



# The THERM

Fort Worth Chapter of ASHRAE Newsletter

Chapter Meeting

Wednesday

February 15, 2006

Petroleum Club

BOG.....10:45 A.M.  
Lunch.....11:30 P.M.  
Meeting... .12:00 P.M.

"This year's Chapter Regional Conference will be held in Cancun. The conference is open to everybody and I'm sure it will be a well organized and festive. CRC always has excellent technical workshops; as well as, informative business meetings."

### **Individual Highlights:**

Pres. Message	1
B.O.G. Meeting Minutes	2
Chap. Meeting Minutes	3
Programs	3
Treasurers Report	4
Announcements	4
Editor's Notes	4
Officers Listing	5
ASHRAE News	5

[www.ashrae-ftw.org](http://www.ashrae-ftw.org)

February 2006

Volume XLVIII, Issue 7

## President's Message



Hello Ft. Worth Chapter of ASHRAE members!  
We are one week into February and I still haven't seen anything that resembles winter weather. I'm a Texan and I like warm weather but this is ridiculous. I missed Punxsutawney Phil's appearance on Groundhog Day but I'm guessing that not very many people in Texas are concerned about another 6 weeks of winter since we are still having high temps in the 60's. It's a great winter to be a house painter....no rain and warm weather.

Our January program focused on indoor air quality and filtration. Mr. Muller's presentation provided very valuable guidelines on the economic and design issues involved in choosing filtration systems. We also had the honor of presenting Mr. Richard Skipper with his Life Member certificate. I would like to extend the chapter's appreciation to Richard for his dedication and service to the chapter.

Thanks again to Carter & Burgess for providing a conference room for our meeting. The room worked well and the barbeque from Red, Hot and Blue was great.

This year's Chapter Regional Conference will be held in Cancun. The conference is open to everybody and I'm sure it will be a well organized and festive. CRC always has excellent technical workshops; as well as, informative business meetings. I encourage everyone to consider making the trip this year and take part in the experience of CRC. Rooms are filling up fast so make your reservations quickly. Contact me if need hotel information.

I hope to see everyone at the meeting this month. This month's topic is on refrigeration and should be very informative. Please remember to RSVP to me by the **13<sup>th</sup>** at [johnm@texasairsystems.com](mailto:johnm@texasairsystems.com).

Everyone is encouraged to visit the Ft. Worth Chapter website at [http://www.ashrae-ftw.org/](http://www.ashrae-ftw.org) for a variety of useful information such as current and past newsletters, monthly meeting schedule and links to other chapters.

Sincerely,  
John Maryak, E.I.T.  
Chapter President

### **February Program Speaker:** Dr. Robert Bittle, Texas Christian University

**"TWO-PHASE REFRIGERANT FLOW IN SMALL-BORE CAPILLARY TUBES"** Robert Bittle is an Associate Professor of Engineering at TCU and has been a member of the Department since 1994. He received his B.S. degree in Mechanical Engineering from

Continued from Page One

Oklahoma State University in 1980, a Master's degree in Mechanical Engineering from the Purdue University in 1983, and a Ph.D. in Mechanical Engineering from Iowa State University. From 1983 and 1990, he worked for General Electric Aircraft Engines in Cincinnati, Ohio as a turbine cooling systems engineer.

## Board of Governors Meeting Minutes

January 18, 2006

Meeting Attendees:

John Maryak, Sid Ellis, David James, Cody Pace, D.W. Gipson, W.O. Kelly, Jay Martin, Don Hardin, & Richard Long

Meeting called to order 10:45 A.M.

- John Maryak, chapter President welcomed everyone in attendance
- Reports:
  - President-Elect: Sid Ellis reported he will attend ASHRAE Region VIII President-Elect training. Sid also said he had someone to sew the awards on the new awards banner. W.O. Kelly made a motion to allow Sid Ellis to pay up to \$100.00 dollars to have the awards sewed on the new awards banner. The Cody Pace seconded the motion, and the motion was carried by unanimous vote of the Board of Governors present.
  - Secretary: No Report
  - Treasurer: David James reported the bank balance at \$3,094.28 with all bills paid.
  - Board of Governors: No Report
  - Committee Chairs:
    - Membership Promotion: No Report
    - Student Activities: No Report
    - Chapter Technology Transfer: Jay Martin reported all the programs are lined up for the rest of the year. The April meeting will be a plant tour.
    - Research Promotion: Cody Pace reported he is working on the annual golf and sporting clays tournaments
    - Refrigeration: No Report
    - Honors and Awards: No Report
    - Newsletter: No Report
    - Webmaster: No Report
    - Historian: No Report
    - Special Events: W.O. Kelly reported that he has reserved the 40<sup>th</sup> floor of the Petroleum Club for the annual Christmas party. The date is set for December 2, 2006. W.O. is finding someone to provide entertainment after dinner meal.
- Old business:
  - The Fort Worth ASHRAE roster will be sent out by the end of January. All rosters will be sent to members via email only.
- New business:
  - John Maryak and Sid Ellis will be attending the Region VIII Strategic Planning Session on Friday January 27<sup>th</sup> in Dallas, Texas. Sid Ellis will also be attending the President-Elect training on Saturday January 28<sup>th</sup>.
- Meeting adjourned at 11:15 A.M.



## Chapter Meeting Minutes

January 18, 2006



Meeting called to order 12:05 P.M.

- Mr. John Maryak, chapter President presiding. John welcomed everyone with 46 members and 6 guests present.
- Members made self-introductions.
- John Maryak introduced our guest.
- W.O. Kelly made a motion to approve the minutes for the December Chapter meeting as they were printed in the Therm. Buddy Pace seconded the motion, and the motion was carried by unanimous vote of the members present.
- Jay Martin introduced our guest speaker Mr. Christopher O. Muller, Purafil, Inc.
- The program was presented by Mr. Christopher Muller. Mr. Muller gave a presentation on "ACHIEVING YOUR INDOOR AIR QUALITY GOALS". Mr. Muller explained there are six main classes of gaseous contaminants which are routinely described in automotive exhaust Aldehydes, Carbon Monoxide, Hydrocarbons, Oxides of Nitrogen, Oxides of Sulfur, Organic Acids, and Particulates. Mr. Muller stated in chemical contaminate control, there are two main processes that occur, adsorption and chemisorption. Inclosing Mr. Muller showed examples of the effects on gas-phase filters at different humidity levels.
- Buddy Pace presented Richard Skipper with the ASHRAE life member award.
- Announcements:
  - The Region VIII dinner in Chicago will be held Monday January 23, 2006
  - John Maryak and Sid Ellis will be attending the Region VIII Strategic Planning Session on Friday January 27<sup>th</sup> in Dallas, Texas. Sid Ellis will also be attending the President-Elect training on Saturday January 28<sup>th</sup>.
- Old business:
  - The roster is finished and will be sent out at the end of January. The roster will only be sent out by email.
- New business:
  - No new business was discussed
- Meeting adjourned at 12:55 P.M.

## Programs Committee

*Jay Martin*

The capillary tube is still the most common expansion device used in household refrigerators and small air-conditioning systems operating on a vapor-compression cycle. Because of its low cost and operational reliability, it will remain so into the foreseeable future.

The latest capillary tube design tools and procedures are contained in the 2002 Refrigeration Handbook, Chapter 45. This work is based on research funded by ASHRAE over the past 15 years. More recent research has been focused in two areas: (1) understanding the trigger for the flash point where the refrigerant transitions from a liquid flow to a liquid-vapor two-phase flow, and (2) a mathematical description of two-phase viscosity, which governs predicted pressure drop through the capillary tube.

The lack of a complete understanding of these two phenomena is obstructing progress



Program Committee Continued from Page 3

toward a larger goal of a first-principles capillary tube flow model. Even in the most comprehensive capillary tube flow models, predicted flow rates can differ from actual measurements by as much as 25%. This error directly impacts the prediction of overall refrigerator system performance, which in turn impacts the engineering design process.

## Announcements

We have several of our own members that will be one year older during the month of February. Give them a call and wish them a happy birthday.

Month	Day	Name
2	1	Philip Farco
2	3	Armando Quincoses
2	4	Jack Osborne
2	6	Michael Cisco
2	7	Bob McAlister
2	8	Tom Carlisle
2	8	Bryan Nekoba
2	9	Scott Williams
2	9	Amit Rajmane
2	11	Justin Baldwin
2	18	Tracie Bishop
2	21	Bozie Wells
2	22	Marcos Braz
2	23	Gordon Pritchard

## Treasurer's Report

*David James*



Meeting Information:

Date of Meeting:	1/18/2006
Members	46
Guests	6
<b>Total:</b>	<b>52</b>

Financial Data:

Starting Balance:	<b>\$6,524.76</b>
Deposits:	
Luncheon Receipts	\$1,000.00
Christmas Party	\$ 510.00
Interest on Checking	\$ 0.51
<b>Subtotal</b>	<b>\$1,510.51</b>

Payments:

Regional VIII Fund	\$ 822.00
John Rhodes	\$2,516.73
Red Hot & Blue	\$ 655.55
Buddy Pace	\$ 100.00
<b>Subtotal</b>	<b>\$4,094.28</b>

**New Balance as of 1/18/06                      \$3,940.99**



Above, Buddy Pace presenting Richard Skipper the ASHRAE life member award.

## Editor's Note

*Sid Ellis*

If anyone in the Chapter has information which they would like to have included in the Therm, please contact me at (972)206-2590 or email me at [sellis@enviromaticsystems.com](mailto:sellis@enviromaticsystems.com). The information should pertain to the Chapter, its members, Region VIII or Society.

RSVP for this month's Chapter meeting at [johnm@texasairsystems.com](mailto:johnm@texasairsystems.com)

## Chapter Officers

President	John Maryak	(817) 281-6165	johnm@texasairsystems.com
President-Elect	Sid Ellis	(972) 206-2590	sellis@enviromaticsystems.com
Secretary	Rick O'Connor	(972) 323-5322	rick.o'connor@tac.com
Treasurer	David James	(817) 921-5434	djames@haroldjames.com

## BOARD OF GOVERNORS

W.O. Kelly	(817) 714-0504	wok59ag@aol.com
Dee Gipson	(817) 441-9942	d.gipson@sbcglobe.net
Cody Pace	(817) 336-0543	cody.pace@mail.ashrae.org

## COMMITTEE CHAIRS

Attendance	John Maryak	(817) 281-6165	johnm@texasairsystems.com
Student Activities	Tony Finch	(817) 281-6165	tonyf@texasairsystems.com
CTTC	Jay Martin	(817) 735-6756	martinjw@c-b.com
Historian	Richard Long	(817) 878-4242	rll@summitmep.com
Membership	Garrett Brown	(817) 878-4242	gsb@summitmep.com
Resource Promotion	Cody Pace	(817) 336-0543	cody.pace@mail.ashrae.org
Newsletter Editor	Sid Ellis	(972) 206-2590	sellis@enviromaticsystems.com
Refrigeration	Randy Morrison	(817) 624-0820	rmorrison@mortx.com
Honors and Awards	Don Hardin	(817) 292-6904	dchardin@swbell.net
Webmaster	John Rhodes	(817) 336-0543	jrhodes@fribergassociates.com



Got questions?

Your Chapter Officers are available to help you.

## ASHRAE News

### Consumers Can Cut Taxes by Going Green

NEW YORK—Under federal legislation that went into effect Jan. 1, consumers who invest this year in energy-efficient products will be able to save on their taxes next year. Consumers are eligible for a tax credit of 10% of the cost for building improvements including insulation, certain kinds of roofing, windows and skylights, and doors. Consumers can also qualify for a tax credit for 30% of the cost of solar electricity or water heating equipment.



### At Least 57,673 Attend 2006 AHR Expo

CHICAGO—At least 57,673 people attended last week's AHR Expo, according to preliminary results. Clay Stevens, president of International Exposition Company (IEC), said the Show set records for exhibitors (1,982) and exhibit space (411,175 ft<sup>2</sup>). "We were most pleased," said Stevens, "by the glowing reports from both attendees and exhibitors."

### 2005 Warmest Year in More Than 100 Years

NEW YORK—The year 2005 was the warmest year in more than a century, according to NASA scientists studying worldwide temperature data. The five warmest years in the last 100 years occurred in the last eight years, according to the director of NASA's Goddard Institute for Space Studies.



**TC 2.8 (jointly with 7.1, 7.6, and 4.7)** is sponsoring a series of symposia entitled 'How Low Can You Go? 'Low-Energy Buildings through Integrated Design'. The first symposium was held at the 2006 winter meeting in Chicago and papers are nearing completion for the June 2006 Annual meeting in Quebec City. Papers have been solicited on low-energy buildings for the January 2007 winter meeting in Dallas (and subsequent meetings). Each case study must include information comparing building energy design goals with at least one year of measured energy data-utility bills or sub- Chair if you would be willing to review one or more papers between February and June. If you are interested, please contact Dru Crawley by email at [Dru.Crawley@EE.DOE.GOV](mailto:Dru.Crawley@EE.DOE.GOV) . Reviewers are needed!

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of ASHRAE**

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February 15, 2006

BOG.... 10:45 A.M.  
Lunch...11:30 A.M.  
Dinner.. 12:00 P.M.

Petroleum Club  
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sellis@  
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We're on the Web!

See us at:

[www.ashrae-ftw.org](http://www.ashrae-ftw.org)



2005-2006 Meetings  
Petroleum Club 39<sup>th</sup> Floor  
Wednesday February 15, 2006  
10:45 A.M. BOG  
11:30 A.M. Lunch  
12:00 P.M. Meeting

**This month's chapter meeting "TWO-PHASE REFRIGERANT  
FLOW IN SMALL-BORE CAPILLARY TUBES"**

Statements made in this publication are not expressions of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers or of the Fort Worth Chapter of ASHRAE and may not be reproduced without special written permission of the Fort Worth Chapter of ASHRAE.



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