

AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS,  
 INC. **DRAFT**  
 1791 Tullie Circle, N.E./Atlanta, GA 30329  
 404-636-8400

**TC/TG/TRG MINUTES COVER SHEET**

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO 1.1 DATE June 2012

TC/TG/TRG TITLE: Thermodynamics and Psychrometrics

DATE OF MEETING 06/25/2012 LOCATION San Antonio, Texas

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDENCE
Bill Fox	11	Laura Schaefer (Program)	09	James Aswegan
James Schaefer	11	S.M. Sami ( <i>Chair</i> )	06	
S.A. Sherif	06	Roy Crawford	88	
		Vernon Peppers (Webmaster)	11	
		Hans-Joachim Kretzschmar	11	
		Corresponding members		
		Mark Ahlers	05	
<i>Corresponding members</i>		Vikrant Aute	11	
Omar Abdelaziz ( <i>Secretary</i> )	08	Chad Bowers	09	
Howard Cheung	11	Robert Braun	05	
Steven Brown	07	Ellen Franconi	99	
Liping Liu	09	Jonathan Douglas	07	
Pedro Mago	05	Don Gatley	01	
Stanislav Perencevic	09	Sivakumar Gopalnarayanan	06	
		Sebastian Herrmann	11	
		Anna Hueffed	09	
		Edwin Huestis	11	
		Jason Hugenroth	07	
		Omar Huzayyin	11	
		Tony Jacobi	91	
		Edward Keuper	98	
		Sandy Klein	02	
		Tom Kuehn	96	
		Ness Lakadawala	11	
		Jason LeRoy	99	
		Thomas Meyer	07	
		Pavan Naicker	11	
		Nicole C Okamoto	04	
		Jose Perez-Galindo	04	
		Eric Ratts	01	
		Trilochan Singh	95	
		Robert Tozer	97	
		Florian Zink	09	
		Kurt Zoellick	09	

**Distribution**

*All members of TC/TG/TRG plus the following:*

TAC Section Head:	<a href="mailto:SH1@ashrae.net">SH1@ashrae.net</a>
TAC Chair:	<a href="mailto:TACchair@ashrae.net">TACchair@ashrae.net</a>
All Committee Liaisons As Shown on TC/TG/TRG Rosters:	
RAC Research:	<a href="mailto:RL1@ashrae.net">RL1@ashrae.net</a>
Program:	<a href="mailto:PL1@ashrae.net">PL1@ashrae.net</a>
Standards:	<a href="mailto:SL1@ashrae.net">SL1@ashrae.net</a>
Handbook:	<a href="mailto:hbf1@ashrae.net">hbf1@ashrae.net</a>
Chapter Technology Transfer:	<a href="mailto:CTTC1@ashrae.net">CTTC1@ashrae.net</a>
Special Pubs:	<a href="mailto:Mark.fly@ashrae.net">Mark.fly@ashrae.net</a>
Manager Of Standards:	Claire Ramspeck <a href="mailto:MOS@ashrae.net">MOS@ashrae.net</a>
Manager Of Research & Technical Services:	Mike Vaughn <a href="mailto:MORTS@ashrae.net">MORTS@ashrae.net</a>

**Unapproved Minutes**  
**TC 1.1 Thermodynamics and Psychrometrics**  
**Monday, June 25, 2012, San Antonio, Texas**  
**2:15 pm – 4:15 pm**

**1. Call to Order:**

S.A. Sherif called the meeting to order at 2:16 pm. The attendance sheet (current TC1.1 Roster) was distributed and attendees registered. S.A. Sherif asked attendees to introduce themselves. He reviewed quorum. Only 3 out of the 7 voting members were present. Quorum was not established

**2. Chair Report and Announcements:**

S.A. Sherif shared notes discussed during the Chair's Breakfast

- Rosters are available through ASHRAE member web page
- TC chair training takes place on Sunday
- TC/TG/TRG handbook was updated to include MTG. The MTG will not fall under any section; it will be lead by TAC
- High Tower Award: deadline for nomination September 1<sup>st</sup>, 2012
- Need for TC volunteers for content development and quality control
- Conference and Exhibit Committee (CEC)
  - Will change registration fee for speakers
  - New focus on research (mini-conference) 25% of the program
  - Specialty conferences
- TC 1.1 website requires update (ask Vikrant to fill in for Vernon Peppers)
- ASHRAE is going through a rebranding procedure and a new logo was approved
- New energy design guides available
- Thank you letters available upon request (digital submission process)
- Using Tele-meeting for subcommittee done through ASHRAE
- Next ASHRAE conference will be held in Dallas, TX from January 26 – 30<sup>th</sup> 2013, and involve 8 tracks
- Next ASHRAE summer conference will be held in Denver, CO from June 22 – 26<sup>th</sup>, 2013
- TC master calendar available through Google
- Wiki pages available for ASHRAE members

**3. Minutes of the Chicago Meeting:**

No Quorum – no vote.

**4. Subcommittee Reports:**

**Research Subcommittee**

Bill Fox has volunteered to be the research subcommittee chair

- No progress yet on the suggested idea by Tony Jacobi during the Montreal meeting **NEED TO GET THE TOPIC TITLE FROM THE PREVIOUS MINUTES**
- Idea on simulating refrigerant mixtures did not progress; Omar Abdelaziz discussed it with TC 3.1 and got negative feedback. Bill Fox will look into it and contact Omar Abdelaziz and Steven Brown if need exists

**New ideas**

Omar and Bill will work on not-in-kind (NIK) technology review for ASHRAE. This research will identify potential efficiency improvement over temperature lift.

**Program Subcommittee (Howard Cheng)**

For Dallas, TC1.1 will submit a seminar with the title: “Thermoelectric cooling: new applications for an old idea.” Steven Brown will chair this seminar.

For Denver, TC1.1 will submit a forum with the title: “Psychrometric Applications in High Altitude”. For January 2014, TC1.1 will target a seminar about thermoacoustic refrigeration.

### **Standard Subcommittee (Roy Crawford)**

Roy has a conflict with other ASHRAE commitments and requested to be switched to a non-voting but expressed the interest to remain the Standards Subcommittee Chair.

### **Handbook Subcommittee (Yongfang Zhong)**

Yongfang has finalized updates on TC1.1 chapters. They need to be approved. S.A. Sherif will try to get them approved through an email ballot.

## **5. Liaison Reports:**

**Section Head notes:** (Vic Penar arrived at 2:35 pm)

- Roster updates
- Thank you letters available upon request
- Program: check writing style and quality of speakers → CEC is here to help
- Chair training available
- YEA mixer on Sunday

### **Handbook (James Aswegan)**

James coordinated with Yongfang (TC1.1 Handbook Subcommittee Chair) on recent chapter updates. TC1.1 needs to approve the changes to Chapters 1 and 2 by the end of July. TC to cc Mark Owens and Heather Kennedy when submitting

### **Research (Art Giesler)**

No active RTARs.

RAC has updated the research manual and uploaded new RTAR and Work Statement forms. RAC currently has no backlog and is looking for new RTARs and ideas. Art mentioned that largest rejection reason is due to ideas not being research projects. He also requested that we cc him on any RTAR ideas at [rl1@ashrae.net](mailto:rl1@ashrae.net). RAC meetings/deadlines: 8/15, 12/15, during ASHRAE winter meeting, 5/15, ASHRAE summer meeting.

## **6. Membership/Roster:**

Liping Liu to become voting member

## **7. Old Business:**

Nothing to report

## **8. New Business:**

Nothing to report

## **9. Adjournment:**

Adjourn at 3:55 pm.

Submitted by Omar Abdelaziz

## ASHRAE TC/TG/TRG ACTIVITIES SHEET TC/TG/TRG

DATE June 2012

TC/TG/TRG NO. 1.1 TC/TG/TRG TITLE: Thermodynamics and Psychrometrics

CHAIRMAN: Samuel Sami VICE CHAIRMAN: S.A. Sherif SECRETARY: Omar Abdelaziz

### TC/TG/TRG Meeting Schedule

#### Location Past 24 months

Las Vegas, NV – January 29-Feb 2, 2011

Montreal – June 25-29, 2011

Chicago, IL – January 21-25, 2012

San Antonio, TX – June 23-27, 2012

#### Location next 24 months

Jun 22-26, 2013 - Denver

Jan 18-22, 2014 - New York

Jun 28-July 2, 2014 - Seattle

### TC/TG/TRG Subcommittees

Function	Chairperson
Standards	Roy R. Crawford
Handbook	Yongfang Zhong
Programs	Laura A. Schaefer
Research	Ron M. Nelson
Webmaster	Vernon Peppers

### RESEARCH PROJECTS – Current & Past

<u>Project Title</u>	<u>Contractor</u>	<u>Monitoring Comm. Chair</u>	<u>Report Made</u>	<u>Reported by</u>
TRP – 1460				
URP – 1485	Don Gatley	Ron Nelson	June 2008	

### LONG RANGE RESEARCH PLAN

<u>Rank</u>	<u>Title</u>	<u>W/S</u>	<u>Approved</u>	<u>To R&amp;T</u>
-------------	--------------	------------	-----------------	-------------------

### HANDBOOK RESPONSIBILITIES

Year and Volume	Chapter and Title	No.	Deadline	Handbook SC Liaison
2013 Fundamentals	1 Thermodynamics		2012	Yongfang Zhong
	6 Psychrometrics		2012	

### STANDARDS ACTIVITIES

**TECHNICAL PAPERS from Sponsored Research** – Title, when presented (past 10 yrs & planned)

**TC/TG/TRG Sponsored Symposia** – Title, when presented (past 10 yrs & planned)

Exergy Efficient Systems and Applications for Sustainable Buildings, Long Beach, CA – June 2007

Exergy: A New Frontier in Green Building Simulation, Long Beach, CA – June 2007

Psychrometrics at Extreme Conditions; Cincinnati, OH - June 2001

Thermoeconomics and Second-Law Analysis of HVAC&R Systems; Atlanta, GA - January 2001

Second-Law Studies of Systems and Processes; Chicago, IL - January 1999

**TC/TG/TRG Sponsored Conference** – Title, when presented (past 10 yrs & planned)

Exergy as a Measure of Performance and Sustainability (planned), Albuquerque, NM – June 2010

**TC/TG/TRG Sponsored Seminars** – Title, when presented (past 10 yrs & planned)

Thermodynamics of Advanced Cycles and Systems (planned), Orlando, FL – January 2010

Thermoeconomics of Net Zero Design, New York, NY – January 2008

Exergy 101 for Beginners, Long Beach, CA - June 2007

Exergy 201 Use it or Lose it, Long Beach, CA - June 2007

Advanced Cycles and Systems, Dallas, TX – January 2007

Advanced Cycles and Systems for Air Conditioning, Refrigeration and Power, Quebec City, Canada – June 2006

Exergy Analysis and Sustainability, Part I: Fundamentals, Quebec City, Canada – June 2006

Soft Cake Yet Not Crusted: Humidity Control and Measurement Challenges and New Technologies at Room, Low, and High Temperature Ranges, Chicago, IL – January 2006

Second Law Analysis and Optimization: Orlando, FL – February 2005

How Second-Law Analysis Can Save You Money; Atlanta, GA - January 2001

**TC/TG/TRG Sponsored Forums** – Title, when presented (past 10 yrs & planned)

Thermodynamics of Biological Systems and Processes (planned); Orlando, FL – June 2009

Thermodynamics of Sustainable Urban Energy Systems; Chicago, IL – January 2009

Humidity Measurements at Extreme Temperatures; Denver, CO – June 2005

**JOURNAL PUBLICATIONS** – Title, when published (past 3 yrs & planned)

Submitted by: Omar Abdelaziz