

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

1791 Tullie Circle, NE, Atlanta, GA 30329
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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: April 10th. 2002

TC/TG/TRG TITLE: Refrigerant System Chemistry

DATE OF MEETING: - January 14, 2002

LOCATION: - Atlantic City, NJ.

Voting Members Present	Voting Members Absent		
Ken Lilje [02] David J. Vincent [02] Alice Riemer [03], International Member Robert Doerr [03] Alan Cohen [03] Cary Haramoto [03] Dietrich Huttenlocher [03] Joe Karnaz [03] Michael Glenn Lacey [04] Glen L. Steinkoenig [04] Sonny Sundaresan [03] David Wilson [03]	Warren Clough [03] Horst Thamm [03] International Member		
Ex-Officio Members and Additional Attendance			
Andy Gbur	Doug Gehring	John Danaher	Rob Yost
Bob Kauffman	Gary Dudley	Kaoru Matsumura	Rosine Rohatgi
Bob Woods	Gordon Tompsett	Liwen Lei	Scott Gustafson
Clint Finstad	Hewitt Gaudin	Lois Lin	Shelvin Rosen
Curt Slayton	Jay Field	Phil Beckler	Tom Watson
Danny Halel	Jim Bouril	Raymond Thomas	

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: April 10th. 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
Minneapolis	6/00	Honolulu	6/02
Atlanta	01/01	Chicago	01/03
Cincinnati	06/01	Kansas City	06/03

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

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)

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

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)

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

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?

JOURNAL PUBLICATIONS: Title, when published

Submitted by: Alice Riemer

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 January 14, 2002. The meeting was held at the Atlantic City Convention Centre, room 417 located in Atlantic City, NJ. After the introduction of members and guests, a quorum was confirmed with 10 members present and 4 absent.

A motion was then made and seconded to approve the minutes from the June 25 meeting, Cincinnati, OH. The minutes from the Cincinnati meeting contain a misstatement with regard to approval of the handbook chapter 5: "A motion was made and seconded to approve the addendum". The correct statement is: "A motion was made and seconded to approve the chapter as presented". Therefore the vote was 0-9-0 (Chairman not voting).

The agenda for the present meeting was approved with no changes. The vote was 9-0-0 (Chairman not voting).

Report on TC 3.0 Chair Breakfast Meeting and ASHRAE Liaisons Present

- ? Some chapters in the handbooks are not quite up to date. This statement does not include the fundamental handbooks, where this TC is involved. The official handbooks are now the CD-edition and not the books.
- ? ASHRAE has hired a webmaster to improve their homepage.
- ? Research money is still tight. There is a big push to get projects done on time and finished.
- ? TEGA liaisons must have copies of the minutes.
- ? 75% of papers / speeches contributed to the conference are now electronically. It is recommended that slides from seminars also be distributed to the web page in .PPT format. Forms etc. are now all to be found on the web page.
- ? Deadline for Honolulu program: Feb. 8th. Deadline for Chicago program: August 2nd.

Art D. Hallstrom, standards liaison present. Daniel Int-Hout, TAC section head present. New RAC research liaison will be William Flemming.

Sub-Committee Reports

David Wilson arrived bringing the voting members to 11 (chairman incl.).

Program – Danny Halel.

Atlantic City Winter 2002

TC 3.2 is co-sponsoring one program in Atlantic City: "Lubricants for Alternative Refrigerants".

Honolulu summer 2002

Danny Halel, as chairman, has planned a symposia: "System Chemistry and Contaminants Research". Until now he only has two papers offered, which is one too less. A motion was made and seconded to move the symposia to Kansas City. The motion was approved with the votes 10-0-0 (chairman not voting).

Chicago winter 2003

Ken Lilje offered to chair a seminar "Issues for alternative Refrigerant Systems". A motion was made and seconded to approve this seminar. The seminar was approved with the votes 10-0-0 (chairman not voting).

Sonny Sundaresan arrived bringing the voting members to 12 (chairman incl.).

Handbook Bob Doerr

Chapter 5 – Refrigeration System Chemistry in the Refrigeration Handbook.

Chapter 5 including the addendum was approved in Cincinnati. Therefore no further voting is necessary. The addendum is now attached to the chapter.

A discussion on how to describe the phase-out of HCFC in the handbook was raised as well as whether ODP and GWP values should be in Chapter 5. The result of the discussion was the following: A motion was made and seconded that the handbook committee group, for the next edition of the handbook, should look at all comments including the ASHRAE white paper. The vote was 11-0-0 (chairman not voting).

Standards Xiaomei Yu

New chairman for standards has to be found, because Xiaomei Yu is not working in the refrigerant business anymore. New chairman is Dietrich Huttenlocher.

Standard SPC141P

"Method of Testing Fluorocarbon Refrigerants for Contaminants".

ISO 12810 could be adopted as the 141P standard. The ISO standard will be sent out for review before the Honolulu meeting. The problems with the ISO standard is that it does not cover so many refrigerants and secondly that the ISO standard is edited continuously. We would then have to re-approve the standard for each edition.

Standard SPC175P

"Metal Pressure Vessel Method to Test Materials Used with Refrigerant Systems".

Joe Karnaz established a group in Cincinnati. The group has its first meeting following this TC meeting. First it has to be discussed if the standard shall be maintained. Chairman for the group means so. The pattern from the ASHRAE 97 could be used.

ASHRAE has asked that the TC's to check if their related standards are mentioned under "Building Codes". For TC 3.2 this is not the fact.

Research - Warren Clough

Warren Clough not present, Ken Lilje reviewed.

1158 TRP - Effects of System Materials towards the Breakdown of POE Lubricants and HFC Refrigerants

Rosine Rohatgi: The experimental work has finished. The final report is being written.

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

Bob Kauffman: The project was started in September. The literature-research is completed. Preliminary tests have been carried out, and actual tests are under start-up.

1249 WS – Determine the Mechanism for Copper Plating.

The work statement was returned by ASHRAE. The comments and changes needed look manageable. The work statement will be rewritten. Deadline for resubmission is May 15th. Voting will therefore have to take place by letter-ballet.

RTAR – Identify Safe Methods for Testing System Components and Materials with Non-halogenated Refrigerants

RTAR was approved by ASHRAE. There is a need for volunteers to write the work statement.

Research needs a new sub committee chairman. Volunteers may address Ken Lilje after the meeting.

Dietrich Huttenlocher leaves, bringing the voting members down to 11 (chairman incl.).

Membership – Dave Vincent

The roster for voting and corresponding members was read for the upcoming year. Anyone interested in becoming a corresponding member contact Dave Vincent.

Ken Lilje wanted to check if the TC 3.2 has a quorum in Honolulu. Enough voting members should be present for a quorum.

Website – Dave Vincent

Presentations in .PPT format from seminars may be handed over to David Vincent.

Old Business – Ken Lilje

Commercialism policy.

Bob Doerr reviewed: The commercialism policy with proposed changes, TC comments and the latest Committee Newsletter Notes incl. the latest policy were send out by e-mail before the meeting. From the TC'S in general positive comments were received. ASHRAE has done some changes to the policy, but not as much as we could have hoped for.

New Business – Ken Lilje.

Doug Gehring from National Refrigerants is retiring. A motion was made and seconded to recognize Doug for all his contribution to ASHRAE's TC 3 section. The vote was 10-0-0 (chairman not voting).

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

The vote was 10-0-0. (Chairman not voting)