

Draft
Minutes
ASC OP/TF 4, Conversion of ISO 10110 to a National Standard Task Force Meeting
August 22, 2008
Telephone Conference

Present	7 Attendees; 1 Alternate Representing 20 ASC OP Member Organizations	
<input checked="" type="checkbox"/>	Committee Members	Representing
<input checked="" type="checkbox"/>	David Aikens	Savvy Optics Corporation
<input checked="" type="checkbox"/>	Gordon Boulton	JDSU Corporation
<input type="checkbox"/>	Andrei Brunfeld	Xyrtex
<input checked="" type="checkbox"/>	Benjamin Catching (Alternate)	JDSU Corporation
<input type="checkbox"/>	David Corridon	Individual
<input type="checkbox"/>	Walter Czajkowski	APOMA (Edmund Optics)
<input type="checkbox"/>	Frank Dombrowski	Gage-Line Technology, Inc.
<input checked="" type="checkbox"/>	Marla Dowell	IEEE/LEOS (NIST)
<input checked="" type="checkbox"/>	Lincoln Endelman	SPIE, (Endelman Enterprises)
<input type="checkbox"/>	Charles Gaugh	Davidson Optronics, Inc.
<input type="checkbox"/>	Krishna Gupta	Zygo Corporation
<input type="checkbox"/>	John Hamilton	Northrop Grumman
<input type="checkbox"/>	Hal Johnson	Harold Johnson Optical Lab
<input checked="" type="checkbox"/>	Alan Krisiloff	Triptar Lens Co., Inc.
<input type="checkbox"/>	Jonathan McGuire (Alternate)	Northrop Grumman Laser Systems
<input type="checkbox"/>	Bruce Netherton	Lockheed Martin Coherent Technologies
<input type="checkbox"/>	Sam Richman (Alternate)	Research Electro-Optics, Inc.
<input type="checkbox"/>	William Royall (by phone)	Eastman Kodak Company, Retired
<input checked="" type="checkbox"/>	Peter Takacs	Brookhaven
<input type="checkbox"/>	Trey Turner	Research Electro-Optics, Inc.
<input type="checkbox"/>	Steve VanKerkhove	Corning Tropel
<input checked="" type="checkbox"/>	Ray Williamson	Ray Williamson Consulting
		Observers (2)
<input checked="" type="checkbox"/>	Gene Kohlenberg	OEOSC
<input checked="" type="checkbox"/>	Travis Hoggard	La Croix Optical

Auditor's Summary of Meeting

During this teleconference the Task Force explored its options for adopting ISO 10110-1 as an American National Standard (ANS). A draft foreword for the national version was reviewed. The issue concerned the fact that the ISO document made normative reference to several other ISO standards that the Task Force wanted to be optional. The goal was to be able to call the standard ANSI/ISO 10110-1. The Task Force decided to contact ANSI to get an opinion concerning the wording of the foreword.

The group also looked at ISO 10110-10 to see what would be required in order to make it an acceptable ANS. It also made normative references to other ISO standards that should not be required in the US.

The Task Force decided to begin looking at ISO 10110-5, -6, -8, -9, -11, and -12 at the next meeting.

1. Welcome and Introductions

D. Aikens opened the meeting at 1:37 p.m. He asked the Secretary to report who had joined the teleconference.

2. Adoption of Agenda

Approval of the agenda was added as an item along with another item to set the time and place of the next meeting. There is no draft foreword of ISO 10110-10 available so that item was deleted. M. Dowell moved that the modified agenda be approved, and A. Krisiloff seconded it. The motion carried unanimously.

3. Review of D. Aikens' proposed foreword to 10110-1

D. Aikens explained that the meeting was being called to address the desire to adopt ISO 10110-1 and -10 as an ANS. The US has no national drawing standard, but common practice utilizes MIL-STD-34, "Preparation of Drawing for Optical Elements and Optical Systems, General Requirements for," which was superseded by ASME-Y14.18, "Optical Parts." Y 14.18 has also been withdrawn. OP could update Y14.18, or redraft MIL-STD-34. Either choice would be a significant undertaking. If OP were to adopt ISO 10110 then the ANSI/OEOSC TAG would have a stronger position to press for improvements to the ISO version. OEOSC would also generate cash flow from the sale of the ANSI version. OP could write a foreword for the US version to suggest a more appropriate use of the standard. L. Endelman pointed out that it is also easier to make changes to the standard without having to go to the ISO committee.

R. Williamson asked how the US version could be called ISO 10110 if OP makes technical changes to the document. D. Aikens said that the normal procedure is that a country would take the ISO document, translate it into its own language, add an explanatory foreword, and release it as XXX/ISO 10110. L. Endelman commented that a country could make changes to the standard and then offer the changed document to ISO as a draft for an updated ISO document. The two would then be synchronized. The Secretary said that if the US makes technical changes to an ISO standard, then OP would have to give it a separate number, OP1.XXX and reference the original ISO number. OEOSC would pay a royalty to ISO based upon the percentage of ISO material in the new document.

D. Aikens asked the Secretary how the document would be identified if no changes were made other than adding a US foreword. The Secretary said that the document would be labeled ANSI/ISO 10110-1. D. Aikens said that the German drawing standard DIN/ISO 10110-1:2004 is based upon ISO 10110-1:1996, not the the 2008 version.

L. Endelman suggested that the group consider the reverse process whereby a country offers a national standard to ISO, who adopts the document. The Secretary said that ISO would not use the original country document number, but would give it a unique ISO number. Then the originating country would have the option of withdrawing its national standard and adopting the ISO version.

G. Boulton noted that D. Aikens had changed the reference wavelength in the foreword. He asked if any other country has made a wavelength reference change. D. Aikens did not know if any had. ISO 10110 references ISO 7944, "Optics and optical instruments – Reference wavelengths," which chose a wavelength used on the shop floor. However, most quality testing is done using interferometers, which use helium/neon as a source. ISO 10110-1 does not specify a reference wavelength to use, but it identifies ISO 7944 as a normative reference. Currently if you want to use 632.8 nm as a reference wavelength, you have to put a note on the drawing. If you want to reference 546.17 nm, then you do not. Most engineers write the reference wavelength on their drawings anyway.

D. Aikens said that the Task Force must decide if it wants to make technical changes to the standard. He referred to item 5 in his draft foreword to ISO 10110-1:

Alternative notations are allowed for glass properties. If desired, the material birefringence, bubbles and inclusions, inhomogeneity and/or striae can be specified using ANSI/OEOSC OP3.001. When this is desired, the symbols and notations defined in that standard are used in place of 0/, 1/, and/or 2/. In this case, an additional note shall be added to the drawing clarifying which glass standard notation is in effect. Since alternative notations are offered in the areas of glass properties the normative references for ISO 10110-2, ISO 10110-3, and ISO 10110-4 should be considered informative.

While this is not consistent with the international version, it is not in conflict with it either. ISO 10110-1 is about drawing format, and ISO 10110-10 describes specific notation. So D. Aikens did not think that his note was a material change. He is offering the ability to use another standard in addition to the ones referenced by the ISO document. A user has this option anyway, because he can reference the standard he is using on the drawing.

R. Williamson asked if the US notation was the same as the ISO notation. D. Aikens said that they were entirely different, but that would make it obvious that the US notation was being used rather than the ISO notation.

D. Aikens asked if the suggested changes would serve the best interests of US optics industry. R. Williamson asked what affect such wording in a foreword would have on the interpretation of the document.

A. Krisiloff suggested that the use of the foreword to note changes would confuse the US industry because the users would have to understand all of the ISO normative references to know why they could ignore them and use the US references instead. D. Aikens said that there are eight or nine ISO normative references in ISO 10110-1. Changing them to informative means that the user does not have to reference them. That would simplify the standard.

D. Aikens' wording in the US foreword was intended to recognize common practice in the US. ASC OP would not be asking the user to become an expert in drawing notation. An American company wanting to use ISO 10110-1, would not want to use parts -2, -3, and -4 because they are incorrect. If ISO 10110-1 described only a drawing format, US industries would have no problems using it; however, the international standard has added seven normative references and also text that has nothing to do with drawing notation. That is why the US foreword has been written in this manner.

A. Krisiloff suggested that the Task Force cut and paste the parts that the US needs from the ISO document, and add the references to pertinent US standards. This way the user does not see the references that are being ignored. D. Aikens countered that the world doesn't need another drawing standard. G. Boulton said that no one would recognize the ANSI standard as being a derivative of the ISO drawing standard. D. Aikens said that his intent is that the user has the option of using the ISO drawing standard exactly as the rest of the world uses it; however, the user also has the option of incorporating alternative US standards on their drawings.

L. Endelman asked if it would be better to revise ISO 10110-1 to make it acceptable to the US. G. Boulton said that at the Boulder ISO meeting the reference wavelength was discussed ad nauseum with no change ultimately being made. He felt that the foreword is clear now that the "-1" has been added to the document number.

D. Aikens asked if the Task Force did want to be able to release this as ANSI/ISO 10110-1.

D. Aikens said that ISO 7944 is normative for ISO 10110-1. He said that the proper way to handle the wavelength is to add a requirement to place a wavelength notation on the drawing. This practice is becoming more common.

L. Endelman asked if the comments about reference wavelength could be made as a note rather than in the foreword. The Secretary said that he would have to find the instructions to see if a note is acceptable while maintaining the ISO number.

B. Catching said that if a drawing makes reference test glasses, then he assumes that the mercury line is intended. Why would anyone want to buy ANSI/ISO 10110-1 rather than the original ISO 10110-1? D. Aikens says that the value added is this proposed foreword. If a manufacturer uses the original ISO version, the glass standard referenced is incorrect, and the scratch and dig standard is fundamentally flawed. The US version would solve those problems. B. Catching asked if the foreword would have enough impact. These seem to be substantive changes. R. Williamson agreed with the question as to why one would read the foreword. He expects a foreword to be informative about the process of writing the standard rather than being a part of the standard.

D. Aikens suggested that perhaps the foreword could be normative. Since most of the standards documents have a note stating that the foreword is informative, which implies that perhaps a foreword could be normative. A. Krisiloff countered that B. Catching's question would not be answered if the foreword were to be made normative. Users may still ignore the foreword. He interpreted B. Catching's question to mean, "Are we not really required to make a material modification to the standard itself?"

L. Endelman said that he assumes that a foreword is a synopsis of what is contained in the standard without details.

D. Aikens said that if he can put the references in the foreword, then the editing process is almost completed. If the references are not put in the foreword, he is not sure what to do next. Can ASC OP make the foreword normative? Is putting the references in foreword sufficient?

D. Aikens continued noting that if a user bought the US version and did not read the foreword, he would use the standard exactly as ISO intended. If a manufacturer got a drawing that referenced ANSI/ISO 10110-1, and read the notations as the ISO standard intended, he would have no problems. He would be safe from misuse. If they read the US foreword, then they would find that it is OK to use common practices of correcting the errors in the glass type and the scratch/dig notations. If the manufacturer saw the notation 80-50 per ANSI/OEOSC OP1.002, he would still know what to do.

D. Aikens said that he has had conversations with his German standards counterparts. They say that referencing a US standard is not compliant. In the US the industry has always viewed drawing notations not as laws but as guidelines.

L. Endelman added that in European countries standards are considered law, unlike the voluntary US standards.

A. Krisiloff asked if the net benefit of releasing the US version of ISO 10110-1 is to provide OEOSC with some revenue since the US industry does what it wants when creating optical drawings. B. Catching said that he did not agree with that conclusion. The drawing notation is just short-hand for text that the creator and the user both understand. Both of them have to have copies of the standard in order to properly interpret the notation. The value added, in this case, is that the US version tells the users the accepted method for making notations.

G. Boulton said that if ASC OP were to make changes to the body of the text, the change would be made to ISO 10110-1, fundamental stipulations.

A. Krisiloff suggested that if making normative statements in a foreword is not allowed, then a statement cautioning the user to watch out for the default wavelength of 546 nm could be substituted.

M. Dowell suggested that the foreword could suggest that the user specifically state the reference wavelength being used. G. Boulton said that if the word "since" was added to item 3 in the foreword, then it would no longer be normative. Item 3 would then state:

Since the default wavelength in the United States is the red HeNe line, 632.8 nm, the normative reference for ISO 7944 should be considered informative. A note should be included on the drawing indicating the wavelength, e.g., reference wavelength $\lambda=632.8$ nm, unless otherwise specified.

D. Aikens noted that the Task Force still needs to decide if notes should be added to the document in addition to or rather than in the foreword.

Other corrections to the foreword include

1. The addition of -1 to the ISO 10110 entries in the first two paragraphs;
2. Superseded was spelled wrong;
3. Item 5 was modified (as it appears earlier in the minutes) to remove references to MIL-G-174B.

D. Aikens asked if notes should be added to the document in addition to comments in the foreword. A. Krisiloff and G. Boulton agreed that notes should not be added.

4. Discussion of ISO 10110 overall strategy

D. Aikens did not draft a foreword to part 10 because he was not sure how far the Task Force would want to deviate from the original ISO 10110 implementation. He considers part 10 to be the “pay dirt” of the entire ISO 10110 package because it tabulates the notations. His problem with part 10 is that Table 1 explicitly references ISO 10110-2, -3, -4, -5, -6, -7, -9, and -17 along with specific symbols that must be used. This is unusual because ISO 10110-1 references the individual sections of the standard for the notation. Part 10 is being redundant. How does ASC OP implement ISO 10110-10 when many parts of Table 1 will cause problems?

At this point the conference was recessed from 3:15 p.m. – 3:33 p.m.

D. Aikens continued by saying that the section called Non-toleranced Data is problematic. It states, “All properties specified neither in the drawing field nor in the table field are covered by ISO 10110-11.” The second problem is Table 1, “Properties to Be Listed,” which describes all of the symbology that is presented in the other sections of the standard. For example, “0/ – Stress birefringence tolerance in accordance with ISO 10110-2.” This is a problem for ASC OP because it does not want “0/” to be tied to ISO 10110-2.

A. Krisiloff asked what does the US want in the table. D. Aikens said that the tabular nature of the drawing should be preserved. Short-hand notation should be preserved to reference different items. However, the user should not be constrained to apply all of those entities as described in the document.

P. Takacs asked if the problem was caused by the specific reference. D. Aikens replied that there would be no problem if “0/” simply referred to stress birefringence, and “1/” to bubbles and inclusions, then ASC OP could modify ANSI/OEOSC OP3.001, “Optical Glass” to allow the user to conform to that notation. There is no obvious way to avoid this problem without editing the table.

L. Endelman asked if the table is correct as it stands or does it have to be changed too. D. Aikens said that the table is consistent with the other parts, but it oversteps its charter. While it describes itself as a tabular representation, it goes further to list the notation which is contained in each sub-section of ISO 10110. It is therefore, redundant. If the US proposed to change this table, the rest of the international contingent would object because they want these notations to specifically be tied to the other parts of ISO 10110. As a national standard we would like to give the option of using an ASC OP standard as a substitute.

R. Williamson said that “0/” would be confusing if the US were to substitute the US notation. D. Aikens agreed that the other documents should make sure that the notations were not interchangeable in any way. As an example, “5/” references ISO 10110-7. The notation would then be $1 \times 0.63; L4 \times 0.025$, etc. ASC OP would substitute 80-50 per ANSI/OEOSC OP1.002. There is no chance that those two notations could be confused.

G. Boulton asked why this could not be handled in the foreword to the ANS version by instructing the user to add “ANSI” to the notation to indicate that the ANSI form is being used. D. Aikens replied that the argument would be that OP is creating a new notation “0/ANSI.”

A. Krisiloff likes the idea of using the foreword.

D. Aikens said that one proposal is that the foreword be written to indicate that alternative notations may be used for 0/, 1/, 2/, and 5/. Another proposal is to ignore ISO 10110-10, or release a US part 10 with the US table.

B. Catching said that he would prefer that ASC OP revise the body of ISO 10110-10 and describe in the foreword how it is different from the international version. A. Krisiloff said that when he thinks of standards, that means that there is one agreed upon way to accomplish a task. An engineer is always able to do as he pleases as long as he documents the way he wants the task accomplished. However, in this instance there are two widely used methods, the US method and the rest of the world method. If the standard can clearly identify which method is being employed then the US can continue its common practice and the rest of the world can continue its common practice.

A. Krisiloff suggested that if ASC OP were to rewrite ISO 10110-10 as an ANS, then the ANSI/OEOSC TAG would be in a position to present it to the ISO committee. Those countries who are currently “on the fence” regarding the acceptance of the current ISO version may lean toward the US version.

A. Krisiloff asked what copyright issues would arise if ASC OP were to release a modified version of the ISO standard. The Secretary said that OEOSC would pay royalties to ISO based upon the percentage of ISO content in the modified documents. He continued by saying that ASC OP could adapt the current ISO 10110 series of documents for release as

ANSI standards with ASC OP numbering. Then the package could be presented to ISO with the goal of getting ISO to adopt the US package as a replacement for the current ISO package. If that were accomplished, then ASC OP could withdraw the US version and adopt the international version.

D. Aikens asked if the Task Force wants him to draft an American National Standard that contains pertinent information from ISO 10110-10. The document would have an ASC OP number. G. Boulton said that he would prefer that the task be accomplished using the foreword to the ASC OP version. A. Krisiloff said that the decision would depend upon whether ANSI agrees that the use of a foreword does not constitute a material change to the standard. L. Endelman thought that a draft of a US version should be prepared in case that the foreword approach is not acceptable.

D. Aiken's said that there is a proliferation of ISO 10110 drawings because the optics software companies are outputting drawings in the ISO format, not because of the standard itself. The drawings now say "indications according to ISO 10110." His agenda is to go to the software manufacturers after there is an ANSI version of ISO 10110-1 and ask them to change the notation on their drawing output to say "indications according to ANSI/ISO 10110." If the software output refers to ANSI/ISO then we would begin to see the propagation of the standard. That would be a huge fait accompli. He said that if he were to ask them to change the note to say "indications according to ANSI/OEOSC 1.XXX," they would ignore him. G. Boulton agreed. If ASC OP released its own version it would be reinventing ASME Y14.18.

5. Plan next steps

L. Endelman proposed that the matter be tabled until the Secretary can get an opinion from ANSI concerning the use of a foreword to the ISO version.

G. Boulton asked when the Task Force would next meet. The Secretary said that the next meeting would occur during the OSA annual meeting in Rochester, NY in October.

A. Krisiloff suggested that the Secretary offer examples of the foreword to ANSI to get a reading concerning the suitability of its wording.

6. Assign tasks

The following tasks were proposed to be accomplished by the October meeting:

- D. Aikens to submit a foreword of ISO 10110-10 by 9-15 to G. Kohlenberg;
- R. Williamson to review ISO 10110-6 and lead the discussion;
- B. Catching to review ISO 10110-5 and lead discussion;
- D. Aikens to review ISO 10110-8 and lead discussion;
- G. Boulton to review ISO 10110-9 and lead discussion;
- A. Krisiloff to review ISO 10110-11 and lead discussion;
- B. Catching to review ISO 10110-12 and lead discussion.

Parts 14 and 17 will be tabled for the present time.

7. Time and Place of next TF 4 Meeting

The Task Force agreed to meet in Rochester, NY on October 20, 2008. The Secretary asked which Task Force meeting would be held in the morning. TF 4 decided that they wanted to meet in the afternoon. D. Aikens said that he had to give a keynote address at 1:00 p.m. on the 21st. M. Dowell said that the Board meeting would be in the morning so he would not miss it.

8. Adjourn

M. Dowell moved that the meeting be adjourned; B. Catching seconded the motion, which carried unanimously. The meeting adjourned at 4:30 p.m.