

Draft Meeting Minutes  
ASC OP TF 1 – Optical Glass  
Thursday, 08, 2013 , 16:30 – 17:30 EDT

Teleconference only

**1. Welcome and Introductions**

Hal Johnson called the meeting to order at 16:31. In attendance were Dave Aikens, Bill Royall, and Gordon Boulton. Since we all knew each other, we did not do introductions.

**2. Approval of the agenda**

Gordon Boulton motioned to accept the agenda, with the modification to add approval of the minutes to the previous meeting. The motion was seconded by D. Aikens and the motion passed.

**3. Approval of the minutes to the previous meeting**

Bill Royall moved we accept the minutes to the June meeting. G. Boulton seconded, and the motion carried.

**4. Decision regarding OP3.001, in the context of MIL-G-174B, ISO 12123, and ISO 10110-2, -3, and -4**

D. Aikens explained Schott USA's position on the glass standards. Tara Maggiano of Schott said that Schott USA necessarily follows Schott Corporate in Germany, and they do not support OP3.001. Specifically problematic are the Striae and Bubble specifications. Moreover, they are moving away from using ISO 10110 as their catalog specification, and using ISO 12123 in the future. Therefore they would encourage us to withdraw OP3.001, and issue ISO 12123 as a National Standard. Corning representatives had no strong opinion. Ohara has said they use the MIL-G-174B method for Striae, but they do not generally support OP3.001 or ISO 10110.

The group then reviewed the details of ISO 12123 and OP3.001 for Striae. D. Aikens found the Schott TIE25 online that ties off the MIL-G-174B grades with their new interferometric testing, and got the same amount of wavefront deviation per 50 mm of glass as is in the table in ISO 12123. Therefore the fact is that OP3.001 and ISO 12123 are in exact agreement for Striae, even though they do not indicate this.

The group then reviewed the details of ISO 12123 and OP3.001 for Bubbles. Right away, it was clear that the two standards don't speak the same language; ISO 12123 specifies maximum bubble size and number of bubbles, while OP3.001 specifies only total obscured area in mm<sup>2</sup>. MIL-G-174B, on the other hand, specifies maximum size bubble and total obscured area in mm<sup>2</sup>. This, though, is not likely to be the cause of concern. The bigger issue is that the grades in OP3.001 are too tight; IG0 (the lowest

grade) is 0.99 mm<sup>2</sup> of total obscuration, which is roughly equivalent to MIL-G-174B grade 10, and about equal to ISO 12123's second tightest grade. ISO 12123's tightest grade is equivalent to OP3.001 grade IG3 or IG2, and OP3.001 IG4 is off the chart. The committee concluded that, when OP3.001 was drafted, the four grades chosen were based on the tightest of the grades for MIL-G-174B, which may have been intended for precision applications like reticles only.

W. Royall asked what would be best for the USA? D. Aikens said that, since the US was more of a user of glass than a maker of glass, the US benefitted most from uniform standardization, which would mean adopting ISO 12123, even if we need to tweak it to match our current needs. There was general agreement to this approach.

D. Aikens moved we adopt ISO 12123 as a national standard. G. Boulton seconded, and the motion carried. The scope will be the first para. of ISO 12123, and the first sentence of the second paragraph.

H. Johnson volunteered to be the project leader. The project will nominally involve modifications to the current specification, and will therefore will be numbered OP1.2123 (ISO 12123 MOD)

Action: D. Aikens to file a PINS with ANSI for a new standard.

## **5. Standards for molded glass properties**

D. Aikens said that he has not had the chance to follow up on molded glass properties; the topic was tabled until next meeting.

## **6. Other business**

There was no other business

## **7. Time and place for next meeting**

D. Aikens moved that we meet at Photonics West. W. Royall seconded, and the motion carried.

## **8. Adjourn**

D. Aikens moved we adjourn. W. Royall seconded, and the motion carried. The meeting was adjourned at 17:27 EDT.