

CEYLON STANDARD 124:1971
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**SPECIFICATION FOR
TEST SIEVES
(METRIC UNITS)**

BUREAU OF CEYLON STANDARDS

SPECIFICATION FOR TEST SIEVES
(METRIC UNITS)

CS 124:1971

Gr.8

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CEYLON STANDARD
SPECIFICATION FOR TEST SIEVES
(METRIC UNITS)

FOREWORD

This Ceylon Standard Specification was prepared by the Drafting Committee on Test Sieves. It was approved by the Metric Divisional Committee of the Bureau of Ceylon Standards and was authorised for adoption and publication by the Council of the Bureau on 1971-12-02.

This Standard Specification is based on ISO recommendations and it follows the international practice in making use of preferred number series and in expressing dimensions solely in metric units, that is, millimetres (mm) and micrometres (μm).

The nominal aperture sizes for woven wire cloth and perforated plates in Test Sieves stated in ISO/R 565 are 24 principal sizes in R 20/3 series (in which the ratio of successive sizes is 1.4) and 9 supplementary sizes in R 10 series (in which the ratio of successive sizes is about 1.26). In order to give a sufficient choice of sizes, in practice, most national standards specify nominal sizes in a series having a smaller ratio than 1.4. To meet this need ISO/R 565 states 'Pending the derivation of a more extensive ISO series of apertures, it is recommended that member bodies requiring sizes

additional to these stated should select them from the R 10, R 20, or R 40 series of Preferred Numbers*.

The nominal aperture sizes for woven wire cloth and perforated plates in test sieves given in this standard are therefore taken from R 40 series in which the ratio between successive sizes is 1.19 (R 40/3).

The nearest metric sizes to the obsolescent inch sizes and the approximate mesh numbers are given in Appendices.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or observation shall be rounded off in accordance with CS 102**. The number of figures to be retained in the rounded off values shall be the same as that of the specified value in this standard.

In preparing this standard, considerable assistance was obtained from the publications of the British and Indian Standards Institutions.

1 SCOPE

This Ceylon Standard specifies requirements for test sieves to be used for determining the size distribution of granular material in the particle size range from 125 mm down to 38 μ m. It covers both woven wire cloth and perforated plate sieving media.

*Preferred numbers are given in CS 103.

**CS 102 Presentation of numerical values.

2 TERMINOLOGY*

For the purpose of this standard, the following definitions shall apply:

- 2.1 **test sieve:** A sieve, which conforms to a test sieve standard specification, intended for the particle size analysis of a material.
- 2.2 **sieving medium:** A surface containing regularly arranged apertures of uniform shape and size.
- 2.3 **frame:** A rigid framework which supports the sieving medium and limits the spread of the material being sieved.
- 2.4 **aperture size:** Dimensions defining an opening.
- 2.5 **woven wire cloth:** A sieving medium of wires interwoven to form the apertures.
- 2.6 **wire diameter:** Diameter of the wire in the woven cloth.
- 2.7 **warp:** All wires running lengthwise of the cloth as woven.
- 2.8 **weft (shoot):** All wires running crosswise of the cloth as woven.
- 2.9 **type of weave:** The way in which warp and weft wires cross each other.
- 2.10 **plain weave:** Every warp wire crosses alternately above and below consecutive weft wires (see Fig. 1a).

**These definitions are taken from ISO/TC/24 draft proposal for "Terms and definitions relating to test sieves and sieving medium".*

2.11 twilled weave: Every warp wire crosses alternately above and below consecutive pairs of weft wires and vice versa (see Fig. 1b).

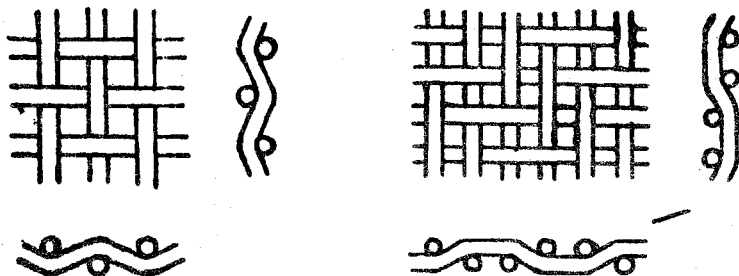


FIGURE 1 a -
Plain weave

FIGURE 1 b -
Twilled weave

2.12 perforated plate: A sieving medium of plate with uniform holes, in symmetrical arrangement.

2.13 pitch (centres): Distance between corresponding points of two adjacent holes in a perforated plate.

2.14 bridge width (bar): Distance between the nearest edges of two adjacent holes in a perforated plate.

2.15 margin: Distance between the outside edges of the outside rows of holes and the edges of the perforated plate.

3 DESIGNATION

3.1 Woven wire cloth in test sieves shall be designated according to nominal size of the square aperture.

3.2 Perforated plates in test sieves shall be designated according to nominal size of the square aperture, or nominal diameter of the round aperture. In addition the type of hole, square or round should be stated.

3.3 Sizes below 1 mm shall be expressed in micrometers (μm^*), sizes of 1 mm and above, in millimetres (mm).

4 FRAMES, COVER AND RECEIVER

4.1 Sieve frames

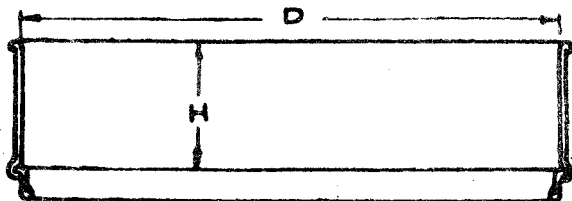
The frame of a test sieve shall be of suitable shape and dimensions and shall be made of brass, steel or stainless steel. Any other material may be used with agreement between the manufacturer and the purchaser.

The commonly adopted dimensions of round frames for use with different types of sieving media are given in Table 1. Variations of shape and dimensions shall be as agreed between the manufacturer and the purchaser.

4.2 Cover and receiver

When specified by the purchaser a cover and receiver shall be provided for round sieves, of the same material and gauge as those of the sieve frame (see Fig. 2).

TABLE 1 - Dimensions of round sieve frames



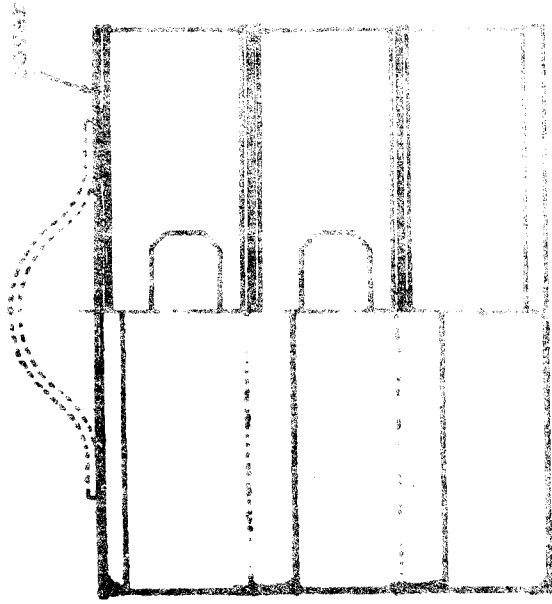
*1000 μm = 1 mm.

Table 1 - cont'd.

Nominal internal diameter D mm	Depth H		Minimum effective diameter of sieving surface mm	Appropriate sieving medium*
	Full depth sieve mm	Half depth sieve mm		
(1)	(2)	(3)	(4)	(5)
100	40	20	90	wire cloth
200	50	25	185	wire cloth or perforated plate.
300	75	-	275	wire cloth of aperture size not less than 1 mm or perforated plate.
450	not less than 100	-	425	perforated plate

When fine wire cloth is used in large sieves it may be supported by a spider or other means.

FIGURE 2 - Cover and receiver for round sieves



Receiver

4.3 Finish

Sieves, receivers and covers shall be smoothly finished. The seal between frame and sieving medium shall be formed so as to prevent lodging of the material to be sieved. There shall be no lacquer on surfaces which come into contact with the sample.

4.4 Nesting

Sieves, cover and receiver in a nest shall assemble snugly with one another.

4.5 Marking

A label shall be permanently attached to the frame of each sieve complying with this standard, legibly marked with the following information:

- a) Designation;
- b) The wording "Test sieve to CS 124";
- c) The material of the wire cloth or perforated plate and the sieve frame;
- d) The manufacturer's name or trade mark.

5 WOVEN WIRE CLOTH IN TEST SIEVES

5.1 Material

The following materials shall be used:

Range of aperture size	Material suitable
Less than 250 μm	Phosphor bronze
250 μm to 16 mm	Brass
1.00 mm and above	Mild steel
All sizes	Stainless steel

Coated or plated wires are not permitted in test sieves.

5.2 Wire

After the cloth is mounted in the sieve the average wire diameter at different positions across the sieving surface shall be uniform in order that the limits on aperture size can be obeyed. The preferred wire diameters and the tolerances are given in Tables 2a and 2b.

5.3 The weave

Wire cloth shall be regularly woven to produce uniform square apertures.

Warp and weft wires shall be perpendicular to each other with a maximum tolerance of $\pm 3^{\circ}$ from the perpendicular.

Wire cloth in sieves with a nominal aperture size of 75 μm and greater shall be plain woven, wire cloth in sieves with a nominal aperture size of 63 μm and smaller may be twilled.

For aperture sizes of 4.00 mm and greater the wire shall be crimped before weaving.

5.4 Mounting

The wire cloth shall be so mounted in the frame as to be held firmly and equally taut in all directions without any distortion, looseness or waviness of the mesh.

5.5 Tolerances on aperture size

The measured aperture size before the sieve is used shall comply with nominal size within tolerances X, Y and Z given in Tables 2a and 2b. These tolerances shall apply to the warp and weft directions separately. Aperture size is measured on the centre lines of the aperture (see Fig. 3).

TABLE 2 - Aperture sizes, preferred wire diameters and tolerances of wire cloth test sieves

a. Apertures in the range 16 mm to 355 μm

Nominal aperture size	Permissible variation in average aperture size	Maximum permissible variation in aperture size for not more than 6% apertures	Maximum permissible variation in individual aperture size	Preferred wire diameter	Maximum permissible tolerance on wire diameter
(1)	X (2)	Y (3)	Z (4)	(5)	(6)
mm	mm	mm	mm	mm	mm
16.0*	± 0.48	+ 0.80	+ 1.12	3.15	± 0.47
13.2	± 0.40	+ 0.66	+ 0.92	2.80	± 0.42
11.2*	± 0.34	+ 0.56	+ 0.78	2.50	± 0.38
9.50	± 0.29	+ 0.48	+ 0.67	2.24	± 0.34
8.00*	± 0.24	+ 0.48	+ 0.64	2.00	± 0.30
6.70	± 0.20	+ 0.40	+ 0.57	1.80	± 0.27
5.60*	± 0.17	+ 0.34	+ 0.50	1.60	± 0.24
4.75	± 0.14	+ 0.29	+ 0.43	1.60	± 0.24
4.00*	± 0.12	+ 0.28	+ 0.40	1.40	± 0.21
3.35	± 0.10	+ 0.23	+ 0.34	1.25	± 0.19
2.80*	± 0.094	+ 0.20	+ 0.31	1.12	± 0.17
2.36	± 0.071	+ 0.17	+ 0.26	1.00	± 0.15
2.00*	± 0.060	+ 0.16	+ 0.24	0.90	± 0.14
1.70	± 0.051	+ 0.14	+ 0.20	0.80	± 0.12
1.40*	± 0.042	+ 0.11	+ 0.18	0.71	± 0.11
1.18	± 0.035	+ 0.11	+ 0.17	0.63	± 0.09
1.00*	± 0.030	+ 0.09	+ 0.15	0.56	± 0.08
μm	μm	μm	μm	μm	μm
850	± 30	+ 79	+ 128	500	± 75
710*	± 28	+ 71	+ 114	450	± 68
600	± 24	+ 66	+ 102	400	± 60
500	± 20	+ 55	+ 90	315	± 47
425	± 17	+ 51	+ 81	280	± 42
355*	± 14	+ 43	+ 71	224	± 34

* The sizes in heavy type correspond to those proposed in ISO Recommendation R 565 - 1967. It is recommended that wherever possible these sieves be included in all sieve analysis data or reports intended for international publication.

b. Apertures in the range 300 μm to 38 μm .

Nominal aperture size	Coarse tolerances			Fine tolerances			Preferred wire diameter	Maximum permissible tolerance on wire diameter	
	Permissible variation in average aperture size	Maximum permissible variation in aperture size for not more than 6% apertures	Y μm (3)	Maximum permissible variation in individual aperture size	Z μm (4)	Permissible variation in average aperture size			X μm (5)
300	± 15	± 40	± 64	± 12	± 38	± 63	200	± 30	
250*	± 13	± 36	± 58	± 10.5	± 33	± 55	160	± 24	
212	± 12	± 33	± 53	± 8.5	± 30	± 51	140	± 21	
180*	± 11	± 31	± 51	± 9.0	± 26	± 43	125	± 19	
150	± 9.4	± 29	± 48	± 7.5	± 24	± 41	100	± 15	
125*	± 8.1	± 27	± 46	± 6.3	± 21	± 36	90	± 14	
106	± 7.4	± 25	± 43	± 5.3	± 19	± 33	71	± 11	
90*	± 6.6	± 25	± 43	± 4.5	± 17	± 30	63	± 9	
75	± 6.1	± 24	± 41	± 3.8	± 15	± 27	50	± 8	
63*	± 5.1	± 23	± 41	± 3.2	± 14	± 25	45	± 7	
53	± 4.8	± 21	± 38	± 2.7	± 13	± 23	36	± 5	
45*	± 4.8	± 21	± 38	± 2.7	± 12	± 22	32	± 5	
38	± 4.0	± 20	± 36	± 2.3	± 11	± 20	30	± 5	

*The sizes in heavy type correspond to those proposed in ISO Recommendation R 565 - 1967. It is recommended that wherever possible these sizes be included in all sieve analysis data or reports intended for international publication.

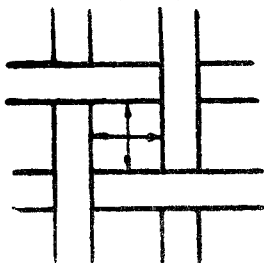


FIGURE - 3

5.5.1 *Average aperture size*

The average aperture size shall not be greater or smaller than the nominal value by more than the tolerance X.

5.5.2 *Intermediate tolerance*

Not more than 6 per cent of the apertures shall be above nominal size by more than the tolerance Y.

5.5.3 *Maximum tolerance for size of an individual aperture*

No aperture size shall exceed the nominal value by more than the tolerance Z.

5.6 *Inspection: Manufacturer's test*

5.6.1 *Survey for condition*

The wire cloth in the sieve shall be examined for condition; for this survey a uniformly illuminated background is helpful. If obvious faults, for example; weaving defects such as loose wire, creases, wrinkles, are found, the sieve is unacceptable. Part apertures are likely to be found round the periphery but blinded apertures away from the periphery are unacceptable.

5.6.2 *Oversize apertures*

The observer shall then carefully and methodically examine all the openings in order to detect oversize

apertures. Suspected oversize apertures in coarse sieves may be assessed with an engineer's limit gauge, segmental or vernier calliper; apertures in fine sieves may best be viewed when magnified optically. In the latter case lack of uniformity in aperture size can be seen in contrast with the general pattern of apertures of uniform size. Typical indications are a line of large apertures, or local noticeably irregular apertures. A note should be made of the location of areas in question.

Relatively large apertures shall be measured individually, and if one exceeds the maximum dimension permitted the sieve is unacceptable.

5.6.3 *Variations of aperture size*

Tests shall be made to check for the proportion which exceeds the intermediate limit, namely (nominal aperture size + Y).

The number of apertures whose size in either warp or weft direction falls within the tolerance band (nominal + Y), and (nominal + Z) shall be recorded and expressed as a proportion of the total apertures checked. If the proportion exceeds the percentage allowed, the sieve is unacceptable.

This test should be used also to conform that no apertures exceed the maximum of (nominal + Z); it may also be used to make an assessment of the distribution of the aperture width in the various tolerance bands, namely:

- less than (nominal - X)
- between (nominal - X) and (nominal + X)
- between (nominal + X) and (nominal + Y)
- between (nominal + Y) and (nominal + Z)

5.6.4 Average size of aperture

The average size of aperture shall then be measured over at least 10 apertures, if available, in each direction in each of at least two positions on the cloth. If the results from the two fields fall in different tolerance bands and if they contradict the information obtained from the test prescribed in 5.6.3., the average aperture size at more positions on the sieving surface shall be checked.

5.6.5 Certification

The sieve manufacturer shall be responsible for making a test on each test sieve before sale, and a certificate as shown in Appendix B shall be supplied with each test sieve when required by the purchaser. The purchaser shall state in his order when a more detailed test, that is, a calibration test, is required to be made by the manufacturer.

6 PERFORATED PLATES IN TEST SIEVES

6.1 Arrangement of square holes

Square holes shall be arranged in line with the centre points at the vertices of squares as shown in Figure 4.

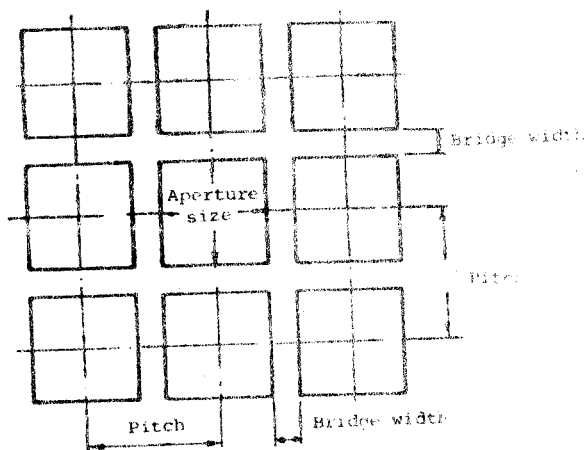


FIGURE 4 - Square holes

6.2 Arrangement of round holes

Round holes shall be arranged with the centres at the apices of equilateral triangles, as shown in Figure 5.

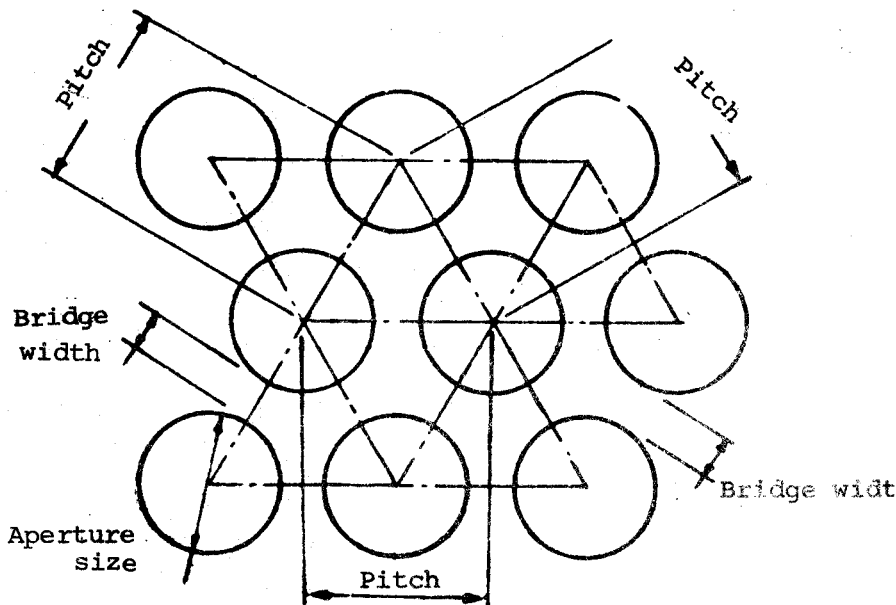


FIGURE 5 - Round holes

6.3 Material

Perforated plates shall be made of mild steel, unless the purchaser specifically requests other material.

6.4 Plate thickness

Perforated plates shall be of uniform thickness which shall lie in the range given in Table 3.

6.5 Pitch

The preferred nominal pitch is shown in Column 5 of Table 3. The nominal pitch may be up to 15 per cent

larger than the preferred pitch, or it may be smaller than the preferred pitch providing individual bridge widths comply with 6.6.

6.6 Bridge width

The bridge width is the pitch minus the aperture size. No individual bridge shall be less than half of the width given by subtracting the nominal aperture size from the nominal pitch.

6.7 Mounting

Perforated plates which are uniformly and cleanly punched shall be mounted with the punch entry side uppermost. The crevices, above and below, of the plate at its junction with its frame shall be filled with a suitable material and left smooth.

6.8 Tolerances on aperture size

Each aperture size of an unused sieve shall comply with its nominal size within the limits of tolerance shown in Tables 3 a, b and c.

6.9 Inspection: Manufacturer's test

6.9.1 *Survey for condition*

The perforated plate in the sieve shall be examined for condition; if obvious faults such as irregularly formed holes, ragged edges, and burrs upward, are found, the sieve is unacceptable.

6.9.2 *Oversize apertures*

The observer shall then carefully and methodically examine all the openings in order to detect oversize apertures. Suspected oversize apertures in coarser sieves may be checked with an engineer's calliper, or a limit gauge, segmental or vernier calliper; those in finer sieves may be viewed when magnified optically.

TABLE 3 - Perforated plate in test sieves

a. Apertures in the range 125 mm to 4 mm; square and round holes

Nominal aperture size	Plate thickness			Preferred nominal pitch of holes	Minimum width of any bridge	Maximum permissible tolerances on individual apertures	
	Preferred	Max.	Min.			Coarse	Fine
mm (1)	mm (2)	mm (3)	mm (4)	mm (5)	mm (6)	mm (7)	mm (8)
125*	3.0	4.0	2.5	160	17.5	± 1.00	± 0.50
106	3.0	4.0	2.5	132	13.0	± 0.90	± 0.45
90.0*	3.0	4.0	2.5	112	11.0	± 0.80	± 0.40
75.0	3.0	4.0	2.5	95.0	10.0	± 0.70	± 0.35
63.0*	3.0	4.0	2.5	80.0	8.5	± 0.60	± 0.30
53.0	3.0	4.0	2.5	67.0	7.0	± 0.55	± 0.28
45.0*	2.0	2.5	1.5	56.0	5.5	± 0.50	± 0.25
37.5	2.0	2.5	1.5	47.5	5.0	± 0.45	± 0.23
31.5*	2.0	2.5	1.5	40.0	4.25	± 0.40	± 0.20
26.5	2.0	2.5	1.5	33.5	3.5	± 0.35	± 0.18
22.4*	2.0	2.5	1.5	28.0	2.8	± 0.30	± 0.15
19.0	2.0	2.5	1.5	23.6	2.3	± 0.29	± 0.15
16.0*	2.0	2.5	1.5	20.0	2.0	± 0.27	± 0.14
13.2	1.5	2.0	1.0	17.0	1.9	± 0.25	± 0.13
11.2*	1.5	2.0	1.0	14.0	1.4	± 0.23	± 0.12
9.50	1.5	2.0	1.0	12.2	1.35	± 0.21	± 0.11
8.00*	1.5	2.0	1.0	10.6	1.3	± 0.19	± 0.10
6.70	1.0	1.25	0.80	9.30	1.3	± 0.17	± 0.09
5.60*	1.0	1.25	0.80	8.00	1.2	± 0.15	± 0.08
4.75	1.0	1.25	0.80	6.90	1.1	± 0.14	± 0.07
4.00*	1.0	1.25	0.80	6.00	1.0	± 0.13	± 0.07

The sizes in heavy type correspond to those in ISO/R 565-1967: Woven wire cloth and perforated plates in test sieves. It is recommended that whenever possible these sieves be included in all sieve analysis data or reports intended for international publication.

TABLE 3 b. Apertures in the range 3.35 mm to 1.00 mm,
round holes only

Nominal aperture size mm (1)	Plate thickness			Pre-ferred nominal pitch of holes mm (5)	Minimum width of any bridge mm (6)	Maximum permissible tolerances on individual apertures	
	Pre-ferred mm (2)	Max. mm (3)	Min. mm (4)			Coarse mm (7)	Fine mm (8)
3.35	1.0	1.25	0.80	5.15	0.90	± 0.12	Fine tolerances are not specified for this range
2.80*	1.0	1.25	0.80	4.50	0.85	± 0.11	
2.36	1.0	1.25	0.80	3.87	0.75	± 0.10	
2.00*	1.0	1.25	0.80	3.35	0.70	± 0.09	
1.70	0.50	0.63	0.40	2.90	0.60	± 0.09	
1.40*	0.50	0.63	0.40	2.50	0.55	± 0.08	
1.18	0.50	0.63	0.40	2.16	0.50	± 0.08	
1.00	0.50	0.63	0.40	1.90	0.45	± 0.07	

TABLE 3 c. Additional sizes, square holes only (for use in aggregate sizing).

50.0	3.0	4.0	2.5	63.0	6.5	± 0.55	± 0.28
28.0	2.0	2.5	1.5	35.5	3.75	± 0.37	± 0.19
25.0	2.0	2.5	1.5	31.5	3.25	± 0.35	± 0.18
20.0	2.0	2.5	1.5	25.0	2.5	± 0.30	± 0.15
14.0	1.5	2.0	1.0	18.0	2.0	± 0.26	± 0.13
10.0	1.5	2.0	1.0	12.8	1.4	± 0.21	± 0.11
7.10	1.5	2.0	1.0	9.8	1.35	± 0.18	± 0.09
6.30	1.0	1.25	0.80	8.8	1.25	± 0.17	± 0.09
5.00	1.0	1.25	0.80	7.3	1.15	± 0.15	± 0.08

The sizes in heavy type correspond to those in ISO/R 565-1967: Woven wire cloth and perforated plates in test sieves. It is recommended that wherever possible these sieves be included in all sieve analysis data or reports intended for international publication.

In both cases irregularity of bridge width is an indication of suspect apertures.

6.9.3 *Measurement of individual holes*

Individual holes shall be checked for compliance with the prescribed tolerances given in Table 3. Callipers, tapered plate gauges, segmental plain limit plug gauges, or optical projection may be used.

Every aperture is eligible for inspection; square holes shall be checked at the mid-section in both directions and round holes, across various diameters.

- a) In any selected area check the holes along each of two straight lines of at least 100 mm length and including at least 10 holes, 5 along each direction; the lines should be at 90° or 60° for round holes, at 90° for square holes.
- b) For square holes, check holes along a line parallel to a diagonal of the holes for at least 150 mm and at least 8 holes.

If the plate has only 20 or less holes, every hole shall be checked.

6.9.4 *Certification*

The sieve manufacturer shall be responsible for making a test on each test sieve before sale, and a certificate as shown in Appendix B shall be supplied with each test sieve when required by the purchaser. The purchaser shall state in his order when a more detailed test, that is, a calibration test, is required to be made by the manufacturer.

APPENDIX A
CALIBRATION TESTS

When more detailed information is required about the woven wire cloth or perforated plate in a test sieve, the acceptance test shall be supplemented as described in A.1.

A.1 AVERAGE APERTURE SIZE

The total number of apertures measured in each direction shall be not less than those given in Table 5. The measurements shall be made in a number of fields not less than as specified in Table 5, and evenly spread over the whole area of the sieve. The fields shall be so chosen that no two fields are crossed by the same wire (see Fig. 6).

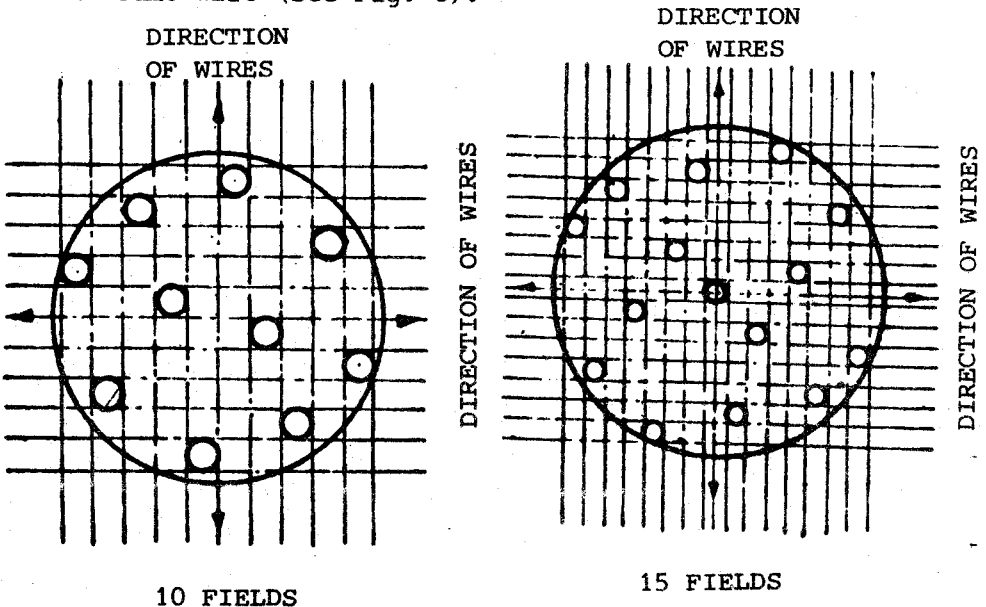


FIGURE 6 a - Selection of fields.

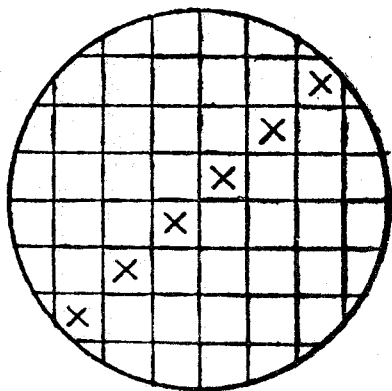


FIGURE 6 b - Enlarged view of a field and method of selecting apertures in a field

For aperture sizes larger than 5.60 mm it is usual to check size with an engineer's gauge. Up to 30 apertures may be assessed rapidly by this means. If a sieve has 20 apertures or less, then all apertures shall be measured.

A.2 WIRE DIAMETER

Ten consecutive wires shall be measured in each direction in each field to determine whether the wire diameter complies with the requirements specified in 5.2.

TABLE 5 - Number of apertures to be measured

Aperture size	Number of fields	Minimum number of consecutive apertures to be measured diagonally in each direction	
		In each field (3)	In all fields (4)
(1)	(2)		
mm			
5.60	10	3	30
4.75	10	3	30
4.00	10	3	30
3.35	10	3	30
2.80	10	3	30
2.36	10	4	40
2.00	10	4	40
1.70	10	5	50
1.40	10	6	60
1.18	10	8	80
1.00	10	9	90
μm			
850	10	10	100
710	10	12	120
600	10	15	150
500	10	15	150
425	10	20	200
355	10	25	250
300	10	30	300
250	10	30	300
212	15	20	300
180	15	20	300
150	15	25	375
125	15	25	375
106	15	25	375
90	15	30	450
75	15	30	450
63	15	30	450
53	15	30	450
45	15	30	450
38	15	30	450

APPENDIX B

A certificate shall be supplied with each test sieve, when required by the purchaser.

B.1 A suitable form of a certificate for a woven wire test sieve is given below.

Aperture size										
Test sieve No. has been found to comply with COARSE/FINE tolerances of CS 124.										
Tester	Date of test	Visual survey and maximum aperture	Average aperture size within permissible variations				Percentage of apertures above maximum permissible variation			
			Warp direction		Weft direction		Warp direction		Weft direction	
			Standard value	Observed value	Standard value	Observed value	Standard value	Observed value	Standard value	Observed value

Signed

B.2 A suitable form of a certificate for a perforated plate test sieve is given below.

Aperture size

Test sieve No., has been found to comply with COARSE/FINE tolerances of CS 124.

Tester	Date of test	Visual survey	Compliance with tolerances of CS 124.

APPENDIX C

MESH NUMBER

Wire cloth was earlier designated by its mesh count or mesh number which was the number of meshes per inch. But this mesh number by itself is not at all indicative of the operating dimension of the sieve viz. aperture size because the wire diameter has to be known before the aperture size can be calculated.

Sieves are now designated by aperture size. Such a designation gives the user directly the information he most needs and this designation is used in this Ceylon Standard.

The tables below are supplied to relate mesh number to aperture size and this relationship should be taken as an approximation.

Mesh number	Nominal aperture size
	mm
3	5.60
3½	4.75
4	4.00
5	3.35
6	2.80
7	2.36
8	2.00
10	1.70
12	1.40
14	1.18
16	1.00

Mesh number	Nominal aperture size
	μm
18	850
22	710
25	600
30	500
36	425
44	355
52	300
60	250
72	212
85	180
100	150
120	125
150	106
170	90
200	75
240	63
300	53
350	45
400	38

APPENDIX D

OBSOLESCENT INCH SIZES AND NEAREST METRIC SIZES

The nearest metric sizes to obsolescent inch sizes used in test sieves are tabulated below.

Perforated plates				Medium mesh wire cloth			
Obsolescent aperture size		Nearest metric aperture size		Obsolescent aperture size		Nearest metric aperture size	
in. (1)	mm equivalent (2)	mm above (3)	mm below (4)	in. (5)	mm equivalent (6)	mm above (7)	mm below (8)
5	127	-	125				
4	102	106	90.0				
3 1/2	88.9	90.0	75.0				
3	76.2	90.0	75.0				
2 3/4	69.8	75.0	63.0				
2 1/2	63.5	75.0	63.0				
2 1/4	57.2	63.0	53.0				
2	50.8	53.0	45.0				
1 7/8	47.6	53.0	45.0				
1 3/4	44.4	45.0	37.5				
1 5/8	41.3	45.0	37.5				
1 1/2	38.1	45.0	37.5				
1 3/8	34.9	37.5	31.5				
1 1/4	31.8	37.5	31.5				
1 1/8	28.6	31.5	26.5				
1	25.4	26.5	22.4				
7/8	22.2	22.4	19.0				
3/4	19.0	19.0	19.0				
5/8	15.9	16.0	13.2	1/2	12.7	13.2	11.2
1/2	12.7	13.2	11.2	3/8	9.52	11.2	9.50
3/8	9.52	11.2	9.50	1/4	6.35	6.70	5.60
5/16	7.94	8.00	6.70	3/16	4.76	5.60	4.75
1/4	6.35	6.70	5.60	1/8	3.18	3.35	2.80
3/16	4.76	5.60	4.75	1/16	1.59	1.70	1.40
					µm	µm	µm
1/8	3.18	3.35*	2.80*	1/32	794	850	710

*Round only.

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The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI which includes surveillance inspection of the factory, testing of both factory and market samples.

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