

NEXT MEETING:
JOINT ENGINEERS, 2-19
HOPE YOU CAN JOIN US

February 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

NO CHAPTER MEETING THIS MONTH!!!

**We will be attending the Charleston
Engineers Joint Council banquet on
February 19th**

At The Citadel Alumni Center

Banquet. 5:30 – 9:00 p.m.



**Cost: \$30.00 per
person**

**MEETING SPEAKER
Dr. Stephen Jarrett
Chief Technology Officer,
at Space and Naval
System Warfare Center,
Charleston**

**LECTURE TOPIC:
ENGINEERING INNOVATION**

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**Charleston Chapter
Website has Been Updated**

Check out your Chapter on the ASHRAE Website!
Go to ASHRAE Online 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!



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The President's Corner

Hello everyone.

This month we will not be having our regular monthly ASHRAE meeting at the Radisson Hotel, but will instead be taking part in the Joint Engineers Council meeting at the Citadel Alumni House Tuesday February 19th, 2008 from 5:30 pm to 9:00 pm. The speaker is Dr. Stephen Jarrett and he will be speaking on Engineering Innovation. The contact for this event is Allen R. Parker at 277-0516 or allenparker@tensarcorp.com. Our Engineering brethren will be attending this meeting coming from groups such as AFCEA, AICHE, ASCE, ASQ, ASME, CE Club, IEEE, NSPE, SAME to name a few. Let's have a good showing to represent ASHRAE. If I don't see you there, please mark your Calendars for the following months meeting in March. It should be a good one!

Sincerely,

Phil
ASHRAE PRESIDENT

CTT Corner
By: Gene Brown

Dwight Landry gave an excellent presentation on noise and vibration control in chillers.

The various tones must be considered in chiller noise. With outdoor chillers if there is no background noise the chiller noise is more noticeable. When the chiller starts it produces a large low frequency noise which rattles windows. Below 40 dBA there is little problem. Above 45 dBA, people notice the noise. At 50-65 dba there will be threats of community action. Above 70 dBA community action can be expected. A pure tone is more noticeable and objectionable than a mixture of frequencies.

The noise ordinance in Charleston includes a limit of 45-55 dBA at night and 65 dBA in the day.

The RC scale of noise measurement is more linear with respect to sound power.

The NC scale of noise is more forgiving of low frequency noise.

There are three methods of sound control:

1. Control the source whether the sound is structure borne or airborne.
2. Control the path: Put something between the source and the living area. This could be more wall panels.
3. Receiver control. This could be placing the individual in a room with sound control or a personnel enclosure.

Sound power is not the same as sound pressure. Specify sound pressure, not

sound power. Sound pressure at a particular distance determines what humans hear.

Equipment is rated on a free field. This is not the same as the location where the equipment will be installed. There are no obstructions or reflecting walls. 298 Hz is the fundamental tone of one chiller. A predominant tone is generated by a chiller. A chiller with a 300 Hz fundamental tone also has spikes of 600, 1200 and 2400.

One example given is that 48 dBA is OK with a broadband of frequencies but is very irritating at a single frequency. Source control might give 6-8 dBA reduction.

Direct path control might give 12-15 dBA reduction.

On second floor or above it is necessary to isolate equipment very well.

Enclosure won't do any good. Put equipment on isolators.

Acoustical design for air cooled chillers can include curtains around the chiller.

This may not be appropriate for areas subject to hurricanes.

An enclosure around a chiller with baffles in the top can give a reduction of 23 dba.

ASHRAE RESEARCH PROMOTION

ASHRAE '08: Reaching New Heights

ATLANTA – Major announcements at ASHRAE's 2008 Winter Meeting included free electronic distribution of the Advanced Energy Design Guide series, publication of the 2007 energy conservation standard from ASHRAE and IESNA, and signing of memorandums of understanding with the Brazil Green Building Council and the Building Owners and Managers Association.

More than 2,700 people attended the meeting, held Jan. 19-23, New York City. Held in conjunction with the meeting was the Air Conditioning, Heating, Refrigerating Exposition, which set a new attendance record with 39,298 registered visitors (excluding exhibitors). Records for a Northeast HVAC&R event also were set with total number of exhibitors of 1,885 and square footage of exhibit space of 363, 505. Centered on the theme *Reaching New Heights*, a nod to the skyscraper skyline of New York City, the ASHRAE meeting offered a technical program with more than 130 sessions, 21 educational courses and

social events. The meeting also featured more than 500 meetings of technical, standards and standing committees, developing guidance for the future of the industry and ASHRAE.

“ASHRAE hit new heights at this meeting in regard to driving the industry forward through our distribution of technical information, educational offerings and networking opportunities,” ASHRAE President Kent Peterson said. “Being surrounded by the thousands of buildings in New York City was a great reminder that ASHRAE and our industry must truly aim to reach new heights in creating high performing buildings. The accomplishments at this meeting certainly helped move us along the sustainability path.”

At the meeting, President Peterson debuted a new video that highlights how existing design and technology can be used in creating net-zero-energy buildings. The video and his state-of-the-Society address can be found at www.ashrae.org/peterson. “Since we last met in June, oil has hit the \$100-per-barrel milestone,” he said in his speech. “As you recall, we were concerned in 2004 when the price of oil roughly doubled in a year to \$55 per barrel. Rising

energy costs and the increased global awareness of the potential impact of climate change continues to drive home the message that low-energy, environmentally responsible, high-performance buildings are the future.”

Meeting highlights include the technical program, with its theme of *Reaching New Heights in Net-Zero Energy Design*, featuring more than 130 sessions with presentation of 59 papers. The most well-attended sessions dealt with net-zero-energy design, exergy, designing for mold and dehumidification avoidance and energy efficient datacom facilities.

Top best-selling books at the ASHRAE Bookstore included the 2007 version of Standard 90.1, the Handbook CD+, the Spanish Pocket Guide and the new *Advanced Energy Design Guide* for K-12 Schools.

More than 900 people attended the ASHRAE Learning Institute’s seven Professional Development Seminars and 14 short courses. The most popular courses dealt with health care, Standard 62.1 and natural ventilation.

ASHRAE, founded in 1894, is an international organization of some 50,000

persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education

CHARLESTON CHAPTER SPRING GOLF OUTING



The spring golf outing is already set for April 11th at Lake Marion, please mark your calendars now.

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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.

BOARD OF GOVERNORS

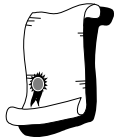
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STEVE MARECK
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Can we put your name here?

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NOVEMBER'S MEETING MINUTES



Minutes from November Meeting:

A. Chapter Officer Reports:

1. President (P. Garces) – Welcome
2. Vice President (R. Turner) – Introduction of Speaker, Mr. David Landry
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) – Highest Delinquency in region for dues, also highest new membership.
2. Student Activities (C. McGartlin) – Scheduling Savannah Meeting
3. Chapter Programs (R. Turner) - No speaker for Feb, Joint engineers Banquet
4. Historian (D. Tomayko) – No report
5. Refrigeration (R. Turner) - No report.
6. Research (D. Knight) – Update of chapter research.
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.

**THANKS FOR YOUR SUPPORT
OF ASHRAE AND ITS RESEARCH
PROGRAMS!**

**CHARLESTON CHAPTER ANNUAL
PROGRAMS 2007- 2008**

September

Tuesday, September 11th
Program Speaker- Edward Fronapfel, P.E.
Crawl and Structural Wood Floor Design and Construction

October

Tuesday, October 9th
Chad Martin, P.E.
Design of Geothermal Well Piping

November

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

December

Tuesday, December 11th
Bob Wegmann
Ice Storage
Donor Recognition Night

January

Tuesday, January 8th
Dwight Landry
Noise Control for Mechanical Equipment

February

Tuesday, February 19th
National Engineers Week Banquet
At the Citadel Alumni Center

March

Tuesday, March 11th
Jeff White
Which Piping Insulation do I use?
Research Promotion Night!

April

Tuesday, April 8th
Dave Lall
Spray Foam Properties and Envelope Design
Chapter History Night!

May

Tuesday, May 13th
Julian DeBulet
School HVAC Design
Student Activities Emphasis Night!