

Attachments Optical Properties Task Group Minutes

Friday, October 30, 2009

3:00 P.M. – 4:00 P.M. EST

Chair: Thomas Morrissey - Hunter Douglas, Inc.

Participants:

Tom Morrissey (Chair), Ray McGowan (Staff), Mike Rubin, John Gant, William du Pont, Carlos McEntire, Rich Watkins, Robert Simons, Ross McCluney, Andrew Caldwell, Sanjiv Malkin, John Lewis

1. Call to Order:

Chair called meeting to order at 3:00 P.M. and conducted a roll call. Anti-trust reminder was given.

2. Review and Approve Agenda:

- Review Master Fabric List chart for LBNL evaluation
- Confirm status of submissions
- Short term objectives for TG - through end of 2009
- Longer term objectives for TG - 2010
- Organize thoughts for November conference

3. New Business:

Solicit participation in new PCP and Labeling task groups. Registration will take place at the November conference.

4. Unfinished Business from Last Call:

Tom Morrissey gave an overview on the status of fabric submissions to LBNL for evaluation. The Master Fabric List will be continually updated as fabrics are submitted by each contributing company. John Gant is coordinating 50 submissions from current participating exterior attachment companies and Tom Morrissey is coordinating the same number from the interior attachments companies. Tom will merge the overall info into one integrated list for the OPTG. The agreed to base number is 100 fabrics for LBNL evaluation.

Long term there will be thousands of fabrics/materials to be tested and documented. Our next task is to work on a measurement and calculation standard. We need active participation in this task from companies which have their own optical equipment and understand the technical complications of testing. In short, we need more worker bees. Standards are necessary for many reasons and we need definite guidelines to get us to the next phase of the process.

Ross McCluney suggested referring to documents referenced on the site managed by Mike Rubin at <http://sites.google.com/site/windowoptics/Home/data/standards/solar> . The standards and guidelines must be completed before the end of the year and a document by early next year.

The Interior/Exterior Attachment Task Group would like to initially use SHGC, determined at normal incidence, as this approach is currently in use within NFRC. It will allow the process to proceed expeditiously. This should be considered when producing our recommendations on standards and testing and before moving to next generation metrics. Having an established initial process will encourage more active member participation incorporating a broader range of attachments, thus members, in the future.

Discussion then moved to equipment and processes used for optical properties evaluation and testing at LBNL. Mike Rubin asked if any company had a spectrophotometer (spl?). HunterDouglas indicated they had one and that it was rated at 400-700 nanometers. Mike indicated the rating must be at least 3200 nanometers and estimated the cost of such equipment to be \$60-\$100k. This led the group to identify the following options for long term testing:

- A funded project at LBNL (perhaps using a student or visiting researcher)
- A select group of private test labs or universities
- A shared expense of equipment by industry members
- Individual companies own and run their own test equipment

Some of these options are perhaps better explained by comments made by Ross McCluney in a previous contribution to the task group copied below:

1. Manufacturers of the materials test the relevant properties according to a NFRC-designated (or developed) test standard (or perhaps a group of non-overlapping standards for different needed properties) in their own laboratories and send the data to a central NFRC repository accessed by the other manufacturers. The other manufacturers examine the submissions and make suggestions for correction when they see something they think might be incorrect (including a challenge procedure that is brought in more formally if the source lab resists suggestions that their properties need to be checked for correctness).

With window glazings, LBNL is serving the role of the arbitration laboratory. Measured samples that are challenged can be sent to Mike's lab and measured very carefully with his state-of-the-art equipment to attempt an independent lab-based settlement of the dispute. This is the normal role for a national laboratory: to do research, settle disputes, provide specialized expert knowledge, but not to do routing testing for a fee. (Other countries may follow the latter model and though I cannot speak for LBNL, I don't think the U.S. wants to go that route.) Of course this requires each manufacturer of optically significant materials going into shading products to have close to state-of-the-art equipment for testing according to the designated standard.

2. Manufacturers of the materials send them to independent, NFRC-certified outside test labs for measurement, the results being sent to the central repository and subject to the same kind of peer review. This has the advantage that manufacturers not possessing the needed equipment to test according to the standard wouldn't have to purchase such equipment. They could send their samples to an outside test lab. If no outside test lab possesses one or more of the pieces of equipment needed to do the standard tests, funding might could be pooled from the manufacturers to either create a not-for-profit independent test lab or to add to the capabilities of existing NFRC test labs.

There are pros and cons to both approaches. There may be other models. Now is the time to discuss the choices and consider the alternatives. NFRC already has existing structures to "regulate" processes like the two above, currently being done with windows, which I think could be extended to interior/exterior shading systems.

Short term (before end of 2009) we will work with Mike to get his initial evaluations on the small sampling of fabrics submitted and then discuss/determine standards and guidelines. Long term (into 2010) we will prepare an RFP (standards, testing guidelines, peer appeal/review), decide on acceptable testing locations and what else needs to be done to get data into WIN6. At the fall conference we will consult with the sub-committee to confirm priorities and timetable. A Gantt chart will then be prepared to keep us on track.

5. Adjourn Meeting:

Meeting ended at approximately 4:10 p.m. The group will next meet at the November conference on Monday morning during the Attachments block on Monday morning, 16NOV09.