

Draft Minutes

ASC OP/TF 2- Committee for Optics and Electro-Optical Instruments - Optical Imperfections
Photonics West
Intercontinental Hotel
Stocon Room, 5th floor
San Francisco, CA

February 2nd, 2020, 13:30-15:15 PST

1. Introductions and assign note taker

Dave Aikens opened the meeting at 13:33 PST. No introductions were necessary as everyone already knew each other. Adam Phenis volunteered to take notes during the meeting.

2. Adoption of the draft agenda.

Jay Nelson moved we adopt the agenda v2 without changes, Adam Phenis seconded the motion, which carried unanimously.

3. Approval of minutes of the previous meeting.

Jay Nelson moved we accept the meeting minutes from the last meeting (February 2019), because we did not meet as planned at OptiFab. Patrick Augino seconded and the motion passed.

4. Updates on ISO 14997-2

Dave Aikens gave an update on the new machine vision based measurement standard for surface imperfections for ISO 10110-7. Part 7 gives you notation, 14997-1 gives both visual and dimensional verification techniques. The new standard, DTR 14997-2 is machine vision based. Has two parts one part for visibility based systems and another for dimensional based systems. Leaders: Danial Kiefhaber (Dioptiq), Dave Aikens (Savvy Optics), and John Nesbit (Redlux). Conclusion from last meeting is that we did not have the juice to create a standard, but a technical report could be made. Next meeting is a teleconference on Feb 12 at 0400 PST meeting to discuss latest draft.

5. Presentation of potential revision of OP1.002 for discussion

Dave Aikens presented his proposed revision of OP1.002

Review of changes:

Sleek – Merge of language from current standards literature

Sleeks vs scratches – clarification that sleeks do not count in visibility system but need to be accumulated in the measurement system.

Short scratches as digs – Dave Aikens tried to simplify confusion between when scratches and digs are separated. Proposed two millimeters. Question raised about what happens if the part is smaller than 2 mm? Potential solution is to use 2 mm or some ratio of diameter to scratch length

2.1.3.4.1 – Return to 2009 definition of digs to “apparent size” Suggested changes have no objection

2.1.3.7 – Sleeks don’t count; return to 2009 definition of digs. Suggested changes have no objection

2.1.5.3 – Scratch concentration. Proposed change is to be consistent with ISO standard. Deviation from MIL and more in-line with ISO. Suggested changes have no objection

2.1.5.5.2 – Proposal to get rid of “dig concentration test 2” which is really the minimum dig separation rule for 20-10 surfaces. 2.1.5.5.1 – Delete and revise 2.1.5.5.2 to get rid of the two test forms. Aligns with ISO standard.

2.3.1 Section – Added Discoloration (2.3.1.5) to area imperfections. Language chosen to match a bunch of Mil standards per Gordon’s analysis of the previous year (48497 and 48616). General comment that Stain and Haze on substrates is on the rise. Finding substrates that pass MIL-PRF-13830B but fail after coating. Can’t see streaks in the standard light box and this could cause failure from coating. Dave Aikens proposed to take another draft of this section if this is proposed to proceed and then ballot. Trey Turner – Maybe it makes just more sense to say no evidence of area imperfections with imperfections being defined in 2.3.1. It is not implicitly defined that this is uncoated only. Trey Turner suggested that it should be. Dave Aikens’s advice is that if you can see it in the light box, reject it. Specifically, 2.3.2 “Uncoated surfaces shall show no evidence of area imperfections in accordance with section 7.” Trey Turner has never been a fan of a separation between uncoated and coated surfaces. Jay is concerned about the two methods of inspection which means that these will appear differently between the two. Dave Aikens is going to keep the standard as is and will let it hash out during balloting.

6.4 – Suggested wording change had no opposition.

7.3 – Dave Aikens would like to offer getting rid of Method 1. Transmitted method 1 where the operator looks directly into the light. It has been reported that people get headaches from the iris changing from looking into the light. Trey Turner said that they do not use this technique and Dave Aikens said that most companies do not use this and the few that do are some of the best manufacturers out there and swear by it. Manufacturers who do use this, should it be removed would probably still use this. The downside is that there is an OSHA risk for this method. Trey Turner asked if there are people who specify this method as a contractual requirement. Davidson box has this built in. Maybe put in a cautionary note. Dave Aikens asked for opinions during balloting.

Table 6: Army round robin brought this standard up to date to match Army results. Generally making things slightly brighter.

Dave Aikens recommended that the draft be updated and circulated as a TF level ballot and submit for revision. There is general agreement to incorporate changes in minutes, assign PINs and then start project. Big advantage is that this would harmonize this standard with ISO.

Trey Turner – Thoughts about area revisions and sleek changes are important, but unsure if it warrants a new revision as even with the updated language, there will be confusion. It is good that it is communized language with ISO.

When 10110-7 passed, they asked for a timeline of withdrawal of OP1.002. There is a community that relies on this standard and if it is withdrawn, then they have nothing.

Walt moved that Dave Aikens revise OP1.002 based on discussions and then the committee can perform an informal review based on it being on the OEOSC website. Trey Turner seconded and the motion carried.

6. Any other new business/new action items

No additional items raised.

7. Time and place for next meetig of TF2

Patrick Augino moved we have a teleconference in about 6 months, once the new draft is generally available. Suggested date 7/7/2020 at 8 AM PST. Adam Phenis seconded and the motion carried.

8. Adjourn

Leonard Hanssen moved we adjourn, Trey Turner seconded, and the motion carried. We adjourned at 15:10 PST.