

NEXT MEETING:  
APRIL 8, 2008  
HOPE YOU CAN JOIN US

April 2008

<http://www.charleston.ashraechapters.org/>

# ASHRAE NEWS

The American Society of Heating, Refrigerating and Air-  
Conditioning Engineers, Inc.  
Charleston "Gee Chee" Chapter Newsletter

## Chapter Meeting

Tuesday, April 8th, 2008

**Radisson Hotel**

B.O.G. 5:30 - 6:30 p.m.  
Social 1/2 Hour: 6:30 - 7:00 p.m.  
Dinner/Meeting: 7:00 - 8:00 p.m.  
Tech. Program: 8:00 - 9:00 p.m.

**Cost: \$20.00 per person**  
**+\$5 for the open bar**



MEETING SPEAKER  
Charles Waggoner  
Demilec, Inc.

Charleston, SC • Columbia, SC • Charlotte, NC • Raleigh, NC

**Chapman**  
COMPANY

3168 Sand Marsh Lane  
Mt Pleasant, SC 29466

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T.R. (Randy) Jones  
President

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Shortly after Charles retired from 27 years in the Air Force, he started building a new home. He designed the house for maximum energy efficiency and comfort by using ICF exterior walls and steel framing on the interior and roof assemblies. Using foam forms on the concrete walls, it was obvious that foam should be used throughout the remainder of the house; however, there was just one problem. He could not find anyone to spray the "new soft, open celled foam" that he had read about. He

traveled to Canada in December 1994 to learn how to spray it himself. He returned as the owner of a new spray foam company with all the knowledge (or so he thought) and equipment to finish his house. The house was finished and the company was established. A few years later he had an opportunity to upgrade the quality of his product when Dave Lall of Demilec USA persuaded him to try the Sealection 500. He found the Sealection 500 to be superior to what he was using and as they say, the rest is history. Charles decided to sell the business in 2004 and retire for the second time; however, once you get iso in your blood, you can't get away from it. He joined the Demilec team in July as the presenter of AIA briefings and as a focal point for technical issues with the dealers and customer.

**LECTURE TOPIC:  
SPRAY FOAM**

**Charleston Chapter  
Website has Been Updated**

Check out your Chapter on the ASHRAE Website! Go to ASHRAE Online [www.ashrae.org](http://www.ashrae.org). Under "Take the Shortcut" in the upper right corner, select Chapter List, and then click on Charleston Chapter. It's that easy!



**Adams Companies, Inc.**  
*We're Degrees Above the Rest*

**Steve Marek, PE**  
*Sales Engineer*

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*The President's Corner*

I hope everyone had a happy Easter and enjoyed times with family and friends. We have a few items left in the year and we hope to finish strongly. Rob Turner and I will be attending the regional planning meeting for CRC later on this month and I encourage our members to pose any suggestions that they may have. We have our Golf tournament on April 11<sup>th</sup> and if you are interested on attending or would like more information please contact Steve Marek or Randy Jones. Ritchie Hartley, a fantastic cook, will be cooking for us and lunch will be served around 11:30am. This will be a great opportunity for everyone to enjoy each others company and play some golf. Hope to see you there.

Hope to see you all at our next meeting!

Sincerely,

Phil Garcés  
Ashrae President

**CTT Corner**  
**By: Gene Brown**

At the March meeting Roger Schmidt gave an excellent presentation on the proper use of insulation. The National Insulation Association (NIA) publishes a chart which specifies which insulation you need for many different applications. The NIA magazine is available at no cost. Insulation begins payback from day one. Always remember to insulate valves flanges, etc.

Reasons to insulate include mold, condensation and energy.

In Europe the driving factor is reduction of emissions. Reducing energy consumption reduces emissions.

A hot water line with insulation gets hotter faster and stays hotter longer, resulting in less run time to get hot water, thereby saving water. Insulation reduces noise of flushing. Cast iron is quieter than PVC but insulating PVC is cheaper than installing cast iron.

Cellular glass has a .33k factor which is not as good as some other material but it is better for some applications.

They don't make insulation of .9 inch thickness or 1.1 inch thickness so you might want to use 1-inch insulation of a higher or lower k value in some cases.

The number one consideration is the temperature of the application. You don't want the insulation to melt. Polystyrene melts at 160F. Polyolefin melts at 200F.

The right protection or finish is important. Protection must resist UV, birds, sticks, hail and animals.

Specify how the contractor must install the insulation. Don't just say "per manufacturer's recommendations."

For low ambient conditions, tape is not sufficient. Joints must be glued.

Consider the base material. For copper, iron or stainless steel, avoid halogens.

If a heat tape is used, specify a groove in the insulation or use oversize insulation to provide clearance for the heat tape.

There is an insulation thickness table in ASHRAE 90.1.

There is a lag time in adopting codes. First the ICC adopts, then the state adopts and finally a city adopts. There can be a ten year lag.

Good websites for information are NIA WBDG (Whole Building Design Guide) and NIBS (National Institute of Building Sciences).

Five years ago there was nothing in the phone book for mold remediation. Now every city has a listing for these businesses. The greatest liability is associated with schools, hospitals and hotels.

If moisture is eliminated 90% of mold problems are eliminated.

In school, 95 was a good grade but insulating 95% of a system is zero.

With 100% RH it is impossible to insulate and prevent condensation. Sometimes it is possible to prevent condensation at 85 RH. A 5 MPH wind can cut your requirement for insulation thickness because condensation is less likely.

Seal all seams, butt joints, and termination points so no air will get into ends.

Some contractors install a water stop at intermediate points in the insulation. If there is a gap in the insulation in one section this disc prevents the migration of air and water past the point where it is installed. It is not good to use a twist tie on the insulation for this purpose.

Condensation will occur on the outside. In closed cell insulation the cells are not interconnected. The material is water resistant but not waterproof. The cells can become waterlogged over a long period of time.

Elastomeric is good for AC and refrigeration.

Polyolefin is good for hot water and cold water. Cellular glass is good for a buried or structural application.

Polyisocyanurate is good for ammonia applications.

Phenolic and melamine are not used much but are sometimes used for acoustic applications.

Fiberglass is good for hot applications but not for cold.  
Insulation can be purchased with pre-slit, pre-glued, peel-back construction. The bond is stronger than the material.  
Specify low VOC adhesives.  
Sometimes condensation forms at every hanger where insulation is compressed. At the hanger use a saddle plus slightly stiffer insulation.  
The elastomeric insulation with gray color has somewhat better sound reduction value.  
One product which is available is Al Clad. This is elastomeric with a jacket of plastic and aluminum film with an outer plastic coating to reduce emissivity.  
Elastomeric cladding is good for extreme temperature cycles. It is also resistant to acid and salt.

**CHARLESTON CHAPTER SPRING  
GOLF OUTING**



**FRIDAY, APRIL 11<sup>TH</sup>!!!!!!!**

**SIGN UP NOW, IT IS NOT TOO LATE!!!!!!!**

**CORPORATE/HONOR ROLL INVESTORS  
2007-2008:  
PLEASE CONSIDER A CORPORATE  
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**MEMBER NEWS**

Gene Adams passed away on March 30<sup>th</sup>. Gene was a great spirit in our Chapter although a member of another chapter he always donated to our chapter and helped out in anyway that he could. If everyone could remember him in their prayers for all that he has done for our industry

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**!!!GET INVOLVED!!!**

**Contact one of our Committee Chairs, or a Chapter Officer to see how YOU can make a difference!!**

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**BOARD OF GOVERNORS**

**BO NUTTING  
STEVE MARECK  
DENNIS KNIGHT**

**MARCH'S MEETING MINUTES**



Minutes from March Meeting:

**A. Chapter Officer Reports:**

1. President (P. Garces) – Welcome
2. Vice President (R. Turner) – Introduction of Speaker, Mr. Roger Schmidt
3. Secretary (P. Conroy) – Begin considering filling positions for next year.
4. Treasurer (L. Schweers) – Financial Report-
5. Region Report (Ira Poston) – No Report

**B. Chapter Chair Reports:**

1. Membership (C. Hipp) – No Report
2. Student Activities (C. McGartlin) – No Report
3. Chapter Programs (R. Turner) –No Report
4. Historian (D. Tomayko) – No report
5. Refrigeration (R. Turner) - No report.
6. Research (D. Knight) – No Report
7. TEGA (G. Brown) – No Report
8. Honors & Awards (B. Nutting) – No report

**C. Old Business: Nothing to report.**

**D. New Business: Nothing to report.**

**The Charleston Chapter**  
**Wall of Honor**

(\$100 or more individual donation)

**Much of our money comes in through individual donations so please give. We are supporting the Charleston Chapter Wall of Honor again this year.**

**Can we put your name here?**

**'07-'08 HONOR ROLL DONORS**

Dave Tomayko  
 Dr. Emad Afifi  
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**THANKS FOR YOUR SUPPORT  
OF ASHRAE AND ITS RESEARCH  
PROGRAMS!**

**CHARLESTON CHAPTER ANNUAL  
PROGRAMS 2007- 2008**

***September***

Tuesday, September 11<sup>th</sup>

Program Speaker- Edward Fronapfel, P.E.  
Crawl and Structural Wood Floor Design and Construction

***October***

Tuesday, October 9<sup>th</sup>

Chad Martin, P.E.  
Design of Geothermal Well Piping

**Philip R. Garcés**  
Systems Sales Engineer



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**November**

Tuesday, November 13<sup>th</sup>  
R. Mark Nunnely, P.E. ASHRAE Distinguished  
Lecturer  
Humidity Control for Commercial Buildings  
**Student Activities Emphasis Night!**

**December**

Tuesday, December 11<sup>th</sup>  
Bob Wegmann  
Ice Storage  
**Donor Recognition Night**

**January**

Tuesday, January 8<sup>th</sup>  
Dwight Landry  
Noise Control for Mechanical Equipment

**February**

Tuesday, February 19<sup>th</sup>  
National Engineers Week Banquet  
At the Citadel Alumni Center

**March**

Tuesday, March 11<sup>th</sup>  
Roger Schmidt  
Which Piping Insulation do I use?  
**Research Promotion Night!**

**April**

Tuesday, April 8<sup>th</sup>  
Dave Lall  
Spray Foam Properties and Envelope Design  
**Chapter History Night!**

**May**

Tuesday, May 13<sup>th</sup>  
Julian DeBulet  
School HVAC Design  
**Student Activities Emphasis Night!**