

AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS, INC.
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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.:	4.5	TC/TG/TRG TITLE:	Fenestration
DATE OF MEETING:	Jan 20, 2021	LOCATION:	Virtual (Zoom)
DATE ISSUED:		RECORDED BY:	Christian Kohler

Name	Affiliation	E-Mail	Member (VM, CM, Guest)	Present
<i>Mahabir Bhandari (Chair)</i>	Oak Ridge National Lab	bhandarims@ornl.gov	VM	Y
<i>Peter Lyons (Handbook)</i>	Peter Lyons and Associates	peter.lyons@fenestralia.com	VM-NQ	Y
<i>Sagar Rao (Research)</i>	AEI	sagar.rao@outlook.com	VM	Y
Thanos Tzempelikos (Secretary)	Purdue University	ttzempel@purdue.edu	VM	Y
Aziz Laouadi	NRC	aziz.laouadi@nrc.ca	VM	Y
Christian Kohler	LBNL	cjkohler@lbl.gov	VM	Y
Iason Konstantzos (Program)	University of Nebraska - Lincoln	iason.konstantzos@unl.edu	VM	Y
<i>Charlie Curcija (Chair/Calculation Methods)</i>	Lawrence Berkeley National Lab	dccurcija@lbl.gov	CM	Y
<i>Anil Parekh (Vice Chair)</i>	Natural Resources Canada	Anil.Parekh@NRCan.gc.ca	CM	Y
Bipin Shah	Winbuild Inc	Winbuild.usa@gmail.com	CM	Y
Won Hee Ko	UC Berkeley	wonheeko@berkeley.edu	CM	Y
Robert Hart	LBNL	rghart@lbl.gov	CM	Y
Eyad Hindash	Hindash Engineering Ltd	eyad@hindashengineering.com	CM	Y
Michael Hammond	Vitro Architectural Glass	mhammond@vitro.com	CM	Y
Paul Bush	Vitro Architectural Glass	pbush@vitro.com	CM	Y
Ravi Srinivasan	Univ. of Florida	sravi@ufl.edu	CM	Y
Jean-Michel Dussault	Veridis Solutions inc.	jean-michel.dussault@veridissolutions.com	CM	Y
Michael Thoman	NFRC	mthoman@nfrc.org	Guest	Y
Yalin Uluaydin	Eckersley O'Callaghan LLC	yalin@eocengineers.com	CM	Y
James Bennett	CDC/NIOSH/ Section 4 head	jbennett@cdc.gov	Guest	Y
Amy Richards	The Mackinac Technology Company	amy.richards@mackinacusa.com	Guest	Y
Nicole Blackshear	AERC	nblackshear@kellencompany.com	Guest	Y

Lance Wheeler	NREL	lance.wheeler@nrel.gov	Guest	Y
Jim Paull			Guest	Y
Niraj Kunwar	ORNL		Guest	Y
Ratnesh Tiwari	University of Maryland	ratnesht@gmail.com	Guest	Y
Stephen Mullaly	Hunter Douglas	stephen.mullaly@hunterdouglas.com	Guest	Y
Steve Selkowitz	Stephen Selkowitz Consultants	seselkowitz@gmail.com	CM	Y
Timothy Dykhuis	The Mackinac Technology Company	timothy.dykhuis@mackinacusa.com	Guest	Y
Sam Taylor			CM	Y
Maureen Grasso	NC State University	mgrasso@ncsu.edu	CM	Y
Seungjae Lee	ORNL		Guest	Y
<i>Ryan Asava</i>	Smith Group	Ryan.asava@smithgroup.com	CM	N
<i>Elliot Benov</i>			CM	N
<i>Agnes Smolarska</i>		agnes.smolarska@gmail.com	CM	N
<i>Eyad Hindash</i>		eyad.hindash@gmail.com	CM	N
<i>Jim Larsen</i>	Cardinal Corp	jlarsen@cardinalcorp.com	CM	N
<i>Mike Rhoden</i>	Velux	mike.rhoden@velux.com	CM	N
<i>Weihsuan Zhao</i>	University of North Texas	weihsuan.zhao@unt.edu	CM	N
<i>Jain Yashima</i>		yashima120@gmail.com	CM	N
<i>Costa Kapsis</i>	Concordia University	c_kapsis@live.concordia.ca	CM	N

Meeting started: 3:00 pm EST

SCOPE:

TC 4.5 is concerned with the identification and evaluation of all physical properties of (1) glasses and other glazing materials, (2) shading and shielding materials and devices, and (3) control devices and strategies which influence the radiant, conduction, and convection transfer of both heat and light through fenestration systems. It is also concerned with the development of procedures for calculating and measuring solar heat gain, daylight admission, and heat transfer through fenestration systems.

COMMITTEE AND MEETING INFORMATION

TC Web Site: <http://tc0405.ashraetcs.org>

Basecamp: <https://3.basecamp.com/3106353/projects>

INTRODUCTIONS AND ROSTER CHECK

- 5 VM present, quorum was achieved.
- One VM slot free because of Willie DuPont's passing
- Need to complete "Roster Update Form" after this meeting. Changes take effect after the annual meeting in summer.

APPROVE MEETING AGENDA

Agenda was approved unanimously by voice vote.

APPROVE MINUTES FROM PREVIOUS MEETING

Minutes were approved unanimously by voice vote

ANNOUNCEMENTS (TC Chair)

- Mahabir attended TC breakfast meeting.
- Code of ethics was presented
- Nominations for Hightower Technical award due by September 1st
- TC Manual of Procedures available on ASHRAE website
- 2019-2024 ASHRAE Strategic Plan (Resilience, IEQ, Organizational Streamlining)
- Research budget \$2.6M-\$2.7M per year, 12-15 projects. No new projects being awarded

TC LEADERSHIP

- Will be reviewed based on Charlie Curcija's Roster Update Form. Right now Sagar Rao shows as Vice Chair
- Bipin Shah volunteered to be a new Voting Member (for next winter meeting)
- Motion by Christian Kohler, seconded by Sagar Rao, 5-0-1 Chair Did Not Vote. Motion passed to appoint Bipin as a new Voting Member.
- Sagar Rao's term is only 1 year in the roster (7/1/2020 – 6/30/2021), this should be 2 years.
- Iason Kostantzos is web-master (needs to be updated in the roster)
- Willie DuPont was subcommittee chair for the Program Subcommittee, Iason Kostantzos volunteered to be the new one Program Subcommittee chair.

LIAISON REPORTS

Technical Activities Committee (TAC) – Jamie Bennet

Section head informed the ASHRAE's proposed TC changes:

- Movement away from reorganization.
- New: Functional Group Evaluation Workbook – self assessment for the TC based on the Manual of Procedures (MOP). Need to track YEA members. One MBO could be to draft a new vision statement. Completed FG Workbook due on Friday Jan 22.

Research Activities Committee (RAC)

Section head informed the ASHRAE's proposed TC changes:

- No updates
- Contact: RL4@ashrae.net

RBC Liaison

- No update provided

Conferences and Expositions Committee (CEC)

No liaison present.

Handbook Committee

The deadline for submission of handbook updates to AHSRAE by the handbook subcommittee is 5/30/2020. If needed need to request extension until 07/31/2020. By this date everything should get out of TC and handed over to ASHRAE (e.g. permission to use charts, tables etc)

Chapter Technology Transfer Committee

No liaison present.

ASHRAE Learning Institute (ALI) / Professional Development Committee (PDC) –

No liaison present.

Special Publications

No liaison present.

Unofficial 205 Liaison

Standards (Need new liaison. John Hogan rolled off)

See below

SUBCOMMITTEE REPORTS

Research (Sagar Rao)

RP 1414:

- Mahabir has reviewed WS. Iason will upload WS to basecamp. We need to vote on it. Mahabir proposes to do it by letter ballot. Mike Thoman will check with NFRC to see what support they can provide.

RP 1789:

- No update, waiting on RAC response.

Number of RTARs proposed and assignments identified

RTARs:

- Illuminance-based Visual Comfort Predictors for Fenestration Selection in Commercial Buildings. Authored by Iason
- Evaluating View Performance: Quantity and Quality (including different glazing systems, E/C, frit etc.) Authored by Iason
- Photovoltaics Windows/Glazing, Bipin and Anil working on a draft.

Long-Range Research Plan:

Programs

- Mahabir chaired meeting in absence of Willie Dupont
- 13 members attended.
- 2 Seminars in this winter virtual meeting.
- Phoenix annual virtual meeting: one session proposed by Anil Parekh about overheating.
- 2022 Winter Meeting: planning one session on “Visual Comfort” and one on “New sensing technologies for fenestration controls”

Handbook

- Peter Lyons chaired meeting
- Working on chapter for 2025
- Mid-2023 need to submit materials
- Planning to add vacuum glazing to the handbook.
- Planning to have bi-monthly meetings to work on the handbook.

Calculation Methods

- Charlie chaired meeting
- Final draft of NWI for ISO submittal discussed, posted on Basecamp

Standards (Chris Mathis) *Not attending*

TC 4.5 Website (Iason Konstantzos)

Iason will update basecamp and web site.

OLD BUSINESS

None.

NEW BUSINESS

ADJOURN

5:00 pm EST

Respectfully submitted by Christian Kohler