



Pier Review

IGMA Members Revise Guidelines in Huntington Beach

by Megan Headley

It wasn't all work and no play when members of the Insulating Glass Manufacturers Alliance (IGMA) met for their summer meeting June 10-13 at the Hyatt Regency in Huntington Beach, Calif., but the beach resort within eyesight of the famous pier did set the scene for getting down to business. Between discussing the possibility of new guidelines on capillary tubes and testing devices for insulating glass (IG) units, and revising drafted guidelines on visual quality and thermal stress, IGMA members were geared to take action during their summer meeting.

Discussion Reopens on Closing Capillary Tubes

The event opened with a meeting of the glazing guidelines working group. The group continued a discussion from its February meeting on closing capillary tubes in the field (see *April DWM*, page 118). The working group had been asked to create a standardized method for guidance on closing capillary tubes for the benefit of those end-users who prefer to close the tubes for various reasons.

Bill Lingnell of Lingnell Consulting Services, IGMA technical consultant, had been able to test capillary tubes donated by manufacturers since the group's last meeting.

"There [are] more kinds of capillary tubes than I ever knew existed in some ways," Lingnell commented. However, he focused on a few suggested ways to close the tubes. He reported that he has used wire cutters and crimpers to close the hard stainless and soft stainless tubes, and has also tried putting a dollop of silicone on the end of the tubes, a method that seemed to work well. So far, Lingnell reported, results have been erratic, but using silicone after bending or crimping the tube seems to ensure that the tubes are closed.

"More than likely you're going to have to have that dollop [of silicone]," Lingnell said.

One concern is that an unac-

counted-for variable—the skill of the tradesman closing the tube—may create vaster differences in closed tubes than the variety of tested methods.

"Workmanship is going to vary in the field," Lingnell said. "You're not always going to have the same guy doing it."

Lingnell said that he still has other methodologies to review, but is closer to reaching a conclusion that will allow him to prepare a technical bulletin on the subject.

Working group members also discussed the possibility of creating a document on the overall use of capillary tubes. At present, manufacturers have different suggestions for how to use capillary tubes,



Insulating Glass Manufacturers Alliance members spent three days refining industry guidelines and technical bulletins.



Members of the Insulating Glass Manufacturers Alliance and American Architectural Manufacturers Association celebrated the co-location of their respective meetings with joint receptions.

but there is no industry consensus on the topic. A motion to approach the Glass Association of North America about the joint development of guidelines for the use of capillary tubes, including information about how best to close them, met unanimous approval.

Gas Permeability Group Moves to Phase Two

After the gas permeability working group reviewed a near-final draft of the executive summary of phase one of its evaluation of the permeability of sheet materials report, discussion moved onto the draft request for proposal (RFP) for phase two of the project. Phase two will evaluate the gas permeability of edge seal assemblies and the RFP will be sent to several labs for bids to do testing.

The objective of the project is to develop a test cell configuration to determine the argon gas permeability of a section of an IG unit edge.

The test cell will take into account the geometry and interactions of the components that make up the sealant/spacer system. It is intended ultimately to provide a tool to better estimate the argon loss rate from an actual production IG unit.

One member of the audience questioned the benefit of measuring the permeability of a section of the edge of the IG unit alone rather than the finished system.

“We know what the gas loss is of a finished unit, to a certain extent,” explained group chair Bruce Virnelson of PRC DeSoto.

According to Virnelson, data already exists on the permeability of finished units, and, since there is a great deal of variability in that data, testing edge sections may provide some answers about why the variability exists.

Following some final changes, the group aims to send out the request to laboratories to bid before the next meeting.

Technical Services Committee Hears GasGlass Research Proposal

During the IGMA Technical Services Committee meeting, the group heard a research proposal from proposed by David Bailey of Bodycote Testing Group Americas.

Bailey was gauging the committee members’ interest in co-authoring a study that would determine whether the GasGlass units should be used to evaluate IG units in the field.

“Our ongoing initiative [is] to see if it makes sense to use this in the field,” Bailey said.

The goal is to use the device to measure the argon content of IG units in manufacturers’ plants, measure them again in a lab setting and then set up a testing area outdoors to expose the units to the elements for one year, with weekly testing. Testing in a variety of places would help to establish a baseline for comparison, but the

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real goal is to take into account the variables created by environmental conditions.

"The influence of the weather over the whole course of the year is what [we want] to see," Bailey said.

According to the ensuing discussion, many people use the GasGlass testing device for measurements in the field, but no research has been done to support whether it is in fact an effective test method.

"This strikes me as something IGMA should be significantly involved in," said Joe Hayden of Pella Corp.

The committee passed a motion to form a task group under the technical services committee to review the proposal.

Working Group Reviews Thermal Stress Guidelines

The thermal stress working group reviewed its IGMA Guidelines for Thermal Stress Considerations. The group's goal is to create a guideline, checklists and do's and don'ts to provide

people unfamiliar with these issues some general knowledge on annealed glass. The document will look at conditions that can cause thermal stress. Among the factors noted in the draft is the impact of the frame, such as how darker colors can absorb more heat, how the frame can keep the edge of glass somewhat cooler than the center material, as well as the impact of grilles and muntin bars. Also noted were problem-causing exterior building conditions, such as shadows cast on glass by overhangs, projections, landscaping and adjacent buildings. One commenter noted that exterior sunscreens are making a comeback. Another added that some companies have developed a clear, polycarbonate outdoor shutter for coastal areas that forms a seal between the shutter and the glass that leads to thermal stress issues.

Adding those considerations, the group added a statement to the document noting that heat-strengthened or tempered glass "will eliminate or substantially



IGMA technical consultant Bill Lingnell demonstrated some of the methods he used to test for closing capillary tubes.

reduce instances of thermal stress." Lingnell is updating the document in preparation for the next meeting

The working group also noted that it sent out its Field Service Inspection Form requesting case studies on thermal breakage on March 8, but has only received a few replies. Some group members noted that as thermal breakage generally occurs in the winter, there might be no responses until December. The group agreed to send out a reminder that documented histories of thermal breakage and perhaps expand the request to a broader group.

Visual Quality Guideline Goes Back to Task Group

The visual quality working group ultimately decided to return its visual quality guidelines back to the task group for revision. The main point of discussion was concern that a single set of visual quality guidelines would not address the unique differences of large commercial IG units versus residential IG units.

Lingnell commented that when



Business journalist Stuart Varney entertained IGMA and AAMA members with his entertaining and perceptive explanation of what makes the United States economy the best in the world.

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making IG, the manufacturers don't know where the glass is going, and therefore the visual quality shouldn't differ depending on the project. But according to Rick Wright of Oldcastle, one can't be expected to use the same criteria and catch the same blemishes on a giant commercial IG unit as it does with the smaller units more likely to be found in residential buildings.

Wright also was concerned that the IGMA document only addresses the inspection for point blemishes since, he said, the inspection process for linear blemishes is different. ASTM C1036 uses two inspection rules and, according to Wright, the IGMA document only follows ASTM halfway. Wright also noted that the sizes IGMA provides for point blemishes are different from the sizes listed by ASTM.

A motion to create two separate documents—residential and commercial—was found non-persuasive, so the discussion turned to the possibility of breaking one document into residential and commercial components in the areas where differences exist. A motion to do just that was approved unanimously, sending the document back to task group.

Another point of discussion for the document was the handling and definition of optical interferences that do not constitute visual obstructions. For Brewster's Fringes, Newton's Rings and quench marks, the document sim-



Members of the Insulating Glass Manufacturers Alliance and American Architectural Manufacturers Association were treated to a number of insightful luncheon speeches.



IGMA members were left some time to enjoy the Huntington Beach Resort at the end of two days of work group and committee meetings.

ply stated that these issues were not addressed by the guidelines.

"It needs a little more than saying it's not covered by the document," said Ray Wakefield of Trulite Industries.

The group agreed that these issues were not addressed because these phenomena are considered inherent to the glass under certain conditions and therefore are not considered to be visual obstructions. To clarify this for the document's readers, the group agreed to move the definitions for Brewster's Fringes, Newton's Rings and quench marks

beneath a general definition for Optical Effects.

Fogging, which is considered a visual obstruction, also was discussed. There was concern that a brief statement that fogging is not allowed could allow the document's end-users to insist on the replacement of fogged units even after the manufacturer's warranty has expired.

"If you've got a 30-year IG unit that starts fogging up, is somebody going to use this to say [to the manufacturer] 'you've got to replace this free of charge?'" Hayden asked.

Rogers said that the document is intended to be a guideline only and shouldn't be construed as instructions for how to deal with visual obstructions.

"This is meant to be that third party that states this is a visual obstruction or it's not—and that's all," he said.

Grossman suggested adding a statement that clarifies where to find instructions. The group approved altering the statement to read, "Fogging: not allowed. Consult with manufacturer."

The group aims to have a ballot on the revised document prepared prior to the January meeting.

For More Information

IGMA's next meeting is the alliance's eighth annual conference, to be held January 28-February 1, 2008, at the Sundial Beach Resort in Sanibel Island, Fla.

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