



# ASHRAE LOUISVILLE CHAPTER NEWS

American Society of Heating, Refrigeration and Air Conditioning Engineers  
Serving the commonwealth for 45 years.

## PRESIDENT

Joseph Nitzken, P.E.  
AAF International  
Ph: 502-637-0179  
Fax: 502-637-0676  
[jnitzken@aafintl.com](mailto:jnitzken@aafintl.com)

## PRESIDENT ELECT

Luke Powell  
Air Equipment Company  
Ph: 502-587-7349  
Fax: 502-587-7340  
[luke@airequipmentcompany.com](mailto:luke@airequipmentcompany.com)

## VICE PRESIDENT

Ray Beaufait, P.E.  
BCCLT, Inc.  
Ph: 502-633-1506  
Fax: 502-633-2222  
[Beaufait@bcclt.com](mailto:Beaufait@bcclt.com)

## SECRETARY

Open

## TREASURER

Julian Donahue, P.E.  
Louisville Water Company  
Ph: 502-569-3600, ext. 2422  
Fax: 502-596-0835  
[jdonahue@lwcky.com](mailto:jdonahue@lwcky.com)

## MEMBERSHIP

Tom Weber  
Louisville Medical Center, Inc.  
Ph: 502-584-4613  
Fax: 502-584-4003  
[tomlmc@bellsouth.net](mailto:tomlmc@bellsouth.net)

## RESEARCH

Edward A. Dusch, P.E.  
Louisville Medical Center, Inc.  
Ph: 502-584-6289  
Fax: 502-584-4003  
[edlmc@bellsouth.net](mailto:edlmc@bellsouth.net)

## CTTC & PROGRAMS

Luke Powell  
Air Equipment Company  
Ph: 502-587-7349  
Fax: 502-587-7340  
[luke@airequipmentcompany.com](mailto:luke@airequipmentcompany.com)

Ray Beaufait, P.E.  
BCCLT, Inc.  
Ph: 502-633-1506  
Fax: 502-633-2222  
[Beaufait@bcclt.com](mailto:Beaufait@bcclt.com)

## HISTORIAN

Bill Kerr, P.E.  
Rademaker Corporation  
Ph: (502) 267-9636  
Fax: (502) 267-1946  
[billk@radco.net](mailto:billk@radco.net)

## MERV FILTER EFFICIENCY.....SIMPLIFIED

**Monday, September 10, 2007  
Lunch Meeting**

### **ABSTRACT:**

With the large number and types of filters available on the market, we are getting a number of questions regarding the proper selection and interpretation of ASHRAE standards 52.1 and 52.2. This talk will cover a comparison of the two standards, testing methods, filter types and their specify applications.

### **SPEAKER:**

Since 2003, Mark has been a member of ASHRAE and currently a voting member of Technical Committee 2.4, "Particulate Air Contaminants and Particulate Contaminant Removal Equipment", Technical Committee 9.11 "Clean Spaces" and is Vice-Chairman of the TC 2.4 Research Subcommittee. He is a corresponding member of SSPC 52.2, the body responsible for the continued maintenance of ASHRAE standard 52.2. He is also a member of the Institute of Environmental Sciences and Technology (IEST) where he has been involved in the writing of the following Recommend Practices: RP-CC-001.4, RP-CC-007.1, and RP-CC-034.2. For the past 21 years, Mark has been with AAF International (American Air Filter) in a variety of engineering and inside sales functions and is currently a Product Manager for AAF's high purity and gas phase product lines. During his tenure with AAF Mark has been involved with all aspects of filter design and construction. Mark is a graduate of the University of Louisville's Speed Scientific School where he received a Master of Engineering degree with Specialization in Chemical Engineering.

### **MEETING LOCATION:**

**The University of Louisville Alumni Club from 11:30 until 1:00 pm**

The cost for attending is \$20.00, cash or check (made payable to ASHRAE). Students and university faculty may attend for \$5.00. Due to our current arrangements with the University Club, reservations are not cancelable after 5:00 PM Thursday prior to the meeting date. We want to encourage attendance, but emphasize the importance of notifying the treasurer if plans to attend have changed. Your consideration will help avoid meeting fee increases to offset losses associated with extra meal preparation.

It is extremely important to make your reservation no later than Wednesday, September 5th with Julian Donahue by simply using one of the following three options: 1) Calling (502) 569-3600 x 2422 2) E-mail [jdonahue@lwcky.com](mailto:jdonahue@lwcky.com).

## NEWSLETTER EDITOR

Hope Gibson  
Harshaw Trane  
Ph: 502-499-7000  
Fax: 502-499-7870  
[hqgibson@trane.com](mailto:hqgibson@trane.com)

## STUDENT ACTIVITIES

Tim Robertson  
Johnson Controls Inc.  
Ph: 502-671-7338  
Fax: 502-671-7386  
[Timothy.S.Robertson@jci.com](mailto:Timothy.S.Robertson@jci.com)

Tom Nicolas

Ameresco  
Ph: 502-420-1999  
Fax: 502-420-1988  
[tnicolas@ameresco.com](mailto:tnicolas@ameresco.com)

## BOARD OF GOVERNORS

Ray Beaufait, P.E.  
BCCLT, Inc.  
Ph: 502-633-1506  
Fax: 502-633-2222  
[Beaufait@bcclt.com](mailto:Beaufait@bcclt.com)

Chip Summers, P.E.  
Air Equipment Company  
Ph: 502-587-7349  
Fax: 502-587-7340  
[chip@airequipmentcompany.com](mailto:chip@airequipmentcompany.com)

## HONORS & AWARDS

Matt Hargan, P.E.  
Hargan Engineering  
Ph: 502-452-2078  
Fax: 502-452-2078  
[mhargan@aol.com](mailto:mhargan@aol.com)

## CRC DELEGATE

Ray Beaufait, P.E.  
BCCLT, Inc.  
Ph: 502-633-1506  
Fax: 502-633-2222  
[Beaufait@bcclt.com](mailto:Beaufait@bcclt.com)

## CRC ALTERNATE

Joseph Nitzken, P.E.  
AAF International  
Ph: 502-637-0179  
Fax: 502-637-0676  
[jnitzken@aafintl.com](mailto:jnitzken@aafintl.com)

## CHAPTER WEBMASTER

Ray Beaufait, P.E.  
BCCLT, Inc.  
Ph: 502-633-1506  
Fax: 502-633-2222  
[Beaufait@bcclt.com](mailto:Beaufait@bcclt.com)

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VISIT THE LOUISVILLE CHAPTER ON THE WEB!  
<http://www.ashraeregion7.org/louisville/index.html>

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### **UPCOMING EVENTS/PROGRAMS:**

Below is a list of upcoming meetings and events for 2007-2008. Please mark your calendars:

October 1 – Dinner meeting at the Alumni Club

November 5 – Lunch meeting at the Alumni Club

December 1 – Christmas Party, location TBA

January 7 – Lunch meeting at the Alumni Club

February 4 – Dinner meeting at the Alumni Club

March 3 – Dinner meeting at the U of L Vogt building, Student Presentations, Joint meeting with ASME

April 7 – Dinner meeting at the Alumni Club

May 12 – Golf Outing, location TBA



Congratulations to Bill Kerr on our chapter's award for the Historian Display at the CRC. Our chapter also received recognition for the CD you assembled and they are passing it around Region 7 as a great idea from Louisville.

### **MESSAGE FROM THE CHAPTER PRESIDENT**

By Joe Nitzken

We have begun our 2007 – 2008 ASHRAE year. Last year Louisville hosted 2 Web casts, 9 speaker programs, a Christmas party where Elvis sang, and a Golf outing with over 100 players. Attendance at meetings remained strong with Professional Development Hour certificates presented at each technical session. The continuing education credits are now particularly important to our engineer members.

On July 1<sup>st</sup> Kentucky law required continuing education for engineers. The draft regulation calls for engineers to verify compliance with the continuing education requirements on their license renewal form. This regulation requires 30 hours of continuing education in the two calendar years preceding the June 30<sup>th</sup> renewal. The types of efforts that earn "Continuing Professional Development" (CPD) for the state of Kentucky can be found in 201 KAR 18:192. Section 4.

I have discussed the quality of our ASHRAE programs with the Executive Director for the State of Kentucky, and the quality of our programs is appropriate for CPD credit. Our Historian, Bill Kerr, has been collecting all presentations throughout the year as well as newsletters, articles and chapter activities. CD's are available to all members and they can be used with the certificates to validate material in the event you are audited. This is just one of the values to being a member of our ASHRAE group.

Regarding our Research efforts, the Louisville Chapter contributed \$12,445 to ASHRAE Research this past year. Our contribution combined with others from Region 7 amassed \$104,000. Did we directly get anything from that money? Yes, Region 7 received projects and benefits that approached \$600,000. This research directly involves people, companies, and students in our region.

Globally ASHRAE is leading energy efficient use of resources. That now extends to the conservation of water. Our society is simply taking a recognized lead in the planning for future "Sustainability". ASHRAE Standards are specified worldwide and this society has the reputation for technical excellence. The technical excellence essentially comes from all of our members and to that I welcome your participation on committees and your presence at meetings. Your participation elevates our Chapter quality.

This year our chapter has offered Dr. Ellen Brehob of U of L, to pay for the first year's membership of up to 40 of her students. This is important as Speed School brings back HVAC classes. Of course we will continue to offer our cash scholarship awards to Elementary, Middle, and College student projects.

Please come and participate in our Louisville ASHRAE Chapter efforts to better our community and serve our membership.



**Emil C. Durbin**

## **59 Years of HVAC in an afternoon with Emil C. Durbin**

**By  
William Kerr – Chapter Historian**

I recently had the privilege of interviewing Emil C Durbin. Emil is 77 years old and has been working in the HVAC industry for 59 years. He began in HVAC working on refrigeration equipment in the Navy in 1948. He has worked for Ward Refrigeration & Engineering, Clark Service/Mechanical, and is now working as a designer with Hussung Mechanical Contractors, Inc. Emil holds the following licenses: Master Plumber, HVAC License, Boiler License, and is NEBB Certified.

Emil feels proudest about knowing that “many people can walk into a mechanical room knowing that Emil Durbin did this room. Whatever is in that room, pumps, centrifugals, or whatever, you can service everything, you can get to every valve, you’ve got room to walk, and everything is correct. And it looks beautiful!”

When Emil began his career in the 1950’s, the air conditioning industry was still in its childhood. Emil explained that most of the air conditioning systems were built up on site. The HVAC engineer would design systems by select components to make up the refrigeration system. He would select the compressor, coils, and fan. The contractor would assemble the components on site. The engineer would be on the project site quite frequently. In fact, the contractor would work side-by-side to start up and get the system running. There were no faxes, computers, email, or even phones at the project sites. The construction paperwork all flowed through the US Mail. The pace of the projects was much slower then today.

Emil said it was a tough and challenging time. Quality was a problem because pipe fitters had to change techniques for quality control. “If your pipe leaked a little bit on water, you had a drip. If the pipe leaked a little bit of refrigeration, the system didn’t work.” It was a challenge for engineers as well, since there was a lack of quality technical documentation for proper air conditioning refrigeration design. Since engineers and contractors were both challenged and spent a lot of time together, there was a real sense of teamwork developed.

Air conditioning in buildings in Louisville was at its infancy. The Ohio Theater was the first theater in Louisville to put in air conditioning according to Emil. He said they had a sign out front that said “Come In, It’s Cool inside.” This “took a lot of business away from the other theaters, so other theaters then added air-conditioning. It was a big boom for the air conditioning industry” as other business soon added air conditioning.

According to Emil, the 1960’s yielded the packaged air-handling units with refrigeration. Early units had hermetic compressor with the refrigeration done at the factory through the evaporator back to a water-cooled condenser. Air condition became a matter of “unloading them, setting them in place, bringing water to them, and plugging them in. That was a big change in the early 60’s.” The cost for air conditioning was significantly reduced with the package units.

Emil feels that the major change he saw in the industry in the 1970’s and early 1980’s was advent of more zoning. This included the use of dual duct systems and reheats in the building ductwork. Other technology changes included packaged rooftop air conditioning units, VFDs, and controls. The packaged rooftop air condition units allowed building owners to free up valuable square footage in the buildings. VFDs and controls allowed for more zoning, better comfort, and more energy efficient systems.

Emil says he has developed close friends in the consulting engineering community and he is concerned with the direction it is going. “Specifications have gotten bigger, there are fewer meaningful drawings, and the designs are more ambiguous. Specification used to tell us what manufacturer’s parts they wanted, now we are supposed to install the job from them.” He said he used to be able to take drawings and be able to prefabricate the pipe from them. He spoke of a recent job in which the HVAC specifications were about two inches thick. Then nine addendums came out on the project that added another five inches of pages.

He sees more business headed to the design build method of construction. Many contractors have employed registered engineers on staff. I asked Emil if he had any advice to the HVAC consulting engineering community. After a few minutes pause, he said “many of the people I work with do not see the problems I see because they have not seen a good set of drawings. In their lifetime, they haven’t seen a good set of drawings. My advice is that they need to be more thorough in putting on drawings what they really want.”

Emil added , "Do you know how many houses were designed by an architect 40 years ago? Almost every one. How many houses today do you think are designed by an architectural firm? Why do you think that happened?"