

MEETING MINUTES
TC 2.3 - Gaseous Contaminants/Removal Equipment
Standards Subcommittee Meeting
Monday, January 31st 2011, 6:00-7:30 p.m.
Las Vegas Convention Center, Room N211, Las Vegas, NV

The meeting was called to order by Chair Paolo Tronville. Present were:

Name

- 1) Nick Agopian
- 2) Rupert Alfiler
- 3) Charlene Bayer
- 4) Barney Burroughs
- 5) Mick Flom
- 6) Joan Gao
- 7) Volker Haendler
- 8) Gemma Kerr
- 9) Chang-Seo Lee
- 10) Bill Lull
- 11) Ashish Mathur
- 12) Matt Middlebrooks
- 13) Chris Muller
- 14) Kathleen Owen
- 15) Peter McKinney
- 16) Patrick Rathje
- 17) Jeff Roseberry
- 18) Brad Stanley
- 19) Mark Stutman
- 20) Christine Sun
- 21) Paolo Tronville

1) Update on standards within scope of ASHRAE TC 2.3

- a) GPC 27P “Procedures for measurement of gases in indoor environments” – *Gemma Kerr*
- Progress is being made on writing. The Guideline is probably a bit less than half complete.
- b) SPC 145.2 “Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Air Cleaning Devices” - *Kathleen Owen*
- No substantive comments were received during the public review. ASHRAE staff is in the process of editing the document and the committee needs to supply them with some information. The standard will be published before the summer meeting.
- c) SPC 145.3 “Field Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Installed Systems” – It is still alive – It was voted in Louisville (June 2009) to drop it – Who is supposed to do what?
- The ASHRAE liaison (Craig Wray) at the SPC 145 meeting reported that it is no longer on the books. ASHRAE will be reminded to remove it from the SPC 145 purpose and scope, also from the website.
- d) ASHRAE Std.145.1-2008 “Laboratory Test Method for Assessing the Performance of Gas-Phase Air Cleaning Systems: Loose Granular Media”
 - i) Recommendation to TC 2.3 to revise, reaffirm, or withdraw 145.1 (see Mark Weber’s messages sent on August 13th 2010 and on January 29th 2011). Section N2.5 of the Standards Committee MOP states that “Following an interval of not more than three years after publication of each standard or guideline, the cognizant committee shall recommend to SRS reaffirmation, revision or withdrawal of the standard or guideline.” The three year date for Standard 145.1-2008 is August 18th 2011.
- The 145 committee will deal with the ASHRAE staff comments (which are large in number but almost all non-substantive) so there will be a minor revision of the standard. The Standards

Subcommittee will recommend to the TC that the revision take place so that the TC can vote on this and Nick can file the appropriate paperwork.

- ii) Still not listed as an ANSI standard (see <http://www.ashrae.org/publications/detail/14891#Std145-1>)
 - ASHRAE will be reminded to change the listing.

2) ASHRAE Official Liaisons

- a) TC 2.4 “Particulate Air Contaminants and Particulate Contaminant Removal Equipment” – *Kathleen Owen*
 - The 52.2 meeting was busy. Several important issues were discussed including whether to continue with MERV, and whether the 52.2 test should be allowed to run with the duct at negative rather than positive pressure (need negative for the procedure to be accepted by ISO).
- b) TC 2.9 “Ultraviolet Air and Surface Treatment” – *Matt Middlebrooks*

Interesting research results were presented from the ASHRAE project on degradation of HVAC materials by UV. Some significant effects were found.

 - i) SPC 185.1 “Method of Testing UVC Devices for use in air handling units or air ducts to inactivate airborne microorganisms”
 - The draft standard has been reviewed by ASHRAE and one substantive comment is currently being addressed. It is expected to go out for public review before the summer meeting.
 - ii) SPC 185.2 “Method of Testing Ultraviolet Lamps for Use in HVAC&R Units or Air Ducts on Irradiated Surfaces”
 - This standard is a lamp test not a system test. The large lamps typically used would mean a very complicated system test.
- c) TC 9.11 “Clean Spaces” – *Matt Middlebrooks*
 - There is not much applicable to TC 2.3 taking place there at present.
- d) SSPC 62.1 “Ventilation and IAQ High Rise Buildings” – *Brad Stanley*
 - The 62.1 committee did not get any programs accepted for this meeting (an IAQP and an ozone program were submitted). They are planning (finally) to publish a document to give a rationale for the prescriptive ventilation rates.
- e) SSPC 62.2 “Ventilation and IAQ Low Rise Buildings” – *TBD*
 - Barney Burroughs reported an interest in IAQP for residences. Matt Middlebrooks reported that the issues discussed included unvented combustion appliances and monitors. There was no discussion of gas phase filters.

3) Information Exchange

- a) AFS – *KJ Choi*
 - The 2011 Annual Conference will take place May 9-12 at the Louisville Holiday Inn in Hurstbourne, Kentucky. The Fall conference – New Energy Era – will take place in Houston, Texas, October 17-20, 2011.
- b) ASTM D22.05 “Air Quality” SC “Indoor Air” – *Chris Muller*
 - There was no update.
- c) ASTM D28.04 “Activated carbon” SC “Gas Phase Evaluation Tests” – *Chris Muller*
 - i) D6646 - 03(2008) “Standard Test Method for Determination of the Accelerated Hydrogen Sulfide Breakthrough Capacity of Granular and Pelletized Activated Carbon”
 - There was no update.
- d) CEN/TC144 “Tractors and machinery for agriculture and forestry” – *Paolo Tronville*
 - i) EN 15695-2:2009 “Agricultural tractors and self-propelled sprayers - Protection of the operator (driver) against hazardous substances - Part 2: Filters, requirements and test procedures”
 - This method was published in 2009. There are different cabin tests for gas phase and particulate contaminants. A difficulty with the gas phase test is that it is conducted at 80% RH. The particulate section has mistakes.
- e) CEN/TC 195 “Air filters for general air cleaning” WG 5 “Gas phase filters” – *Paolo Tronville*
 - This WG mirrors WG 8 in TC 142. They have the prEN ISO 10121-1 under consideration at present. If it is approved it will become also a CEN standard not only an ISO one. So for European countries will

- be mandatory while elsewhere it remains voluntary.
- f) CEN/TC 346 “Conservation of cultural property” WG 4 “Environment” – *Chris Muller*
 - There is nothing new on the gas phase. RH is their main concern.
 - g) CEN/TC 386 “Photocatalysis” – WG2 “Air Purification” – *Paolo Tronville*
 - They are using work from fine ceramics committee (see below). Their document will be a CEN standard only, valid in Europe but not worldwide.
 - h) ISO/TC 22/SC7/WG3 “Air and oil filters” – *Paolo Tronville*
 - i) ISO 11155-2: 2009 “Road vehicles - Air filters for passenger compartments - Part 2: Test for gaseous filtration”
 - There is nothing new to report.
 - i) ISO/TC 142 “Cleaning Equipment for Air and Other Gases” WG8 “Gas-phase air cleaning devices” – *Matt Middlebrooks*
 - i) DIS 10121-2 “Test methods for assessing the performance of gas-phase air cleaning media and devices for general ventilation - Part 2: Gas Phase Air Cleaning Devices (GPACD)” (public review ends June 20th 2011)
 - This draft standard is out for public review now (ending on June 20th 2011).
 - ii) CD 10121-1 “Test methods for assessing the performance of gas-phase air cleaning media and devices for general ventilation - Part 1: Gas Phase Air Cleaning Media (GPACM)”
 - The document is making progress but is not as far along the approval path as the other one. A large number of media types are covered and information is not available for all of them yet.
 - iii) US Technical Advisory Group to ISO/TC 142 (TAG)
 - They will discuss before voting on acceptance of ISO/DIS 10121-2. Matt is due to roll off as advisory group chair, but will continue in this position.
 - j) ISO/TC146 “Air quality” /SC6 “Indoor air” – *TBD*
 - A list of 41 documents in various stages of approval was sent out with the Agenda.
 - k) ISO/TC 205 “Building environment design” – *TBD*
 - i) ISO 16814:2008 “Building environment design - Indoor air quality - Methods of expressing the quality of indoor air for human occupancy”
 - There was nothing to report.
 - l) ISO/TC 206 “Fine ceramics”/WG 37 “Test methods for photocatalytic materials”
 - i) ISO 22197-1:2007 “Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials - Part 1: Removal of nitric oxide”
 - This is a published standard.
 - ii) ISO/FDIS 22197-2 “Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials - Part 2: Removal of acetaldehyde”
 - This document is at the very final stage and it will be balloted for the “formal vote”.
 - iii) ISO/DIS 22197-3 “Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials - Part 3: Removal of toluene”
 - Nothing is known on this.
 - iv) ISO/CD 22197-4 “Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials - Part 4: Removal of formaldehyde”
 - Nothing is known on this.
 - v) ISO/CD 22197-5 “Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for air-purification performance of semiconducting photocatalytic materials - Part 5: Removal of methyl mercaptan”
 - Nothing is known on this.
 - m) ISO/TC209 “Cleanrooms and associated controlled environments” – *Chris Muller*
 - i) ISO 14644-8:2006 “Classification of airborne molecular contamination”
 - There was no report.

- ii) CD 14644-10 “Cleanrooms and associated controlled environments -- Part 10: Classification of surface chemical cleanliness”
 - This is a new document just started.
- n) ITRI (Taiwan) – *Chris Muller*
 - There was no report.
- o) JIS B 9901:1997 (Japan) “Gas-removal – Method of test for performance of gas-removal filters”
 - There was no report.
- p) China
 - GB/T 18801 - 2002 “Air cleaner”
 - There was no update
 - QB/T 2761 – 2006 “Methods for determination of purificatory effect of indoor environment”
 - There was no update
 - JC/T 1074 – 2008 “Air purification evaluations of indoor wall coating materials”
 - There was no update
 - ??? “Test methods of pollutant cleaning performance of air cleaner”
 - There was no update

4) Old Business

- a) Filter Energy Rating/Labeling Guideline/Standard
 - a meeting was held this afternoon with attendees from TC 2.3, TC 2.4, SSPC 90.1, etc. The next step is to request to start an ASHRAE MTG to involve all interested parties in discussion. Issues include the need to avoid LEED encouraging low efficiency filters just because of low energy use. Bill Lull also says there is a system effect which needs to be addressed.
- b) Life Cycle Cost Calculation Guideline/Standard
 - There was no update.

5) The meeting was adjourned at 7:20 pm.