



The Dewpoint

January Issue

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Central Florida Chapter
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Central Florida Chapter of ASHRAE
Wade Conlan Vice-President
2601 Westhall Lane Maitland, FL 32751

January Program

LEED From an Owner's Perspective

Thursday January 10th, 2008
Dubsdread Historic Banquet Hall
549 Par Street
Orlando, FL
(407) 650-0100

*For reservations, please go to the
Central Florida Website www.ashrae-cfl.org
and pre-pay or register to pay at
the door. Cost is \$25 in advance, \$30
for non-registered at the door.
Social 6:00 pm, Dinner 6:45pm,
Speaker's Presentation 7:00pm*

Our Speaker:

Mr. Spencer has been with the Orlando Utilities Commission for over 23 years and the Vice President of the OUCustomer Connection since 1998. He has 28 years of engineering, project management, contract development, power generation facilities management, and industrial sales experience. He is knowledgeable about electric utilities infrastructure, customer operations, customer service, and electric industry deregulation/competitive issues. Actively involved in the community, he is currently a Board Chair of the Coalition for the Homeless of Central Florida. Past Board Member of the Greater Orlando Chamber of Commerce Leadership Orlando Alumni and Orlando/Orange County Convention & Visitors Bureau. He graduated from Kansas State University in 1978 with a BS in Mechanical Engineering and has been a Registered Professional Engineer in the State of Florida since 1988. He enjoys racquetball, water skiing and playing golf with Laurie, his wife of 27 years.

Upcoming Events

Thursday, December 13th
**Strategies for Analyzing
Products**

Speaker: James Kiriazes

Thursday, January 10th
**LEED From an Owner's
Perspective**

Speaker: Doug Spencer

January 19th -23rd
2008 Winter Meeting

@ New York City

Thursday, February 7th
**UFADS - Under Floor Air
Distribution Systems**

Speaker: Gary Smith

Thursday, March 13th
6th Annual Shrimp Boil

@ Winter Park Farmers Market

Thursday, April 10th
What's New in Energy Savings

Speaker: Larry Maxwell

Friday, April 18th
Spring Golf Tournament

@ Sanctuary Ridge, Clermont

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President's Message

Mike Dillard

Chapter President

Happy New Year!!!

If you're like me, I'm in complete disbelief that 2008 is already here. To me, it seems 2007 only lasted three or four months!

January marks the second phase of our ASHRAE 2007/08 meeting series and

we have some exciting things planned for 2008! I'm thrilled to announce that in May, Society President Kent Peterson will be our speaker! This is the second year in a row that our chapter has hosted the society president for an important presentation. In May of 2007, Terry Townsend gave an important presentation on Carrying the Fire – The ASHRAE Promise. That event took place at the Orlando Museum of Art and included participation from BOMA, NAIOP and USGBC. The Venue for Mr. Peterson's visit in May isn't secured yet so stay tuned for more information as this event comes together. We do know that it will be held on May 28th instead of our regular meeting date. We hope to secure the Orlando Museum of Art once again. You certainly won't want to miss this event and seating will be limited. So, mark your calendars for May 28th and monitor www.ASHRAE-CFL.org for updates.

Our annual Shrimp Boil (and weird, flowery shirt party) is scheduled for March 13th at the Winter Park Farmer's

Market! You won't want to miss the incredible food (tiny, tasty crustaceans, jambalaya and assorted sundries). I'll be throwing beer, hurricanes and margaritas and soft drinks around again (bartending) and we'll have live music as always. It's a great event and we can't wait to see you all there!

Our Spring Golf Outing and Foot-Wedge Tournament is planned for April. We are still awaiting a date confirmation and will pass that along as soon as the date is secured. Polish your clubs and show up with your wallet ready to support Research Promotion!!

January's meeting is on the 10th at Dubsdread and will feature Doug Spencer, Vice President of Orlando Utilities Commission. He will be speaking on LEED from an owner's perspective. We look forward to seeing you there!

Finally, as we start the new year, I want express my appreciation to all who volunteer to make our chapter successful. It's heavy lifting, especially with the pace of business and personal commitments. But, I'll bet each one of the volunteers that contribute as board members, chairpersons or committee members would tell you that the rewards are worth the effort. A special thanks goes to each of them for the time, talent and energy they bring to the ASHRAE Central Florida.

In closing, I encourage you attend the ASHRAE meetings, support our initiatives and get involved in chapter events! It's your chapter. You can make a difference!

Don't make it through 2008...MAKE 2008!

Mike Dillard

President – ASHRAE Central Florida

Future Programs

Wesley Patterson

Program Chairman (President-Elect)

Shrimp Boil – A Great Tradition Continues...

Members, mark your calendar for the Sixth Annual Shrimp Boil, which will be hosted on Thursday March 13th at the Winter Park Farmer's Market. This is great opportunity to come out and have a blast will fellow professionals of the Central Florida HVAC industry while enjoying great Cajun cuisine and live entertainment!

Your ideas are always welcome...

If you have any suggestions regarding meetings or technical seminars, please contact Wesley Patterson (Programs Chair and President-Elect).

Membership

Amy Pastor

Membership Promotion

Update

Our current membership is a total of 364 people, including 338 active members! Great job to those of you who have kept up with your yearly dues! Right now, only **24 people** are in a grace period. If your membership is in a grace period, you will be hearing from me so that we can get you up to date on your society and chapter dues for the upcoming year!

The Membership Promotion committee has begun our calling campaign so that we could increase membership. Most (hopefully ALL) of you should have received a call reminding you about the monthly meeting in December. Expect that call again along with our usual monthly email reminder. Make sure to bring a colleague or a friend to the January meeting!

Annual Dues/Chapter Dues

Even though we currently have 338 active members, please be sure to stay on top of your membership. With the new rolling enrollment, you may forget to pay your yearly dues! It is also important that you pay your chapter dues along with the society dues. **Half** of our chapter members have not paid the chapter dues to Central Florida.

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Upcoming Events

Wednesday, May 7th
ASHRAE/ASPE Product Show
 Central Florida Fairgrounds

Wednesday, May 28th
End of Year meeting
Orlando Museum of Art
 Kent Peterson

June 21st – 25th
2008 Annual Meeting
 Salt Lake City, Utah

August 7th-9th
2008 Region XII CRC
 Argentina

When renewing your membership online or through the mail, please be sure to check that you have added the \$25 for the Central Florida Chapter dues. Since this option is missed by many members, a committee has been set up to help ensure that all chapter dues are paid to Central Florida.

Membership-Changes and Status

There are a lot of opportunities for general members to upgrade their membership. Please be sure to check your membership status. If you have changed employers, moved and/or are unsure of your current membership status, please call Society at 800-5AS-HRAE (527-4723) or contact Amy Pastor at 407-580-2088 or apastor@x-nth.com.

Student Activities

Megan Tosh

Student Activities Chair

2008 Will Be Great!

As the Spring semester gets underway, our UCF Senior Design teams are working on their designs for the ASHRAE International Design Competition. This year’s project is a recreational center in Nashville, Tennessee. The building is 60,000ft² and includes a gym, offices, locker rooms and an indoor pool. Both system selection teams and the system design team are making good progress – UCF and CFL ASHRAE should have some strong contenders in this year’s competition. Look out for Student Activities Night in February when the students will present some of their work at the monthly meeting.

ASHRAE at UCF had a busy fall semester and they have even more stuff planned for the Spring. Plans include two socials, one in January and a second in March. Additionally, ASHRAE will be participating in the E-Week activities taking place on campus. Keep an eye out for our new website that will host a full calendar of our events!

Highlighting the beginning of the Spring Semester for ASHRAE at UCF

will be the Winter Meeting in New York City. This year we have *seven* students attending the meeting and the AHR Expo. The students will participate in the student program, take a technical tour of the New York Times building and explore the AHR Expo. Student Activities thanks CFL ASHRAE and all the members for your support that helps make these events possible.

CTTC

Chapter Technology Transfer Committee

Article: “Supermarket Refrigeration System With Completely Secondary Loops”

By: Vasile Minea

Review:

Typical supermarkets utilize multiplex refrigeration systems that account for 50% of the total energy consumption. In addition to the energy impact, another downside to a multiplex system is the amount of refrigerant required. The distance between the system components in the mechanical room and the evaporators in the freezer display cases or produce sections in the supermarket requires lots of refrigerant. The long refrigeration piping, valves and joints can leave the system vulnerable to leaks leading to as much as 15%-30% of annual refrigerant loss.

By incorporating the use of a secondary fluid loops with heat recovery and passive heat exchangers these systems can minimize energy used for refrigeration. The use of a secondary loop replaces the need for refrigerant on the freezing or refrigerating side of the system, keeping the working refrigerant inside the mechanical space. In a low temperature application, potassium formate, a non-toxic fluid with a large heat capacity and low viscosity, exchanges heat inside the supermarket display cases. Performance throughout the year showed to be without temperature fluctuations suggesting

stable and normal thermodynamic cycles. When compared to two separate multiplex systems the secondary loop system’s daily average power demand was about 14% and 20% less. The secondary loop systems also reduced the working refrigerant by 61% and carbon emissions by about 80%.

For more information about medium temperature systems, heat recovery/heat rejection loops, and yearly performance see this article in the September 2007 issue of the ASHRAE Journal.

Article: “Heat Recovery In Industrial Refrigeration”

By: Douglas T. Reindl and Todd B. Jekel

Review:

In industrial ammonia refrigeration systems, the waste heat can be applied to various systems such as under floor heating for freezers, domestic water heating, and boiler makeup water heating, to name a few. It is important to first identify where the waste heat can be taken from, such as an oil cooling/heat rejection for screw compressors. As oil is injected in a screw compressor it lubricates and moves throughout, absorbing heat from the compression. The leaving oil temperature is at or close to the refrigerants discharge temperature and then the oil is cooled through a heat exchanger returning to its supply temperature. Instead of using an air to cool the oil, the heat can be transferred through another medium and used for another purpose. Some advantages by recovering heat from oil cooled heat exchangers in screw compressors makes oil cooling completely independent of system pressures resulting in easier startup. It also allows the ability to use plate and frame heat exchangers with out worrying about refrigerant-side pressure drops.

For more information about heat recovery from oil cooling heat

exchangers and screw compressor discharge gas see this article in the August 2007 issue of the ASHRAE Journal.

Review of Addendum ac to ASHRAE 90.1-2004

By: John Fabian

Addendum “ac” to ASHRAE 90.1-2004 refers to fan power limitations as described in Section 6.5.3.1. This section determines the maximum ratio of fan power to airflow for which the system can have for HVAC systems with a fan motor nameplate greater than five horsepower. One issue with the old standard is it did not account for hospitals and laboratories which use flow control devices to maintain designed pressure relationships between spaces for health and safety purposes. In practice, the previous calculations for the maximum fan power limitations can be exceeded due to the added pressure drops across exhaust valves, HEPA filters, etc. Previously the allowable fan system power was calculated using the CFM, a pressure credit and a relief fan credit. The pressure relief credit is given to make up for the fan energy needed to overcome pressure drops. The old calculation only accounted for pressure drop across the unit filter and/or the pressure drop across a heat recovery device. The fan power limitation pressure drop adjustment now includes not only for heat recovery devices but also different adjustments for filters according to their MERV ratings. Other credits are given for flow control devices for return/exhaust air, sound attenuation sections, gas phase-air cleaners, and fully ducted exhaust/return systems.

Also, Section 6.5.3.2 discusses the fan motor selection. When choosing fan motors, only the next available motor greater than the brake horsepower required can be used. There are exceptions that allow the next higher up motor size to be used. The Standard

states “For fans 6 bhp and larger, where the first available motor larger than the bhp has a nameplate rating with 30% of the bhp, the next larger nameplate motor size may be selected.”. Essentially, only a 30% cushion is allowed in selecting the motor hp for your systems bhp. There is also an exception for motors less than 6 bhp.

For more information log on to <http://www.ashrae.org/technology> to access the ASHRAE Standards Addenda.

Dewpoint-Newsletter Notes

Leo Rocha
Newsletter Editor

Publication Deadlines

The *Dewpoint* is published monthly – seven days before the monthly meeting. Please submit articles to be included in advance of the following deadline dates:

Meeting Date	Article Deadline
Thurs Dec-13	Fri Nov-30
Thurs Jan-10	Fri Dec-28
Thurs Feb-7	Fri Jan -25
Thurs Mar-13	Fri Feb-29
Thurs Apr-10	Fri Mar-28
Thurs May-8	Fri Apr-25

Employment and Education

If your company is looking for individuals with particular skills to fill a position at your firm, or if your company is offering professional technical, continuing education or other learning opportunities of interest to our membership, the Central Florida Chapter of ASHRAE will publish your education/employment announcement at no charge.

Spring 2008 Golf Outing

Firouz Keikavousi
Golf Tournament Chair

Invitations

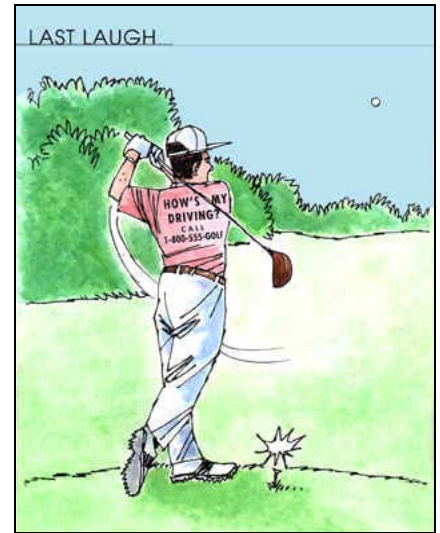
Please join the Central Florida Chapter of ASHRAE on Friday April 18th for this traditional event.

Location

The location of the Spring Golf Outing will be announced on the January 2008 Dewpoint Newsletter.

Entry Form

For more information on the Spring Golf Outing, please contact Firouz Keikavousi at: 407-303-1141 (Office) or Firouz.Keikavousi@flhosp.org



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Chapter Leadership

President: **Mike Dillard**
(CRC Delegate) (407) 857-3510
mdillard@msifla.com

President Elect: **Wesley Patterson**
Programs: (407) 444-2261
Lawrence.w.Patterson@jci.com

Vice President: **Wade Conlan, PE**
(407) 660-0088
wconlan@x-nth.com

Secretary: **Leo Rocha**
(407) 321-8100
Leo.rocha@harperlimbach.com

Treasurer: **Richard King**
(407) 246-1688
rking@peifla.com

Past President:
& Governor **Tim Citek**
(407) 671-3739
tcitek@cfl.rr.com

Governors: **Bill Dillard**
(407) 857-3510
bdillard@msifla.com

Todd Moore, PE
(407) 551-1124
Toddmoore@trane.com

Governors: **Michael Sheerin, PE**
(Cont'd) (407) 841-9050
michael.sheerin@tlc-eng.com

Firouz Keikavousi
(407) 303-1141
firouzk@gmail.com

Membership
Promotion: **Amy Pastor**
(407) 660-0088
apastor@x-nth.com

Student Activities: **Megan Tosh**
(407) 581-6940
mtosh@stanweaver.com

UCF Initiative: **Jason Alphonso**
(407) 206-5816
jalphonso@msifla.com

YEA Chair: **Kevin Kelly**
(407) 291-0961
kkelly@tombarrow.com

Historian **Tim Citek**
(407) 671-3739
tcitek@cfl.rr.com

Welcome
Committee: **George Nulanz**
(407) 999-8990
gnulanz@cosentini-fl.com

Resource
Promotion: **John Miller**
(407) 246-1688
jmiller@peifla.com

CTTC **Brian Mirus**
(407) 660-0088
bmirus@x-nth.com

Calling
Committee: **Mike Dillard**
(407) 857-3510
mdillard@msifla.com

Awards: **Todd Moore, PE**
(407) 551-1124
Toddmoore@trane.com

Newsletter Editor: **Leo Rocha**
(407) 321-8100
Leo.rocha@harperlimbach.com

Chapter
Website: **Wade Conlan, PE**
(407) 660-0088
wconlan@x-nth.com

Product Directory: **Tom Edwards**
(407) 581-6940
tedwards@stanweaver.com

Golf
Tournaments: **Firouz Keikavousi**
(407) 303-1141
firouzk@gmail.com

Central Florida Chapter of ASHRAE
Wade Conlan Vice-President
2601 Westhall Lane Maitland, FL 32751

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ADDRESS CORRECTION REQUESTED

