

RESOLUTION 08/2014

Adoption of the agenda

The subcommittee adopted the agenda as given in document N 861.

RESOLUTION 09/2014

Appointment of the drafting committee

The following delegates agreed to assist the secretariat in preparing and finalizing the resolutions:

Marla Dowell, USA

Akira Kikuchi, Japan

RESOLUTION 10/2014

Report of the secretariat

The subcommittee accepted the report on the activities of the secretariat as given in document N 862 and as presented by Mareike Trunk.

RESOLUTION 11/2014

Minor revision of ISO 10109

On the recommendation by WG 3, the subcommittee resolved to register a minor revision of ISO 10109, as revised during the WG 3 meeting.

ISO/FDIS 10109 *Optic and photonics – Guidance for the selection of environmental tests*

Target date: Submit FDIS manuscript to ISO CS by: 2014-11-30

RESOLUTION 12/2014

Revision of ISO 9022-9

On the recommendation by WG 3, the subcommittee resolved to revise ISO 9022-9 according to the discussion at the WG 3 meeting and circulate a Committee Draft within 2 months ballot.

ISO/CD 9022-9 *Optics and photonics — Environmental test methods — Part 9: Solar radiation and laboratory weathering*

Project leader: Florian Feil

Target dates: Circulation of Committee Draft: 2014-10-31

RESOLUTION 13/2014

Minor revision of ISO 9022 parts – circulation of Final Draft International Standards

On the recommendation by WG 3, the subcommittee resolved to register a minor revision of the following parts of ISO 9022 according to the discussion at the WG 3 meeting and circulate the revised documents as Final Draft International Standards.

ISO 9022 *Optics and photonics — Environmental test methods*

Part 11: Mould growth

Part 12: Contamination

Part 14: Dew, hoarfrost, ice

Part 17: Combined contamination, solar radiation

Target date: FDIS manuscripts to ISO CS by: 2014-10-31

RESOLUTION 14/2014

Circulation of ISO/DIS 10110-5.2 as Final Draft International Standard

On the recommendation by the joint meeting of WG 1 and WG 2, the subcommittee resolved to revise ISO/DIS 10110-5.2 according to the discussion during the joint meeting and circulate the revised document as Final Draft International Standard.

Changes to be made to N 859 are put down in Annex A.

Project leader:	Sven Kiontke	
Target dates:	Comments sheet and manuscript sent to Secretariat by PL by:	2014-09-30
	Ask ISO CS to skip the French version:	2014-09-30
	Submission of FDIS to ISO CS by:	2014-10-15

RESOLUTION 15/2014

Circulation of ISO/DIS 14999-4.2 as Final Draft International Standard

On the recommendation by the joint meeting of WG 1 and WG 2, the subcommittee resolved to revise ISO/DIS 14999-4.2 according to the discussion during the joint meeting and circulate the revised document as Final Draft International Standard.

ISO/FDIS 14999-4 *Optic and photonics – Interferometric measurement of optical elements and optical systems – Part 4: Interpretation and evaluation of tolerances specified in ISO 10110*

Changes to be made to N855 are put down in Annex B.

Project leader:	Axel Krause	
Target dates:	Comments sheet and manuscript sent to Secretariat by PL by:	2014-09-30
	Ask ISO CS to skip the French version:	2014-09-30
	Submission of FDIS to ISO CS by:	2014-10-15

RESOLUTION 16/2014

Circulation of ISO/WD 14997 and ISO/WD 10110-7 as Committee Draft

On the recommendation by the joint meeting of WG 1 and WG 2, the subcommittee resolved to revise ISO/WD14997 and ISO/WD 10110-7 according to the discussion during the joint meeting and circulate the revised documents as Committee Drafts.

ISO/CD 14997 *Optics and photonics – Test methods for surface imperfections of optical elements*

ISO/CD 10110-7 *Optics and photonics – Preparation of drawings for optical elements and systems – Part 7: Surface imperfection tolerances*

Project leader:	Dave Aikens	
Target dates:	Comments sheets and manuscripts sent to Secretariat by PL by:	2014-10-15
	Circulation of committee drafts to SC 1 by:	2014-11-15
	Closure of 3-months-ballot on CD by:	2015-02-15
	Comments' resolution meeting (Webex) on:	2015-03-19

RESOLUTION 17/2014

Circulation of ISO/FDIS 10110-6 as 2nd Final Draft International Standard

Following the recommendation by WG 2, the subcommittee resolved to revise ISO/FDIS 10110-6 according to the discussion during the WG 2 meeting and circulate the revised document as 2nd Final Draft International Standard.

ISO/FDIS 10110-6.2 Optic and photonics – Preparation of drawings for optical elements and systems – Part 6: Centring tolerances

All amendments to be made are recorded in N 875.

Project leader:	Manfred Thomae	
Target dates:	Comments sheet and manuscript sent to Secretariat by PL by:	2014-09-30
	Ask ISO CS to skip the French version:	2014-09-30
	Submission of 2 nd FDIS to ISO CS by:	2014-10-15

RESOLUTION 18/2014

Circulation of ISO/DIS 10110-19.2 as Final Draft International Standard

On the recommendation by WG 2, the subcommittee resolved to revise ISO/DIS 10110-19.2 according to the discussion during the WG 2 meeting and circulate the revised document as Final Draft International Standard.

ISO/FDIS 10110-19 Optic and photonics – Preparation of drawings for optical elements and systems – Part 19: Generalized surfaces

Change to be made to N 857:

Delete "during the life cycle of the part" in Clause 4.2.

Project leader:	Dirk Jahn	
Target dates:	Comments sheet and manuscript sent to Secretariat by PL by:	2014-09-30
	Ask ISO CS to skip the French version:	2014-09-30
	Submission of FDIS to ISO CS by:	2014-10-15

RESOLUTION 19/2014

Circulation of ISO/CD 10110-9 as Draft International Standard

On the recommendation by WG 2, the subcommittee resolved to revise ISO/CD 10110-9 according to the discussion during the WG 2 meeting and circulate the revised document as Draft International Standard.

ISO/DIS 10110-9 Optics and photonics – Preparation of drawings for optical elements and systems – Part 9: Surface treatment and coating

Project leader:	Hansjörg Niederwald	
Target dates:	Comments sheet and manuscript sent to Secretariat by PL by:	2014-12-31
	Submission of DIS to ISO CS by:	2015-01-31

RESOLUTION 20/2014

Revision of ISO 10110-17

On the recommendation by WG 2, the subcommittee resolved to revise ISO/WD 10110-17 according to the discussion during the WG 2 meeting. The project leader will deliver the revised manuscript to the Secretariat; afterwards a Committee Draft will be circulated for P-members ballot.

ISO/CD 10110-17 *Optics and photonics – Preparation of drawings for optical elements and systems – Part 17: Laser irradiation damage threshold*

Project leader:	Detlev Ristau	
Target dates:	Comments sheets and manuscript sent to Secretariat by PL by:	2014-11-30
	Circulation of committee draft to SC 1 by:	2014-12-15

RESOLUTION 21/2014

Circulation of ISO/WD 10110-1 as Committee Draft

On the recommendation by WG 2, the subcommittee resolved to revise ISO/WD 10110-1 according to the discussion during the WG 2 meeting and circulate the revised documents as Committee Draft.

ISO/CD 10110-1 *Optics and photonics – Preparation of drawings for optical elements and systems – Part 1: General*

Project leader:	Dave Aikens	
Target dates:	Comments sheet and manuscript sent to Secretariat by PL by:	2014-11-30
	Circulation of committee draft to SC 1 by:	2014-12-31

RESOLUTION 22/2014

Revision of ISO 10110-11 and circulation of Draft International Standard

On the recommendation by WG 2, the subcommittee resolved to revise ISO10110-11 according to the discussion during the WG 2 meeting and circulate the revised document as Draft International Standard.

ISO/DIS 10110-11 *Optics and photonics – Preparation of drawings for optical elements and systems – Part 11: Non-toleranced data*

Project leader:	Richard Youngworth	
Target dates:	DIS manuscript sent to Secretariat by PL by:	2014-10-31
	Submission of DIS to ISO CS by:	2014-11-30

RESOLUTION 23/2014

Conclusion from systematic review of ISO 10110-8:2010 – Confirmation and preliminary work

On the recommendation by WG 2, the subcommittee resolved to confirm the standard at this time and to start preliminary work towards a revision.

ISO/PWI 10110-8 Optics and photonics – Preparation of drawings for optical elements and systems – Part 8: Surface texture, roughness and waviness

The following experts were nominated:

Dave Aikens (US)
Michael Bray (FR)
Dana Granciu (RO)
Dirk Jahn (GE)
Akira Kikuchi (JP)
Eckard Langenbach (CH)

The subcommittee appointed Richard Youngworth to serve as the project leader.

Project leader:	Richard Youngworth	
Target date:	Working Draft sent to Secretariat by PL by:	2015-03-06
	Circulation of working draft to WG 2 for comments:	2015-03-31

RESOLUTION 24/2014

Schedule of the 2015 Systematic Review

In anticipation of the business to be conducted the subcommittee resolved to ask ISO CS to launch the 2015 Systematic Review with a start date of 2015-01-15:

ISO 9336-1:2010 Optics and photonics -- Optical transfer function -- Application -- Part 1: Interchangeable lenses for 35 mm still cameras

ISO 15529:2010 Optics and photonics -- Optical transfer function -- Principles of measurement of modulation transfer function (MTF) of sampled imaging systems

ISO 10110-12:2007 Optics and photonics -- Preparation of drawings for optical elements and systems -- Part 12: Aspheric surfaces

ISO 10110-14:2007 Optics and photonics -- Preparation of drawings for optical elements and systems -- Part 14: Wavefront deformation tolerance

RESOLUTION 25/2014

Extension of term of the conveners of WG 1 and WG 2

In recognition of the new ISO directives regarding 3-year terms for working group conveners as well as the continuity in working group leadership, the subcommittee resolved to re-appoint

Hans-Jörg Heimbeck as Convener of
WG 1 General optical test methods
Akira Kikuchi as Convener of
WG 2 Preparation of drawings for optical elements and systems

for 3-year terms until the end of September 2017.

Annex A - Changes to N 859 to be included for submission of ISO/FDIS 10110-5

After a lengthy discussion, the committee recommends renaming the term 'sagitta deviation' (commonly referred to as Value "A" on optical drawings) with 'power deviation'. In 14999-4:2007, the term 'sagitta deviation' referred to the distance normal from a reference surface to the optical surface. However, the term sagitta refers to the distance parallel to the z axis to an optical surface rather than the distance normal to the optical surface. Whereas power is the commonly used term to describe normal distance.

However, the committee agreed that the true sagitta deviation is a useful term for specifying optical components. Since the new definition of the sagitta deviation term is not included in ISO 14999-4, this definition has been added to this version of ISO 10110-5. In contrast to the power deviation (value A), the name "sagitta deviation" is represented by delta Z. With these changes, the naming convention regarding sagitta deviation is now consistent between 10110-5 and 14999-4.

Updates to both 10110-5 and 14999-4 are needed to accommodate the change in terminology from existing 14999-4 definition of 'sagitta deviation' to the new naming convention of 'power deviation'.

Specific changes are:

1. Add a Note to section 5.2.3. to reflect new definition of 'sagitta deviation'. The Note should state 'Previous versions of this standard used the term sagitta to represent this value A. This is not correct, since the true sagitta deviation is the distance evaluated parallel to the z axis. For better clarity, we have changed the name of quantity A everywhere to power deviation (reflecting the change in 14999-4), so that the true sagitta can be used correctly.'
2. Throughout the document including Annex A and B, refer to term quantity A as power deviation instead of sagitta deviation.
3. Use Annex A from ISO 10110-5:2007 rather than the version in the current draft.
4. In section 5.2.3, a 4th Note to Entry should be added after the definition of the quantity A. This note should read: 'Care should be taken in the specification of quantity A for surfaces with large amounts of curvature as the value of the power can vary significantly compared to the measured value of the deviation of the radius of curvature.'
5. In section 3.2, add Note to entry 3: For simple optical surfaces the z axis is often also the optical axis.
6. In section 5.2.4.1 the following sentences should be added replacing the last paragraph: 'Calculations of max and rms slope deviations are performed on the function f_{det} after detrending. By default f_{det} equals one of the following functions: wavefront irregularity f_{WI} , wavefront irregularity for cylindrical wavefronts $f_{\text{WI,CY}}$. All quantities are defined in 14999-4. A note on the drawing is required if method other than the default is used to calculate f_{det} .'

Annex B - Changes to N 855 to be included for submission of ISO/FDIS 14999-4

1. In 3.3.1 and throughout document, replace 'sagitta deviation' with 'power deviation'. See explanation in Annex A.
2. Add a Note 2 to entry in section 3.3.1 stating that 'Previous versions of this standard used the term sagitta deviation to represent this value. For better clarity, the term sagitta deviation has been replaced with power deviation to more accurately reflect the distance normal to a reference surface whereas sagitta deviation refers to the distance parallel to the z axis to the surface.'
3. In 3.3.2 and throughout document replace 'sagitta deviation for cylindrical wavefronts' with 'power deviation for cylindrical wavefronts'.
4. Change Clause 6 – Paragraph 3

"This part of ISO 14999 considers the distance between the measured surface and the theoretical surface. The distance is measured perpendicular to the theoretical surface; that is, along the theoretical surface normal. Therefore for an ideal part where the measured wavefront is the same as the theoretical wavefront, the difference is zero for all points on the surface, which would define a plane $z = 0$, wherein the normal lies in z -direction for all points on the surface. Hence, the slope deviation can be expressed by means of the gradient."

5. Change Clause 6.1 – Paragraph 1

"When using this kind of tolerance definition the slope of the surface is only evaluated by a line wise measurement, which is consistent with tactile measurements. Nevertheless the slope deviation tolerance applies to the complete test area or the defined areas, see ISO 10110-5. Hence, no starting or reference points are given."

6. Add a paragraph in the end of Clause 6.1

"For measurement equipment that provides measurement points with a smaller separation than the spatial sampling interval (i.e. scanning instruments) all measurement points within one spatial sampling length shall be used for calculating the least square fit of the straight line function to determine slope deviation for that sampling interval. As above, the distance between two adjacent intervals for calculating the slope deviation equals the spatial sampling interval."

7. Add a paragraph in the end of Clause 6.2

"For measurement equipment that provides measurement points with a smaller separation than the spatial sampling interval, all measurement points within the square with the edge length of the spatial sampling area shall be used for calculating the least square fit of the plane function to determine slope deviation for that spatial sampling area. As above, the distance between two adjacent squares for calculating the slope deviation is the spatial sampling interval."

8. Amend figure B.1

Amend the heading such that it reads

N	Radial	$\cos(\theta)$	$\sin(\theta)$	$\cos(2\theta)$	$\sin(2\theta)$	$\cos(3\theta)$	$\sin(3\theta)$	$\cos(4\theta)$	$\sin(4\theta)$	$\cos(5\theta)$	$\sin(5\theta)$
---	--------	----------------	----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------