

**AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS, INC.**

1791 Tullie Circle, NE, Atlanta, GA 30329  
404-636-8400

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

(Minutes of all meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG No. 3.2

Date: November 20<sup>th</sup>. 2002

TC/TG/TRG TITLE: Refrigerant System Chemistry

DATE OF MEETING: - June 24, 2002

LOCATION: - Honolulu, HI.

Voting Members Present	Voting Members Absent		
Ken Lilje [02] David J. Vincent [02] Joe Karnaz [03] Horst Thamm [03] International Member Glen L. Steinkoenig [04] Cary Haramoto [03] Alan Cohen [03] David Wilson [03]	Warren Clough [03] Alice Riemer [03], International Member Robert Doerr [03] Dietrich Huttenlocher [03] Michael Glenn Lacey [04] Sonny Sundaesan [03]		
Ex-Officio Members and Additional Attendance			
Bob Woods Barb Minor	Art Hallstrom Jay Field	John Danaher Frank Naly	Scott Gustafson

**DISTRIBUTION:**

All members of the TC/TG/TRG

TAC Chairman: K.William Dean [02]

TAC Section Head: Daniel Int-Hout [05]

LIAISONS:

Program: John Bisset [03]

Journal: Thomas Reinarts [02]

Standards: Arthur D. Hallstrom [02]

Special Publication: Joseph Driscoll [01]

RAC Research Liason: Anthony M. Jacobi [04]

Education: Alexander J. Boome [02]

TEGA LIASONS: Marvin Ginsburg [01]

Jon C.Larry [02]

ASHRAE STAFF LIAISONS:

Research: William Seaton

Handbook: Roberto R. Aguilo [2002]

Handbook: Arthur P. Garbarino [2002]

Standards: Claire Ramspeck

Technical Services: Martin Weiland

Additional Distribution:

## ASHRAE TC/TG/TRG ACTIVITIES SHEET

TC/TG/TRG No. 3.2

Date: November 20<sup>th</sup>. 2002.

TC/TG/TRG TITLE: Refrigerant System Chemistry

CHAIR: Ken Lilje

VICE CHAIR: David J. Vincent

SECRETARY: Alice Riemer

## TC/TG/TRG MEETING SCHEDULE

Location Past 12 months	Date	Location planned: next 12 months	Date
Atlanta	01/01	Chicago	01/03
Cincinnati	06/01	Kansas City	06/03
Honolulu	06/02	Anaheim	01/04

## TC/TG/TRG SUBCOMMITTEES

Function	Chair
Program	Danny Halel
Handbook	Robert Doerr
Standards	Xiaomei Yu
Research	Warren Clough
Membership	David J. Vincent

## RESEARCH PROJECTS CURRENT

Project Title	Contractor	Monitoring Comm. Chair	Report
1158-TRP "Effects of System Materials towards the Breakdown of POE Lubricants and HFC Refrigerants".	Spauschus Associates		

## LONG RANGE RESEARCH PLAN

Rank / Title	W/S Written	Approved	To R&T
1211-TRP "Mechanism for Reaction between Polyolester Lubricant and Ferrous Metals".		10/00	

## HANDBOOK RESPONSIBILITIES

Year & Volume	Chapter & Title	Handbook Subcomm. Liaison
2002 Refrigeration	5: Refrigerant System Chemistry	Bob Doerr

## STANDARDS ACTIVITIES: List and Describe Subjects

SPC 141P: MOT/Fluorocarbon Refrigerant for Contaminants

Standard 97: Sealed Glass Tube Stability Test

SPC 175P: New Standard to be developed for Pressure Metal Vessels

## TECHNICAL PAPERS from Sponsored Research: Title, when presented

6/99 Equilibrium Water Capacity of Desiccants in Mixtures of HFC Refrigerants and Appropriate Lubricants (RP-867)

6/99 Study of the Fractionation of Refrigerant Blends in Contact with Lubricants and Measurement of the Solubility, Density and Viscosity. (RP-867)

TC/TG/TRG Sponsored Symposia: Title, when presented

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6/00 Refrigerants System Chemistry Update

6/99 Flammability Test Methods (With TC 3.1)

1/98 New Learning in System Chemistry for New Refrigerants and Lubricants (with TC 3.3 and 3.4)

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TC/TG/TRG Sponsored Seminars: Title, when presented

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1/02 Lubricants for Alternative Refrigerants (with TC 3.4 & TC 8.1).

1/01 Contaminants Control – Back to Basic (with TC 3.3)

1/01 System Issues Update (with TC 3.3)

2/00 System Issues Update

6/99 Lubricants for HFC/HCFC Blends

6/98 Materials Compatibility (with TC 3.3 and TC 3.4)

1/98 Contemporary Issues in Alternative Refrigerants (with TC 3.3 and TC 3.4)

1/97 Acceptability of Alternative Refrigerants and Lubricants (with TC 3.3 and 3.4)

1/97 Performance Issues of Alternative Refrigerants & Lubricants: Elastohydrodynamic Lubrication & Desiccants (with TC 3.3 and 3.4)

1/97 Non POE Lubricants for HFC Systems (with TC 3.3 and 3.4)

6/97 Compatibility Issues (With TC 3.3)

2/96 Alternative Refrigerants - Performance Issues (with TC 3.3 and 3.4)

2/96 Materials Compatibility with Refrigerants and Lubricants (with TC 3.3 and 3.4)

2/96 Practical Considerations in Use of Refrigerant Mixtures (with TC 3.1)

6/96 Experiences in Retrofits with Esters (with TC 3.3 and 3.4)

6/96 System Chemistry of Refrigeration Lubricants (with TC 3.3 and 3.4)

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TC/TG/TRG Sponsored Forums: Title, when presented

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1/02 System cleanup issues (with TC 3.3).

6/00 Research Needs For Refrigerants, Lubricants and Secondary.

6/99 Changes Needed to Refrigeration Handbook Chapter 5

1/98 Filter Drier Issues with POE's (with TC 3.3)

6/95 Experiences with Esters in Retrofit and Service

6/95 What Clean-up Procedures are Required after Server System Failure?

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JOURNAL PUBLICATIONS: Title, when published

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Submitted by: David J. Vincent

ASHRAE TC3.2

## **Minutes – TC 3.2 Refrigerant System Chemistry**

Ken Lilje, Chairman, called the meeting to order at 2:15 p.m. on Monday June 24, 2002. The meeting was held at the Hawaii Convention Centre, room 316A located in Honolulu, HI. After the introduction of members and guests, a quorum was confirmed with 8 members present and 5 absent.

A motion was then made and seconded to approve the minutes from the January 14, 2002 meeting, Atlantic City, NJ. The vote was 7-0-0 (Chairman not voting).

### **Report on TC 3.0 Chair Breakfast Meeting and ASHRAE Liaisons Present**

- ? 95% of the programs for the Hawaii meeting was submitted on line.
- ? In August ASHRAE manuscript central will be launched.  
This is an online review process which should cut the review time in half.
- ? August 2<sup>nd</sup> is the deadline for Chicago.
- ? October 1 is the targeted launch date for the TC website. Templates will be provided.
- ? Members can log on to the ASHRAE website and update their contact information on line and also pay dues.
- ? Handbook content. Does it serve the audience it is targeting. Engineers, contractors building owners.

### **Sub-Committee Reports**

#### **Program – Ken Lilje for Danny Halel.**

Chicago  
None

Kansas City.  
Seminar - "Issues for alternative Refrigerant Systems". Chaired by Ken Lilje  
2 committed, 1 pending.  
Was proposed for Chicago but has been pushed back to

#### **Standards Ken Lilje for Xiaomei Yu**

The new chairman will be Dietrich Huttenlocher.

Standard SPC141P  
*"Method of Testing Fluorocarbon Refrigerants for Contaminants"*.  
Waiting on the review of the ISO standard.

Standard SPC175P  
*"Metal Pressure Vessel Method to Test Materials Used with Refrigerant Systems"*. - Joe Karnaz  
The group consists of 5 members. Joe Karnaz, Glen Steinkoenig, Michael Lacy, Alan Cohen and Rosine Rohatgi.  
Lois Lin is also considering joining.

#### **Research – Ken Lilje for Warren Clough**

Warren Clough not present, Ken Lilje reviewed.  
*1158 TRP - Effects of System Materials towards the Breakdown of POE Lubricants and HFC Refrigerants*  
The work is done and the final report should be ready by the end of March.

*1211 TRP - Mechanism for the Reactions between Polyolester Lubricants and Ferrous Metals.*

Jay Field - The project is supposed to be complete by October 31<sup>st</sup>.

*1249 WS – Determine the Mechanism for Copper Plating.*

The work statement was returned by ASHRAE to resubmit with changes or drop. The work statement will be rewritten. Once complete the work statement will be sent out along with a letter ballot.

*RTAR – Identify Safe Methods for Testing System Components and Materials with Non-halogenated Refrigerants*  
RTAR was approved by ASHRAE. The RTAR now needs to be turned into a work statement. Glenn will help write the WS.

Rob Yost will be Research Subcommittee Chair

**Membership – Dave Vincent**

The membership roster was reviewed.

**Old Business – Ken Lilje**

None

**New Business – Ken Lilje.**

None

A motion was made to adjourn the meeting and was seconded.

The vote was 8-0-0. (Chairman not voting)