoses so they can jump out of the vehicle and keep the vests on. "All of this was a logical extension of the armor and the heat issue," Bussee said.

For the collaboration between TARDEC and NATICK in developing the vests, the two commands received the 2005 Research and Development Laboratory Collaborative Team of the Year award by the assistant secretary of the Army for Acquisition Logistics and Technology. The award was presented at the Association of the U.S. Army annual meeting in October.

Some of the vests are now being used by Soldiers operating ambulances in theater, TARDEC officials said. Others are being used on convoys.

"Since we have had the vests, they have become increasingly popular with the platoon," said 1st Lt. David J. Dixon Jr., 18th Airborne Corps, who provided feedback via e-mail to TARDEC engineers. "They argue over who gets to wear them. They wanted me to ask for more."

Operational assessments of the cooling kits are being made to gather Soldier performance evaluations, TARDEC officials said.

## Upcoming Events

### Minnesota Chapter 2005-2006 Meeting & Event Calendar

- ü ~~October 11, 2005 Dinner~~  
Meeting Topic: Tour — Guthrie on the River
- ü ~~November 8, 2005 Seminar/Lunch~~  
Health & Life Safety Seminar
- ü ~~December 13, 2005 (Tuesday) Lunch~~  
Meeting Topic: TEGA
- ü January 10, 2006 (Tuesday) Lunch  
Meeting Topic: AHRAE Standards Update  
Rick Hermans
- ü February 14, 2006 (Tuesday)  
Seminar/Lunch  
Refrigeration Seminar
- ü March 14, 2006 (Tuesday) Dinner  
Meeting Topic: Research Promotion and  
Support Appreciation
- ü April 11, 2006 (Wed.) Seminar/Lunch  
Meeting Topic: Education Seminar
- ü May 9, 2006 (Tuesday)  
Seminar/Lunch  
Meeting Sub-topic: Installation of  
Officers/Past Presidents Day/History -  
Utility Night
- ü June, 2006  
Golf Outing

### Rochester Section Schedule

- ü ~~September 20, 2005 Lunch~~  
MN Board of Engineering
- ü ~~October 18, 2005~~  
Chilled Water Systems
- ü March 21, 2006 Seminar/Lunch  
Energy Solutions
- ü April 18, 2006 Lunch/Seminar  
Tour -TBD
- ü June 2006  
Golf Outing

### ASPE Meeting Schedule

*Submitted by Renae Torborg, Newsletter  
Editor*

- September 21, 2005  
Backflow Prevention
- October 10, 2005  
ASPE Local Convention
- October 17, 2005  
Rib Eating Contest
- October 19, 2005  
Plumbing in Zero G
- November 16, 2005  
Plumbing Vent Basics
- December 21, 2005  
Valve Design and Application
- January 13, 2006  
Holiday Party-Rolling Green CC
- January 18, 2005  
"Sewer Cam Process"
- February 15, 2006  
Fossil Fuel vs. Electric
- March 15, 2006  
Siphonic Roof Drainage
- April 19, 2006  
Oil Separators
- May 17, 2006  
ASME B-31-9 Update

## Professional Directory



Space for Rent!

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TMS Johnson  
General Mills

**Publication Deadline for the  
January Exchanger; December 9<sup>th</sup>**  
**All submissions must be in electronic format and should be emailed to the  
Editor: Daniel Chudecke**

**ñ ñ Society and/or Chapter dues Paid?**

First **Yes/No** on Mailing Label = Society Dues

Second **Yes/No** on Mailing Label = Chapter Dues

**INSIDE: Insert: February Seminar Notice  
January Meeting Notice**

