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Test sieves — Technical requirements and testing —

Part 2: Test sieves of perforated metal plate

Tamis de contrôle — Exigences techniques et vérifications —

Partie 2: Tamis de contrôle en tôles métalliques perforées

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives.

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 24, *Particle characterization including sieving*, Subcommittee SC 8, *Test sieves, sieving and industrial screens*.

This fifth edition cancels and replaces the fourth edition (ISO 3310-2:1999), which has been technically revised.

ISO 3310 consists of the following parts, under the general title *Test sieves — Technical requirements and testing*:

— *Part 1: Test sieves of metal wire cloth*

— *Part 2: Test sieves of perforated metal plate*

— *Part 3: Test sieves of electroformed sheets*

Introduction

As the accuracy of test sieving depends on the dimensional accuracy of the test sieve openings, it is considered necessary in this part of ISO 3310 to keep tolerances on the holes in perforated metal plate as close as possible as the manufacturing process allows.

Requirements other than tolerances on the holes, such as requirements for the pitch of holes, any corner radii, and plate thickness, have not been limited more closely than necessary, since the influence of these criteria on test sieving is of minor importance, and excessively strict requirements may make manufacturing unnecessarily difficult.

Test sieves — Technical requirements and testing —

Part 2: Test sieves of perforated metal plate

1 Scope

This part of ISO 3310 specifies the technical requirements and corresponding test methods for test sieves of perforated metal plate.

It applies to test sieves having

— round holes, with sizes from 125 mm down to 1 mm, or

— square holes, with sizes from 125 mm down to 4 mm,

in accordance with ISO 565.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 2395, *Test sieves and test sieving — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2395 apply.

4 Designation

Test sieves of perforated metal plate shall be designated by the nominal size of the holes, expressed in millimetres, and by the shape of the holes.

5 Perforated metal plate

5.1 Requirements

The tolerances on the individual size of holes and the selection of pitches shall be as specified in Table 1.

5.1.1 Tolerances on individual size of holes

The tolerances on the individual size of holes as given in Table 1, Column 4, apply to the widths of the mid-sections of square holes and to the diameters of round holes.

5.1.2 Pitch, p

5.1.2.1 The pitches given in Table 1 apply to both round and square holes.

5.1.2.2 The nominal pitches given in Table 1, Column 5, are preferred.

The nominal pitches should be within the limits of p_{max} and p_{min} as given in Table 1, Columns 6 and 7. These are defined by a permissible range of choice of approximately ± 15 % of the value calculated from the nominal size of holes and the preferred pitch.

Table 1 — Tolerances on individual size of holes and selection of pitches

Dimensions in millimetres

Nominal sizes of holes, w [a]			Tolerances on individual size of hole ±	Pitch, p		
Principal sizes	Supplementary sizes			Preferred sizes	Permissible range of choice	
R 20/3	R 20	R 40/3		p_{nom}	p_{max}	p_{min}
(1)	(2)	(3)	(4)	(5)	(6)	(7)
125	125	125	1	160	184	143
	112		0,95	140	161	126
		106	0,9	132	152	119
	100		0,85	125	144	113
90	90	90	0,8	112	129	101
	80		0,7	100	115	90
		75	0,7	95	109	85
	71		0,65	90	103	81
63	63	63	0,6	80	92	72
	56		0,55	71	82	63,5
		53	0,55	67	77	60
	50		0,55	63	72,5	56,5
45	45	45	0,5	56	64,5	50,5
	40		0,45	50	57,5	45
		37,5	0,45	47,5	54,6	42,5
	35,5		0,4	45	51,7	40,5
31,5	31,5	31,5	0,4	40	46	36
	28		0,35	35,5	40,8	31,8
		26,5	0,35	33,5	38,5	30
	25		0,35	31,5	36	28,5
22,4	22,4	22,4	0,3	28	32,2	25,5
	20		0,3	25	29	22,5
		19	0,29	23,6	27,1	21,3
	18		0,28	22,4	25,8	20,2
16	16	16	0,27	20	23	18
	14		0,26	18	20,7	16
		13,2	0,25	17	19,5	15,1
	12,5		0,24	16	18,4	14,3

[a] In accordance with ISO 565, the lower limit of the nominal size of square holes is 4 mm.

Table 1 *(continued)*

Nominal sizes of holes, w [a]			Tolerances on individual size of hole	Pitch, p		
Principal sizes	Supplementary sizes			Preferred sizes	Permissible range of choice	
R 20/3	R 20	R 40/3	±	p_{nom}	p_{max}	p_{min}
(1)	(2)	(3)	(4)	(5)	(6)	(7)
11,2	11,2	11,2	0,23	14	16,1	12,6
	10		0,21	12,6	14,5	11,3
		9,5	0,21	12,1	13,8	10,2
	9		0,2	11,6	13,3	9,8
8	8	8	0,19	10,4	12	9,2
	7,1		0,18	9,4	10,8	8
		6,7	0,17	8,9	10,2	7,5
	6,3		0,17	8,5	9,8	7,2
5,6	5,6	5,6	0,15	7,7	8,9	6,6
	5		0,14	6,9	7,9	5,9
		4,75	0,14	6,6	7,6	5,6
	4,5		0,14	6,3	7,2	5,3
4	4	4	0,13	5,8	6,7	4,9
	3,55		0,12	5,2	6	4,4
		3,35	0,11	5	5,7	4,2
	3,15		0,11	4,7	5,3	3,9
2,8	2,8	2,8	0,11	4,35	5	3,6
	2,5		0,11	3,9	4,5	3,3
		2,36	0,11	3,75	4,3	3,2
	2,24		0,1	3,6	4,1	3,1
2	2	2	0,09	3,3	3,8	2,8
	1,8		0,08	3,1	3,6	2,7
		1,7	0,08	3	3,4	2,5
	1,6		0,08	2,75	3,2	2,3
1,4	1,4	1,4	0,08	2,6	3	2,2
	1,25		0,08	2,45	2,9	2,1
		1,18	0,07	2,4	2,7	2
	1,12		0,07	2,22	2,5	1,8
1	1	1	0,07	2	2,3	1,7

[a] In accordance with ISO 565, the lower limit of the nominal size of square holes is 4 mm.

5.1.3 Plate thickness

The nominal thicknesses given in Table 2, Column 2, are preferred. The nominal thickness may, however, depart from these values within the permissible range of choice given in Table 2, Columns 3 and 4.