

**Report to the American Wire Cloth Institute
on ASTM Committee E29 Activities
April 26, 2021**

ASTM Committee E29 on Particle & Spray Characterization, has three major subcommittees. The AWCI is a member of two, Subcommittee E29.01, Sieves, Sieving, and Screening Media, as well as Subcommittee E29.03, International Cooperation on Particle and Spray Characterization.

This report covers the last meeting October 26-27, 2020 conducted as a virtual meeting.

ASTM Dues

- Our 2021 annual dues have been paid as follows; \$75.00 individual membership, \$300.00 ISO/TC participation contribution, and \$80.00 E29 activity fee.

ASTM Standards on Disc

- Standards are only available on-line.

Announcements

- The Task Groups for E2016 and E11 meet virtually January 14.

Subcommittee E29.01

- The new Standard Test Method for Bubble Point Pressure of Woven Wire Filter Cloth was balloted with only the normal procedural negative received, and so with a couple minor editorial corrections, will move on to publication. This effort was started just 3 years ago, and especially with the final year being during COVID, was certainly completed at “warp speed”.

This document is technically robust with proper references and derivation of equations, and includes suggesting the PoroDict software module by Math2Market be used to model a filter cloth specification and generate a calculation factor to convert the test pressure result to a pore size. This allows a more accurate factor to be used vs. the historic 1.65 factor of ARP901 which has been shown to be too high.

It is important to note that this Test Method is simply a performance qualification on a sample of filter cloth, analogous to an XRF test to confirm a chemical certification.

- The new Standard Specification for Material Certifications was balloted to the Subcommittee, and received a persuasive negative. This was regarding the terminology differentiation of a certification of *compliance* vs. *conformance*. Upon much research and negotiation, the draft revision states they are the same but with idiosyncrasies, namely compliance is more binding to external specifications (i.e. wire per ASTM A478) while conformance is more general to internal specifications (ex. quality system per AS9100). It is anticipated the revision will now be submitted for a full Committee ballot.

- E2016-20, Standard Specification for Industrial Woven Wire Cloth
Current; next due for ballot action 2025

A Work Item and Task Group were formed to address that some of the tolerances defining a defective opening can result in physical impossibilities. Accordingly, Sect.5.3.4 and Table 10 are drafted for revision as follows. The proposed tolerances will align E2016 and ISO 9044 within an average difference of only 0.5% based on the standard market grade range of mesh specifications. The minus tolerance will only apply if the specification is >50% open area, as for heavier double crimp meshes a negative tolerance is not applicable because the physical possibility of severe undersize openings is less likely during weaving, and minor undersize openings do not typically affect screening processes.

TABLE 10 Tolerance for Defective Opening	
Note 1—Deviation from nominal opening per 3.2.21.	
Note 2 - minus tolerance only applies if >50% open area per 3.2.8	
Mesh	Tolerance ²
Coarser than 6 mesh incl	+/- 20 %
Over 6 to 15 mesh incl	+/- 25 %
Over 15 to 30 mesh incl	+/- 30 %
Over 30 to 100 mesh incl	+/- 40 %
Over 100 to 250 mesh incl	+/- 60 %
Finer than 250 mesh	+/- 80 %

The draft revision will also include reference to the new Standard Specification for the Certification of Metallic Materials, as well as a reference to the new Test Method for Bubble Point Pressure of Woven Wire Filter Cloth.

- E11-20, Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves
Current; next due for ballot action 2025

A Work Item and Task Group were formed to address a number of new issues including clarifying that tolerances are applied to the average wire diameter, multiple inspection paths are to be used in order to meet the requirement for number of sample openings, consider whether a section for Test Apparatus should be incorporated, and reference the new Standard Specification for the Certification of Metallic Materials.

- E2814-18, Standard Specification for Industrial Woven Wire Filter Cloth
Current; next due for ballot action 2023
- E1638-18, Terminology Relating to Sieves, Sieving Methods and Screening Media
Current; next due for ballot action 2023
- E2427-18, Test Method for Acceptance by Performance Testing of Sieves
Current; next due for ballot action 2023
- E323-16, E454-16, & E674-16, Standards for Perforated Plate and Sieves
These Standards all require action in 2021, and will be balloted for reapproval.
- E161-18, Standard Specification for Precision Electroformed Sieves
Current; next due for ballot action 2023

Subcommittee E29.03

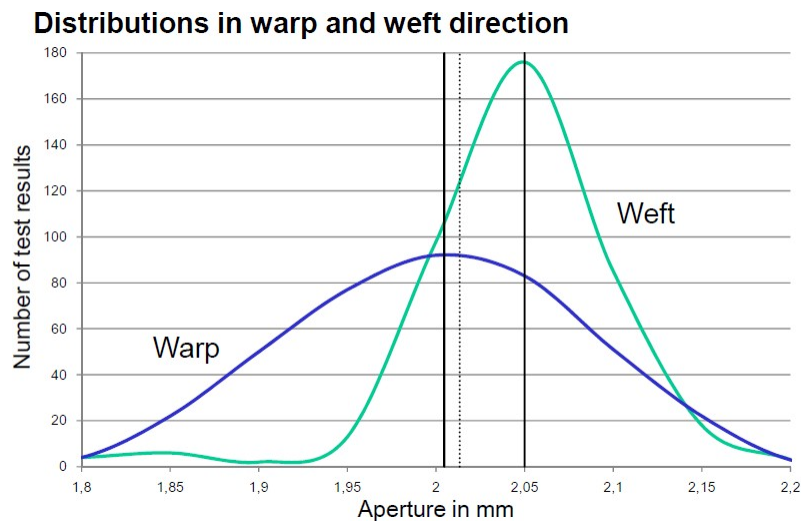
E29.03 is the Technical Advisory Group (TAG) under ANSI for the sole U.S. vote on ISO Technical Committee 24 (TC24), Particle Characterization including Sieving.

TC24 includes Subcommittee 4 (SC4) for particle characterization, and Subcommittee 8 (SC8) for test sieves, sieving and industrial screens.

SC8, Working Group 1 (SC8/WG1) is responsible for ISO 3310 Test Sieves, and Working Group 2 (SC8/WG2) is responsible for ISO 9044 Industrial Woven Wire Cloth.

- SC8 last met virtually October 13, 2020 and is tentatively scheduled to next met virtually this October 2021, under the Chairmanship of Frank Meyer of Haver & Boecker.

After discussions, SC8 requested Dr. Hinrichs of the Technische Universität Braunschweig in Germany to further study whether the statistical tolerances used in ISO 3310 are invalid because the distribution of the apertures in the weft (shute) mesh is not a normal distribution; and to prepare a proposal for new K-factors, sample sizes, and tolerances based on a T-distribution.

Future ASTM E29 Meetings

April 28-29, 2021; Amelia Island, FL (physical cancelled, to be virtual)

October 4-5, 2021; Atlanta Marriott Marquis; Atlanta, GA

April 27-28, 2022; Amelia Island, FL

Respectfully submitted,

Ken Beyer

AWCI Representative to ASTM E29

ASTM E29.01 Sub-Committee Secretary