



The THERM

Fort Worth Chapter of ASHRAE Newsletter

Chapter Meeting

Wednesday

March 15, 2006

Petroleum Club

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

"The nominating committee will be putting together a list of nominees for next year's officers and committee chairman. If you have an interest in serving in any of these positions, please contact me by email or talk to me at the meeting next week."

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www.ashrae-ftw.org

March 2006

Volume XLVIII, Issue 8

President's Message



Hello members of the Ft. Worth Chapter of ASHRAE! Another month has come and gone and the Chapter Regional Conference is getting close. As most of you know, CRC is being held in Cancun this year. They were hit pretty hard by the storms last year but I talked to the folks at the hotel yesterday and they say that everything is up and running again. This event is open to everybody. It is very informative and we always have a lot of fun. So make your reservations now. For those of you wanting to make reservations, we

are staying at the Fiesta Americana Condesa Cancun. You can make your reservations online at www.fiestaamericana.com. The code is G9K6B@FCC when it prompts you for "special rates select the corresponding option – Group". American Airlines still has some low fares. It would be great if we had a large number of Ft. Worth members present.

Our February program was presented by Dr. Bittle. The focus of the presentation was on "Two Phase Refrigerant Flow". Dr. Bittle provided some very enlightening information into the studies he has done to determine the point at which evaporation begins in capillary tubes and how that corresponds the refrigerant flow.

Next week's program should also be exceptional. It will be presented by Mr. David Knebel, P.E. Many of you have heard Dave in the past and are aware of how informative he can be. The program will address DX systems and Dehumidification. Specifically, he will explain why some systems fail.

The nominating committee will be putting together a list of nominees for next year's officers and committee chairman. If you have an interest in serving in any of these positions, please contact me by email or talk to me at the meeting next week.

I hope to see everyone at the meeting this month. Please remember to RSVP to me by the **13th** at johnm@texasairsystems.com.

Everyone is encouraged to visit the Ft. Worth Chapter website at <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

March Program Speaker: Mr. David Knebel, Vice President of Sales and Technology for AAON Inc. Tulsa, Oklahoma

"DX and Dehumidification; Why some systems fail and some systems work?"

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Mr. Knebel received his Bachelor of Engineering Degree in Mechanical Engineering from Stevens Institute of Technology and his Master of Science Degree in Mechanical Engineering from Oklahoma State University.

Mr. Knebel is principal lecturer in ASHRAE's Professional Development Seminar in Energy Calculations. He has been Chairman of TC 4.7 Energy Calculations, Chairman of TC 6.9 Thermal Storage, and Chairman of the Research and Technical Committee, Member of the Technology Council, the Task Group for Combustion Turbine Inlet Air Cooling, Member of the Standard 90 Committee, and is Vice Chairman of the ASHRAE Standards Committee. He was Deputy Chairman ARI Section on Thermal Storage. Mr. Knebel is an ASHRAE Fellow, member of the ASHRAE College of Fellows and recipient of the ASHRAE Distinguished Service Award.

Mr. Knebel is the author of 30 technical papers and articles, the ASHRAE text on Simplified Energy Analysis, and several computer programs used in the HVAC industry.

Board of Governors Meeting Minutes

February 15, 2006

Need to get therm reports in before end of the month.

Would like to get everything to John Rhodes before the end of the month to allow enough time to get sent out to everyone.

BOG Reports:

Attendees: John Maryak, Sid Ellis, David James, Cody Pace, D.W. Gipson, Jay Martin, Don Hardin, Richard Long, John Rhodes and Rick O'Connor

Meeting called to order 10:52am by John Maryak, Chapter President

Reports:

- **President-Elect:** Sid Ellis
Banner is complete.
Need a speaker for the Past Presidents meeting. The previous speaker had to cancel. Suggestions are requested. They do not have to be a technical speaker for this event.
 - Ft. Worth Police Dept
 - Bobby Bragen, baseball legend
 - Approximately 50 people will attend
- **Secretary:** Roster sponsors have donated \$1000.00. Finalizing ads and will get out for printing. Suggestions from BOG to use Kinko's to have spiral bound. Color choice is up to Secretary to choose.
- **Treasurer:**
 - Current balance is \$3,911.29 as of 2-15-2006
- **Board of Governors:**
- **Committee Chairs:**
- **Membership Promotion:** No Report
- **Student Activities:** No Report
- **Chapter Technology Transfer:** Jay Martin
 - Need submissions for Technology Awards.
 - Facility design awards.
 - Need submissions by Mid March to qualify for this year's submission.
 - Refrigeration plant tour needs to be set up. Suggested Gordon Prichard. Sid and Jay will see what projects he has done lately, or Super Wal Mart
- **Research Promotion:** Corporate donations for <\$100 do not get recognized. If you are making a "Personal donation" for \$100 don't use a company check if you want to be recognized.



BOG continued from page 2

- Golf Tournament will be scheduled for April 24th. This is the Monday before CRC.
- CRC Registration is on the Web-Site.
- **Refrigeration:** No Report
- **Honors and Awards:**
 - Don Hardin looking into criteria for chapter service awards. Don will put new criteria on web-site.
 - Wayne Frazell's application for the Distinguished Service Award has been accepted.
 - Submit John Rhodes for Awards at CRC. Chapter Service Award and Regional Award of Merit.
 - Don Hardin putting in his application for Chapter Service Award.
 - Please look into the award criteria and see if "You" qualify.
 - Need Volunteers for Winter Meeting in Dallas 2007. See Don to sign up.
- **Newsletter:**
 - Will try to keep adding more pictures to Therm.
- **Webmaster:** No report
- **Historian:** History needs to be in by June to receive PAOE Points. Richard will make sure that we do not need before CRC.

Old Business:

New Business:

- Collection of Chapter dues. John will fill out form to have Society to continue collecting our dues.
- PAOE Points must be in prior to CRC.
- Adjourned 11:20am

Chapter Meeting Minutes

February 15, 2006

Meeting called to order at 12:01pm

- John Maryak, chapter President presiding. John welcomed everyone with (34) members and (3) guests.
- The meeting minutes were approved from last month
- David James introduced guests
- Members did self-introduction.
- Jay Martin introduced our guest speaker. Dr. Robert Bittle.

February 15, 2006 Program

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 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 TWO-PHASE REFRIGERANT FLOW IN SMALL-BORE CAPILLARY TUBES

Presented by Dr. Robert Bittle, Texas Christian University

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 toward

Meeting Minutes continued from page 3
 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.

Old Business:
 Please turn in any last minute roster changes to any BOG member
 Reminder to register for CRC held this year in Cancun.

Meeting adjourned 12:54p



Treasurer's Report

David James

Programs Committee

Jay Martin

The objective of this session is to analyze various types of DX air conditioning systems through simulation modeling, in order to determine their capability in controlling humidity in hot and humid climates. Systems to be analyzed will include: simple on-off control, mixed air bypass, return air bypass, modulating hot gas reheat, and systems including combinations of these basic types. The goal is to determine what system configurations can control room dry bulb temperature and relative humidity under all room load conditions and ambient conditions. The energy impact of each alternative will be simulated with the goal of developing the system which controls under all conditions with minimum energy usage. With a back to basics approach we will develop the ideal system and solve the indoor air quality problem with minimum energy usage.

Meeting Information:

Date of Meeting:	2/15/2006
Members	34
Guests	3

Total: 37

Financial Data:

Starting Balance:	\$3,960.00
Deposits:	
Luncheon Receipts	\$ 760.00
Luncheon Receipts	\$ 450.00
Interest on Checking	\$ 0.52

Subtotal \$1,210.52

Payments:

Petroleum Club Luncheon	\$ 714.45
Stacy's Styling (Banner Stitching)	\$ 50.00
	\$ 0.00
	\$ 0.00

Subtotal \$ 764.45

New Balance as of 2/15/06 \$4,406.84

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. The information should pertain to the Chapter, its members, Region VIII or Society.

RSVP for this month's Chapter meeting at 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	rl@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

Proposed Standard to Provide Minimum Design Requirements for Sustainable Buildings

WASHINGTON, D.C.—ASHRAE, The U.S. Green Building Council (USGBC) and the Illuminating Engineering Society of North America (IESNA) have agreed to cosponsor the development of a new minimum standard for sustainable high-performance buildings. Proposed Standard 189, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, will provide minimum requirements for the design of sustainable buildings. The proposed standard will use USGBC's LEED® Green Building Rating System to help provide a baseline for sustainable building that can be incorporated into building codes.



Green Roofs Gaining Popularity in U.S.

STREET, Md.—Large green roof projects are being constructed in cities throughout the United States. The City of Chicago put a green roof on its City Hall in 2000. Since then, about 150 public and private buildings in Chicago have also installed such roofs. In San Francisco, a 2.5 acre (1 ha) green roof will be installed on the new California Academy of Sciences building, which is to be completed in late 2008. Also, a 10 acre (4 ha) green roof project has been installed at a Ford Motor Co. truck plant in Dearborn, Mich. The projects are creating a sophisticated market for plants that can thrive in what are usually very harsh conditions.

Voice-Interactive Thermostat Introduced for Visually Impaired

CHICAGO—A programmable voice-interactive thermostat was introduced last month at the AHR Expo. The KELVIN thermostat from Action Talking Products is programmed via voice commands. It is designed for people who are blind or sight-impaired and who cannot visually control temperature settings. Temperature settings also can be programmed for different days or times of day.



Announcements

ASHRAE Technology Awards

ASHRAE Technology Awards recognize members for innovative designs and technological concepts that are proven through actual operating data. Awards are made in seven categories: Commercial Buildings (New and Existing); Institutional Buildings (New and Existing); Health Care Facilities (New and Existing); Industrial Facilities (New and Existing); Public Assembly (New and Existing); Residential (New and Existing); and Alternative or Renewable Energy Use.

The purpose of the ASHRAE Technology Awards is threefold:

1. To recognize ASHRAE members who design and/or conceive innovative technological concepts that are proven through actual operating data.
2. To communicate innovative systems design to other ASHRAE members.
3. To highlight technological achievements of ASHRAE to others, including associated professionals and societies worldwide, as well as building and facility owners.

The Fort Worth Chapter will be conducting its own local competition to determine which applicants should be forwarded to the Regional competition. **Applications for this award must be submitted by April 14, 2006.** If you have any questions or would like to learn more, please visit the chapter website (<http://www.ashrae-ftw.org/>), or contact the CTTC chairman, Jay Martin at jay.martin@c-b.com or 817-735-6756.

Sustainability and the Building

Information about building sustainability principles, practice and emerging concepts will be presented in the free April 19 satellite broadcast and web cast, "Sustainability and the Building Environment." The program will take place from 1-4 p.m. EDT. Registration opened March 1 for Satellite Broadcast Site Coordinators and web cast participants. Registration opens March 15 for satellite broadcast site participants.

To register or for more information, visit <http://www.ashrae.org/greenbuildingsbroadcast>.

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

Month	Day	Name	Month	Day	Name	Month	Day	Name
3	1	Dirk Baumann	3	8	Wayne Potter	3	18	Konrad Chmielewski
3	1	Billy Livingston	3	9	Heath Klein	3	18	Paul Steidle
3	1	Philip Sheridan	3	11	Johnny Ralls	3	23	Bob Buntaine
3	3	Fred Polley	3	12	John Maryak	3	23	Clayton McQuagge
3	3	Joseph Canal	3	13	Steve Hildebrand	3	25	Munir Hyder
3	3	Mark Stubblefield	3	15	Jody McFadden	3	25	Alex Milenkov
3	3	Sam Joe	3	16	Donald Lampe	3	29	Mark Privitt
3	4	Khanh Ho	3	17	Les Brown	3	31	Patrick Worley
3	5	Joe Romine	3	18	Patrick Adell			

**Fort Worth Chapter
of ASHRAE**

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March 15, 2006

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Lunch..... 11:30 A.M.
Dinner.... 12:00 P.M.

Petroleum Club
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We're on the Web!

See us at:

www.ashrae-ftw.org



2005-2006 Meetings
Petroleum Club 39th Floor
Wednesday March 15, 2006

10:45 A.M. BOG

11:30 A.M. Lunch

12:00 P.M. Meeting

This month's chapter meeting **"DX and Dehumidification;
Why some systems fail and some systems work?"**

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