

INFORMAIRE

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AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS

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OCTOBER MEETING

Submitted by Tom James

DATE: Monday Evening, October 13th, 2003

LOCATION: **Union South** (look for room location when you arrive)

University Of Wisconsin Campus
(Parking is available at the Engineering Centers or go to <http://www.union.wisc.edu/parking/index.html>)



TIME: 5:00 – 5:30 Social Gathering
5:30 – 6:30 Dinner
6:30 – 7:30 Presentation

SPEAKERS: Brandon Lachner - Investigating the use of water as a refrigerant
Nathan Hoffenbecker - Investigation of Alternative Defrost Strategies

TOPIC: **University Of Wisconsin Student Projects**

Investigating the use of water as a refrigerant

Brandon Lachner

Brandon is originally from the Milwaukee area and grew up in the Boston area. He came to Madison in '99 for a BS in ME. Brandon is currently an ME graduate student at the University of Wisconsin – Madison, with hopes of graduating in May '04. He became interested in the HVAC industry when he was presented with a masters project involving the use of water as a refrigerant.

His talk will be about the use of water as a refrigerant. Although on the surface, it may look like a wonderful refrigerant, a deeper look reveals the truth about water as a refrigerant. He will talk about the good, the bad and the ugly of water in a vapor compression refrigeration cycle, from the thermodynamic, design and cost standpoints.

Investigation of Alternative Defrost Strategies

Nathan Hoffenbecker

Nathan Hoffenbecker is a resident of Marathon, WI. He received his Bachelors' Degree in Mechanical Engineering at Michigan Technological University in the spring of 2002. Nathan is now pursuing his Master's Degree at the University of Wisconsin. He has been working since October of 2002 with professors Sandy Klein and Doug

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Reindl on a research project involving the efficiency of refrigeration cycles by focusing on the defrost strategies employed.

The overall objective of this research project is to improve the efficiency of industrial refrigeration systems that utilize air-cooling evaporators. The primary focus of the research is aimed at achieving energy efficiency improvements by developing strategies for reducing the parasitic impacts of evaporator defrosting, which can represent energy losses that range from 10 to 25% of the system's overall energy use. This research project will contribute to understanding the factors that influence defrost performance as well as the parasitic impacts on system energy consumption by a generated transient computer model of the processes involved in a hot gas defrost cycle. The findings thus far include:

- Time to defrost heavily depends on the temperature of the refrigerant.
- Energy loss due to evaporation is significant.
- Energy re-entering the freezer space during a defrost cycle can vary from 18% ~ 45%, depending frost properties and refrigerant temperature.

RESERVATIONS: Cost is \$20 for members and guests and \$1 for students. Pay at the door. Please make checks payable to Madison ASHRAE Chapter. Please **RSVP by Tuesday October 7th** to make reservations call Tom James at (608) 845-6411 or E-mail to tjames@carnes.com.

PRESIDENT'S MESSAGE

Submitted by: Mark Miller

Welcome To A Great Start To The ASHRAE Year!

The Board of Governors have been busy preparing the year for you in an attempt at offering quality programs, fiscal management, student involvement, historical research and funding promotion. We are in the process of establishing goals for all our committees to identify what we would like to achieve, therefore allowing us the chance to measure our accomplishments. I would like provide you an overview of these activities for your awareness and support.

Tom James, our Program Chairman, has done a great job pulling together an assortment of program ideas and grasping them for establishing a great year of programs. He is striving to satisfy our Society goals by monitoring the PAOE (Presidential Award Of Excellence) point system and fulfilling the criteria set forth. Look over the future program schedule and offer your assistance if you can help or have ideas about the programs.

The new UW-Madison Student Chapter started their year with their first meeting last week. Wayne Prior, Doug Bergmann and I attended to provide an overview of ASHRAE, discuss the benefits of being a member and provide some insight on career options in the HVAC Industry. Professor Shedd presented the students with the many scholarships that are available to students within ASHRAE. We were encouraged by the interest and we will promote our support to continue to grow throughout the year.

The BOG has decided to take a more serious look at our finances. Our past Presidents, Mike Meteyer and Doug Bergmann have provided us with a solid foundation for which we can build a plan to put in place. Our Scholarship funds are now in the trusting hands of a managed fund account and we are completing a budget that aligns itself with our expense categories. Our goal is to spend our funds where they benefit you, the members and have our funds that we are holding, grow conservatively.

Jeff bolt has embraced the Historian position whole heartily. He has gathered histories on local companies and providing them to you through attachments to the INFORMAIRE or on our web site. Jeff

has organized our files and recorded them as requested through the PAOE reporting methods. His grasp of this position has been truly impressive and refreshing.

Al Zeller is enthusiastically taking on the role of Resource Promotion Chairman. He is entertaining new ideas at promoting this important role. His committee members are preparing to meet and put these great ideas in place.

With these and the other Committees activities (that I am refraining from reporting for now), we are on a great start. I am pleased with our progress and impressed with those who are volunteering their time for the Chapter. Look forward to more good things to come as we strive to meet our goals.

Mark F. Miller- President, Madison Chapter

BOARD OF GOVENORS MEETING MINUTES

Submitted by: Chad Faber

Thursday August 26, 2003, 4:30 PM

Attendees:

Mark Miller	President	Tom Benell	Member At Large
Tom James	President-Elect	Gene Nelson	Member At Large
Bruce Kimball	Treasurer	Doug Bergman	Past President
Chad Faber	Secretary		

1. Chapter President Mark Miller called the meeting to order.
2. PAOE Points (President Award of Excellence)
 - a. Mark Miller suggested that we go through the whole PAOE at a BOG meeting.
 - b. Mark asked that each one of the board members look at how these points affect them, and what they can do to help the chapter.
3. Financial Plan
 - a. Review of budget provided by Mark Miller at last meeting
 - b. Look at using excess money to improve meeting quality.
 - c. Adopt existing as a working item.
 - d. Bruce Kimball was asked to compare last years budget to this years, and he said he would give it a try.
 - e. Bruce Kimball needs to provide some options, than we can review at next meeting.
4. Web Site
 - a. Mark Miller asked for an update from Doug Bergmann. He has contacted Webmasters and has a plan he will be implementing soon.
 - b. Product Directory – get people to advertise in our website.
 - i. Good source of income.
 - ii. Mark Miller recommends a committee be formed.
5. New Topics: - Cafeteria Plan
 - a. Mark Miller would like implement plan for this year. It will create some benefits to both the organization and members.
 - i. Easier book keeping for members and society.
 - ii. Offer a package to attend all meetings at discounted rates.
 - b. Doug Bergmann suggested we contact St. Louis to see how they do their plan.
 - c. First suggestion was to increase individual meeting rates from \$15 to \$20.

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- d. Suggest form to be included in next INFORMAIRE.
 - e. Final resolution was to charge \$100/year cafeteria plan for individual. This would be nontransferable and the first \$20 would be added towards the plan if the member chooses to do so in October.
 - f. Students still \$1/meeting.
 - g. Mark asked that Chad write a description of the cafeteria plan and the motions to put in upcoming INFORMAIRE before the first meeting.
6. Chapter Sponsored Seminar: -
- a. Mark asked that this be given some thought, and come up with some ideas, possibly someone who would spear head this project.
7. Next Meeting: - September 30, 2003, 4:30 at the Radisson Hotel
Meeting adjourned 6:15 pm.

Chad Faber, Chapter Secretary

RESOURCE PROMOTION

Submitted By: Al Zeller

As overwhelmingly approved at the September membership meeting we will be having a raffle to support Resource Promotion at the October membership meeting. Resource Promotion is the new title for the committee that raises funds for Ashrae Research, the Ashrae Learning Center, and Ashrae's Endowment Fund. Until further clarification from the Board of Governors, the raffle will support Ashrae Research.

Al Zeller, Resource Promotion Committee,
241-9342, azeller@capitolmechanical.com

HISTORICAL COMMITTEE

Submitted By: Jeff Bolt

The Madison Chapter Historical Committee is trying to be the first chapter in the region to reach PAR in our PAOE points. We are almost there, largely because of the attached article that was submitted by Mike Meteyer of Marshall Erdman. To reach our goal we need one more similar type of article about a system, person, event or a company in our chapter; or an interview of a prominent chapter member.

Articles do not need to have pictures or be interactive. For many of your companies this is a way to get some FREE advertising, since we will distribute these with the INFORMAIRE. KJWW Engineering, Madison Trane Company, and Marshall Erdman have taken advantage of this so far. Systems you designed that have historical value (first of their kind or unique systems) also qualify.

Please enjoy the attached history of Marshall Erdman and send histories or interviews to Jeff Boldt (608) 223-9600 boldtjg@kjww.com

Jeff Bolt, Historical Committee Chairman

NEW FACES NEEDED

Submitted by: Mark Miller

I am writing to seek your help to encourage nominations for the National Engineers Week New Faces of Engineering recognition program. As you may know, September 26 is the deadline for submissions of nominations for ASHRAE's New Faces of Engineering. Despite outreach through letters, ASHRAE Insights, e-mail and posting on the ASHRAE website, only 3 nominations have been submitted. To nominate young engineers, submit the completed nomination form on ASHRAE.org at www.ashrae.org/newfaces. If you have a candidate that you would like to submit, but will have trouble meeting the deadline, please let me know.

Last year, in its role as lead society of National Engineers Week, ASHRAE launched the New Faces program to highlight the contributions of the country's newest engineers. The program culminated with a full-page ad of the top 16 New Faces in USA Today during National Engineers Week. Due to its success, the program has been continued for 2004 National Engineers Week, which will take place Feb. 22-28.

This year, special emphasis is being placed on New Faces from outside North America. Sponsoring societies with international chapters are requested to nominate two of their five candidates from outside the United States.

Nominees must hold an engineering degree, be employed as an engineer for between two and five years, have been involved in projects that significantly impact public welfare or further professional development and growth and be an ASHRAE member. Nominations must be submitted to Tony Giometti, ASHRAE, 1791 Tullie Circle, NE, Atlanta, Ga., 30329 or giometti@ashrae.org by Sept. 26, 2003. For more information, I can be reached at 404-636-8400, ext. 1155.

Thank you!

Tony Giometti
ASHRAE Manager of Communications and Programs

SCHOLARSHIP COMMITTEE

Submitted By: Mitch Hagens

The Scholarship Committee members include Dick Pearson, Harry Sulzer, Tim Shedd, Brant Olson and Mitch Hagens, who continues as the chair.

Scholarship Fund:

Thanks to last year's Board and through the efforts of Todd Fortune of Merrill Lynch, the investment strategy for the scholarship funds was changed during the fall of 2002. As a result, the fund value has rebounded from a value of \$31,764.11 on 6/28/02, to a value of \$34,174.54 on 8/29/03.

Scholarship Awards:

For the 2003-2004 school year, we are awarding \$4,000 in scholarship money. This past spring we received seven applications for these scholarships from UW-Madison and UW-Platteville students. The committee selected 4 scholarship recipients, each of whom will receive \$1,000. They are:

- Dan Bell, UW-Platteville
- Jacob Ben-Poorat, UW-Madison
- Daniel Bergmann, UW-Madison
- David Doyle, UW-Madison

I had the pleasure of meeting our three UW-Madison scholarship recipients at the 28th Annual Mechanical Engineering Scholarship Night, held on September 11th, 2003. As always, this is a very

rewarding night in that 100 ME students received a total of **\$191,000** in scholarship support from 48 sponsors.

Following is a little bit of information on our four scholarship recipients:

- **Dan Bell** attends UW-Platteville and plans to graduate in May, 2004 with a BSME. Dan is from Gays Mills, Wisconsin, is a member of ASHRAE and currently has a cumulative GPA of 3.58. Mr. Bell has previously worked on co-op with the Trane Company in La Crosse in their scroll compressor division.
- **Jacob Ben-Poorat** attends UW-Madison and plans to graduate in May, 2004 with a BSME. Dan is from Cedarburg, Wisconsin and currently has a cumulative GPA of 3.52. Mr. Ben has previously worked on co-op with Sub-Zero of Madison where he learned about appliance refrigeration and ventilation requirements.
- **Daniel Bergmann** attends UW-Madison and plans to graduate in May, 2004 with a BSME. Dan is from East Troy, Wisconsin, is a member of ASHRAE and currently has a cumulative GPA of 3.42. Mr. Bergmann has previously worked as an intern with the Madison office of the Trane Company on a couple of occasions in the areas of sales and controls.
- **David Doyle** attends UW-Madison and plans to graduate in December, 2003 with a BSME. Dan is from Whitefish Bay, Wisconsin, is a member of ASHRAE and currently has a cumulative GPA of 2.80. Mr. Doyle has previously worked as an intern with Abbott Laboratories in their Corporate Engineering Division in Abbott Park, Illinois where he worked on a lab renovation and on a chiller replacement project.

Again this year, all seven applicants had very good credentials and demonstrated a clear interest in a career in HVAC. Given a better economic situation, we could have justified awarding a scholarship to every candidate.

Future Scholarships:

The amount of funds to be awarded during 2003-2004 will be determined this fall. Based on results of the golf outing and investments, I am hoping to increase the amount of awards to at least \$5,000 for next year.

STUDENT ACTIVITIES

Submitted By: Wayne Prior

Each year members of the Madison ASHRAE Chapter donate their old handbooks that are taking up shelf space and gathering dust to the Student Activities Committee. We bring the handbooks to the meetings and give them to students who show up. The students find them to be a valuable source of information and put them to use.

Our supply is running low. We need the Madison ASHRAE Chapter members to bring their old handbooks to the October meeting, which is student night. We expect students from the Madison and Platteville campus to be there. We could use about 20 handbooks for the October meeting.

We will also come and get the handbooks if you can not make it to the meeting.

You can call Wayne Prior at 608-288-8338 or E-Mail at prioreng@mcleodusa.net

Thank you for your help.

SEMINAR NOTICE

Submitted By: Mark Miller

See the attachment regarding the humidity seminar in our neighboring Chapter of La Crosse. It sounds like it will be a great seminar!

PROGRAM SCHEDULE

Submitted By: Tom James

	Topic	Location	Presenter	
Oct 13	Student Research Projects - Water as Refrigerant - Defrost Strategies	U of Wisconsin Madison Union South	Brandon Lachner Nathan Hoffenbecker	Student TEGA
Nov 10	Ammonia Refrigeration (Tentative)	Tour of Oscar Mayer Plant (Tentative)	TBA	Refrigeration
Dec 8	Holiday Party	Capital Brewery	TBA	Membership Historian
Jan 12	Humidification Overview & Recommended Applications	TBA	TBA	Resource Promotion
Feb 9	Underfloor Air Distribution (Tentative)	TBA	TBA	
Mar 8	ASPE Joint Meeting - Commissioning (Tentative)	TBA	TBA	Student
Apr 12	Green Buildings - Or Noise & Vibration Control	TBA	TBA	
May 10	Ice Storage Systems	Airport Tour (Tentative)	TBA	

CHAPTER CONTACTS

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at

mark.miller@mail.ashrae.org

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