

Draft Minutes
ASC OP/TF 2 – Committee for Optics and Electro-Optical Instruments –
Appearance Imperfections Standard Meeting
(Held in conjunction with SPIE Photonics West)

January 22, 2012
08:30 - 12:00 PST

Intercontinental Hotel
888 Howard St. San Francisco, CA 94103

Twin Peaks Room

1. Welcome and Introductions

Gordon Boulton opened the meeting at 8:39 PST. In person were Gordon Boulton, Allen Krisiloff, Erik Stover, Doug Hoover, Sara Mines (observer), Hal Johnson, Walt Czajkowski, Garth Eliason, William Royall, Piotr Szwaykowski, Trey Turner, Charles Gaugh, Dave Corridon (observer), and Dave Aikens. On the phone were Frank Dombrowski and Donna Howland. Ray Williamson joined at the break. Quorum was established.

2. Adoption of Agenda

W. Royall made the motion to accept the revised agenda, modified to add a review of the newest Gage-Line comparison standard, and H. Johnson seconded it. The motion carried unanimously.

3. Approval of the Minutes to the August 11, 2011 Meeting of ASC/OP TF2.

C. Gaugh moved that the minutes be accepted and F. Dombrowski seconded the motion. The motion carried.

4. Status of assigned action items from August 11, 2011.

Action: D. Aikens to investigate alternatives for file sharing within the group or with a subgroup. – A. Krisiloff reported the results of our forum and document sharing. We are currently experimenting with it.

Action: R. Williamson to cross-post members of the OSA and SPIE groups to increase people's awareness of OEOSC. – Ray was not in attendance at the time.

Action: D. Aikens will post the questions of ignore diameter and whether people use "closest but more visible" or "closest" in the use of the scratch standard. He will also do such a request for how people deal with sleeks. –done. Dave showed the committee the OEOSC LinkedIn group.

Action: A. Krisiloff will adjust the dimensional accumulation language to be more like MIL-C-48497A. – new version of OP1.002 has been drafted and posted to the website.

Action: A. Krisiloff will deliver the new version of 5-03 to D. Aikens who will put it, and the explanation for the new structure, up on the website. - done

Action: G. Boulton will provide a redlined version of 4-01 with typos and other errors. -done

5. Update on Army's switch to the SavvyInspector™ for calibration of Army-issued standards

D. Aikens reported that he visited the Army last week to perform the annual calibration of their system, which is in frequent use. While there, he met with Mark Lindenbaum and Amy Jones and discussed the changes the Army is making to their certification process. They have conducted a GR&R, and found the SavvyInspector™ gave more repeatable results than visual inspection when used by trained operators. Unfortunately they have not gotten the GR&R released for public distribution. They have also developed a new Operating Procedure which uses the SavvyInspector™ to grade each of the standards, but still requires a visual verification against the limit standards. They are in the process of revising the SOP to comply with new Army guidelines on how they should be structured. Once it is finished, it will be sent to Savvy Optics for proof-reading and to confirm that it is consistent with the process used at Savvy Optics.

One thing that is different about how the Army uses their system now compared to in the past is that they have found more reliable results from orienting the scratches vertically, rather than horizontally, so they asked to have their system re-calibrated to be always used that way. Savvy Optics is going to test this method out as well, and will likely publish the findings.

D. Aikens also said he was encouraging them to publish their work, so that the rest of the industry could benefit from it, but Mark explained that doing so would not be approved unless it benefitted the Army. They do not believe there is any issue regarding scratch and dig, since what they are doing now seems to work fine.

G. Eliason emphasized that the lasers community has more functional needs for surface imperfection standards. A. Krisiloff and C. Gaugh also echoed that there are commercial users of optics which continue to need scratch and dig specifications.

The group engaged in a lengthy discussion of the need for very tight surface imperfection standards for laser optics, imaging systems with coherent sources, and high power laser systems.

The consensus opinion was that OEOSC needs to take ownership of the artifact standards themselves.

6. Review of next draft of OP1.002, including any Annexes.

A. Krisiloff reviewed the discussion guide for OP1.002 and the design guide revision 3.

Break 10:03-10:25

After the break, A. Krisiloff continued his review of the design guide. We had a lengthy discussion about title. The group seemed to converge on a title of "surface imperfections" rather than "cosmetic specification of quality for optical components." A. Krisiloff was asked to consider changing the title on the next revision. The scope should also be changed to reflect the fact that the standard is not restricted to "cosmetic" imperfections.

The group next reviewed the accumulation rules. Most felt that the names of the accumulation and concentration rules should be retained from the old standard, but that the equations can be revised to show the new summation. W. Royall suggested that we could even write out the equation, since there aren't that many different kinds of scratches and digs. Another method of making the accumulation rules more clear would be to include graphic examples, such as the ones that are currently in the course "Understanding Scratch and Dig." One additional suggestion was made that "test" could be considered ambiguous, since many people think of the inspection rather than the accumulation rules.

The list of definitions is significantly longer than before, and moved to a glossary. It is very important that we do not change the meanings of standard terms in the industry. It was also observed that standards should have some level of inertia, and should not radically change unless it is necessary due to a technological change.

There was a discussion regarding schedule of the new draft. There were opposing views regarding the desire to take whatever time it needs to get the standard correct, rather than rush to a revision of an actively used standard, versus a need to get the new version into circulation sooner, since there will be more resistance to change as time progresses. The plan is to get through one more set of redlines after the next revision, and then get to blue line by January of next year.

7. New OP1.002 comparison artifact from Gage-Line

During the break, D. Hoover showed everyone the latest offering by Gage-Line for an ANSI OP1.002 comparison artifact. The new design is easier to use than the recommended layout in the current standard, since the imperfections are along the edges of the plate, which makes comparison easier. Gage-Line also designed a stand to allow the artifact to be mounted stationary for visual inspection or with a loupe in multiple configurations. General response was positive.

8. New Action Items.

The following action items were assigned at this meeting:

Action: A. Krisiloff change the title to “surface imperfections”

Action: A. Krisiloff revise scope to be consistent with the title.

Action: A. Krisiloff review the course and reconcile the naming of the accumulation rules to be more consistent with standard practice. Pay attention to the term “test”.

Action: committee to review the document and supply the project leader with detailed feedback on the current revision via the phorum by the end of March.

Action: D. Aikens confirm that all members of the TF have access to the phorum.

Action: A. Krisiloff to review all the feedback and create a new version of the standard by the end of May.

9. Time and Place for next OP/TF 2 meeting.

D. Aikens moved the next meeting be held in conjunction with OSA OF&T in Monterey, CA. D. Howland seconded the motion, and it carried with two abstentions.

A. Krisiloff suggested that maybe a webinar would be a good idea to consider for the next meeting.

9. Adjourn

A. Krisiloff moved to adjourn. D. Hoover seconded, and the motion carried. Meeting adjourned at 12:16 PST.