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Industrial plate screens — Specifications and test methods

*Tôles perforées pour tamisage industriel — Exigences techniques et
méthodes d'essai*



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Foreword

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International Organization for Standardization

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Industrial plate screens — Specifications and test methods

1 Scope

This International Standard specifies technical requirements and test methods for perforated metal plate used for industrial screening purposes and supplied in flat or coiled form.

It applies to perforated plates of low carbon steel according to ISO 7805-1 and ISO 7805-2 with nominal sizes of holes from 1 mm for round holes and 4 mm for square holes up to 125 mm according to ISO 2194, and with a maximum plate thickness of 12,5 mm.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2194:1991, *Industrial screens — Woven wire cloth, perforated plate and electroformed sheet — Designation and nominal sizes of openings*.

ISO 7805-1:1984, *Industrial plate screens — Part 1: Thickness of 3 mm and above*.

ISO 7805-2:1987, *Industrial plate screens — Part 2: Thickness below 3 mm*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 plate: Flat rolled material for the manufacture of perforated metal plate, 3 mm to 12,5 mm thick, the edges of which are allowed to deform freely during rolling, supplied in flat form and generally in rectangular shape, but also in any other shape according to a design sketch.¹⁾

3.2 sheet: Flat rolled material for the manufacture of perforated metal plate, less than 3 mm thick, the edges of which are allowed to deform freely during rolling, supplied in flat form and generally in rectangular shape, but also in any other shape according to a design sketch.¹⁾

3.3 coil: Flat rolled sheet for the manufacture of perforated metal plate, the edges of which are allowed to deform freely during rolling and which immediately after the final rolling pass is wound into regular superimposed laps.

3.4 perforated plate: Screening surface consisting of a plate with uniform holes in symmetrical arrangement. The holes may be square, slotted, circular or of other regular geometrical shape.

3.5 plate thickness: Thickness of the plate before perforation.

3.6 feed direction: Direction in which a plate or sheet was fed through the perforating press.

3.7 punch side: Surface of a perforated plate which the punch entered.

1) After perforation, plates and sheets are both designated as "perforated plate", see 3.4.

3.8 hole size: Diameter of a round hole or distance between opposite sides of a square hole of a perforated metal plate.

3.9 pitch: Distance between corresponding points of two adjacent holes in a perforated plate.

3.10 bridge width; bar: Distance between the nearest edges of two adjacent holes in a perforated plate.

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

3.12 percentage open area: Ratio, expressed as a percentage, of the total area of the holes to the total area of the perforated part of the plate (excluding any non-perforated parts).

3.13 roller levelling: Cold mechanical operation on a perforated metal plate to promote flattening.

4 Symbols

See table 1.

Table 1 — Symbols used to describe perforated metal plate

Symbol	Interpretation	Figure reference
a_1	overall length of the short side of a plate (plate width)	2
a_2	length of the short side of the perforated area of a plate	2
b_1	overall length of the long side of a plate (plate length)	2
b_2	length of the long side of the perforated area of a plate	2
c	amount out-of-square of a rectangular plate	3
e	width of the margins on the long sides of a plate	2
e_1	width of the larger e -margin, if not equal	2
e_2	width of the smaller e -margin, if not equal	2
f	width of the margins at the short sides of a plate	2
f_1	width of the larger f -margin, if not equal	2
f_2	width of the smaller f -margin, if not equal	2
g	deviation from edge flatness	5
h	deviation from edge straightness	6
p	pitch of holes	1
t	plate thickness	2
t_1	height of turn-in zone of hole	4
t_2	height of cutting zone of hole	4
t_3	height of breakaway zone of hole	4
t_4	height of burr on hole	4
w	hole size, measured on punch side	1
w_b	hole size, measured on reverse (burr) side	4