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**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.:	<b>4.5</b>	TC/TG/TRG TITLE:	<b>Fenestration</b>
DATE OF MEETING:	<b>February 4, 2020</b>	LOCATION:	<b>Orlando, FL</b>
DATE ISSUED:	<b>February 4, 2020</b>	RECORDED BY:	<b>Mahabir Bhandari/ Charlie Curcija</b>

Name	Affiliation	E-Mail	Member (VM, CM, Guest)	Present
<i>Peter Lyons (Handbook)</i>	Peter Lyons and Associates	<a href="mailto:peter.lyons@fenestralia.com">peter.lyons@fenestralia.com</a>	VM-NQ	N
<i>Anil Parekh (Vice Chair)</i>	Natural Resources Canada	<a href="mailto:Anil.Parekh@NRCan.gc.ca">Anil.Parekh@NRCan.gc.ca</a>	VM	N
<i>Sagar Rao (Research)</i>	AEI	<a href="mailto:sagar.rao@outlook.com">sagar.rao@outlook.com</a>	VM	Y (part)
<i>Roger LeBrun</i>	Velux America	<a href="mailto:roger.lebrun@velux.com">roger.lebrun@velux.com</a>	VM	N
<i>Charlie Curcija (Chair/Calculation Methods)</i>	Lawrence Berkeley National Lab	<a href="mailto:dccurcija@lbl.gov">dccurcija@lbl.gov</a>	VM	Y
<i>Mahabir Bhandari</i>	Oak Ridge National Lab	<a href="mailto:bhandarims@ornl.gov">bhandarims@ornl.gov</a>	VM	Y
<i>Joe Hetzel</i>	DASMA	<a href="mailto:jhetzel@thomasamc.com">jhetzel@thomasamc.com</a>	VM	Y
<i>Samuel Taylor</i>		Samuel.taylor.sr@gmail.com	CM	Y
<i>Aziz Laouadi</i>	NRC Canada	<a href="mailto:Aziz.laouadi@nrc.ca">Aziz.laouadi@nrc.ca</a>	CM	Y
<i>Jamie Bennett (TAC Liaison)</i>	CDC/NIOSH	Sh4@ashrae.net	Guest	Y (part)
<i>William C. DuPont</i>	Sunergy Consulting	waupi@msn.com	CM	Y / Remote
<i>Christian Kohler</i>	LBNL	cjkohler@lbl.gov	CM	Y
<i>Iason Konstantzos</i>	University of Nebraska Lincoln	iason.konstantzos@unl.edu	CM	Y
<i>Mike Buchanan</i>	Vitro	jtheios@guardian.com	CM	Y / Remote
<i>Ryan Asava</i>	Smith Group	Ryan.asava@smithgroup.com	CM	Y / Remote
<i>Elliot Benov</i>			CM	Y / Remote
<i>Steve Selkowitz</i>	Selkowitz Consulting / LBNL	seselkowitz@lbl.gov	CM	Y / Remote
<i>Ratnesh Tiwari</i>	University of Maryland	ratnesht@umd.edu	Guest	Y
<b>Total voting members: 7 Voting members present: 4</b>				

#### 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

- Reviewed roster and updated.
- New web form for changes. Need updates right away
- Rolling off VM: Charlie Curcija, Anil Parekh, Peter Lyons. How about Thanos? Contact him.
- Proposed new VM: Christian Kohler, Aziz Lauoadi, Iason Konstantzos
- Update program chair to be Willie DuPont
- Can Kelli Fleming replace Roger LeBrun?
- Before becoming VM, needs to be CM. [ashrae.org/joinatc](http://ashrae.org/joinatc)

### APPROVE MEETING AGENDA

Agenda were approved unanimously.

### APPROVE MINUTES FROM PREVIOUS MEETING

Minutes were approved unanimously.

### ANNOUNCEMENTS (TC Chair)

- None

### TC LEADERSHIP

- Voting membership reviewed.
- Mahabir Bhandari will be proposed as a new chair.
- Christian Kohler new Vice Chair

### LIAISON REPORTS

#### ***Technical Activities Committee (TAC)***

Section head informed the ASHRAE's proposed TC changes:

- Trying to reduce conference space
- Have main and SC meetings in one block
- TC Collaboration area. Multi TC in one common room with round tables. Perhaps not appropriate for the main TC meeting. Maybe have block meeting and if needed continue in common space

#### ***Research Activities Committee (RAC)***

Section head informed the ASHRAE's proposed TC changes:

- No updates
- Contact: [RL4@ashrae.net](mailto: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)**

#### **RP1710:**

- Completed and removed from RAC agenda

#### **RP 1414:**

- TC Chair to submit to RAC. Willie DuPont prepared revised SOW and cover letter. Charlie will submit to Mike Vaughn with cc to RAC liaison

#### **RP 1789:**

- Need to be rebid with revised PES. Aziz to send to Mike Vaughn

Number of RTARs proposed and assignments identified

### **Programs**

- Mahabir will submit and chair a seminar on windows shading systems in Austin
- Proposed two seminars for Chicago
- Deadline for Austin submission is February 10 for the seminar July 26.

### **Handbook (Peter Lyons)**

Deadline: May 31, 2020 (all approved)

Make sure that everything is in place (e.g., permissions to publish, etc.)

Peter Lyons to schedule monthly conference calls. TC Chair to send note to Peter.

Reviewed assignment list

### **Calculation Methods (Charlie Curcija).**

Meeting was not held in lieu of attending ISO TC 163 US TAG meeting, where Charlie Curcija presented new work item (NWI) for the development of harmonized ISO standard on the calculation of thermal and solar-optical indices for fenestration and fenestration shading. In addition, WG under SC2 is being proposed that will deal with windows only. Further discussion centered around the concern that we might not succeed in convincing Europeans to abandon ISO 10077 and also concern about resources that we can devote.

**Standards (Chris Mathis)**

*None*

**TC 4.5 Website (Iason Konstantzos)**

Iason will update basecamp and web site.

**OLD BUSINESS**

None.

**NEW BUSINESS**

AIA deadline for new definitions is July 5.

**ADJOURN**

4:35pm.

*Respectfully submitted by Charlie Curcija  
February 4, 2020*