INTERNATIONAL STANDARD

ISO 3254

Second edition
1989-09-01

Shipbuilding and marine structures — Toughened safety glass panes for rectangular windows

Construction navale et structures maritimes — Verres de sécurité trempés pour fenêtres rectangulaires de navires

INTERNATIONAL ISO

Reference number
ISO 3254 : 1989 (E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3254 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures.*

This second edition cancels and replaces the first edition (ISO 3254 : 1975) : definitions have been deleted, being replaced by a reference to ISO 6345; the reference to sheet glass has been deleted; a single tolerance for parallelism has been adopted; the clause on maximum pressure head has been deleted; sampling is allowed in clause 9 on testing; and the annex has been deleted.

ISO 3254 forms one of a series which also includes the following :

ISO 614 : 1989, *Shipbuilding and marine structures — Toughened safety glass panes for rectangular windows and side scuttles — Punch method of non-destructive strength testing.*

ISO 1095 : 1988, *Shipbuilding and marine structures — Toughened safety glass panes for side scuttles.*

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Shipbuilding and marine structures — Toughened safety glass panes for rectangular windows

1 Scope

This International Standard specifies materials and finish, dimensions for interchangeability, tolerances, parallelism and flatness, testing, marking and designation of toughened safety glass panes for rectangular windows complying with ISO 3903.

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 listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 614 : 1989, *Shipbuilding and marine structures — Toughened safety glass panes for rectangular windows and side scuttles — Punch method of non-destructive strength testing.*

ISO 3903 : 1977, *Shipbuilding — Ships' ordinary rectangular windows.*

ISO 6345 : —[1], *Shipbuilding and marine structures — Windows — Vocabulary.*

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 6345 apply.

4 Material

Toughened safety glass shall be manufactured of plate glass, either float or polished.

5 Finish

Toughened safety glass may be either

— clear (code No. 1); or

— obscured (code No. 2).

NOTE — The process of obscuring transparent glass is carried out before the procedure of toughening.

6 Dimensions and tolerances

6.1 Main dimensions and thicknesses

The nominal thicknesses of toughened safety glass panes for ships' rectangular windows complying with the requirements of ISO 3903 are shown in figure 1 and given in table 1.

The nominal size given in table 1 is the clear light dimensions of the window.

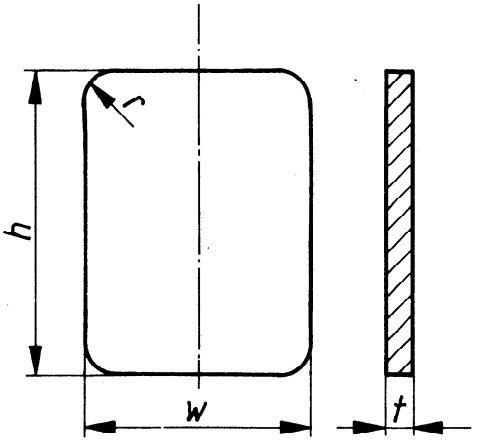

Figure 1 — Dimensions of glass pane

1) To be published.

Table 1

Dimensions in millimetres

Window No.	Window Nominal size	Width, w min.	Width, w max.	Height, h min.	Height, h max.	Radius, r	Thickness, t 8 ± 0,3	10 ± 0,3	12 ± 0,3	15 ± 0,5	19 ± 1
1	300 × 425	314	318	439	443	58	X	X	O	O	
2	355 × 500	369	373	514	518	58	X	X	O	O	
3	400 × 560	414	418	574	578	58	X		X		O
4	450 × 630	464	468	644	648	108	X		X		O
5	500 × 710	514	518	724	728	108		X		X	
6	560 × 800	574	578	814	818	108		X		X	
7	900 × 630	914	918	644	648	108			X		X
8	1 000 × 710	1 014	1 018	724	728	108			X		X
9	1 100 × 800	1 114	1 118	814	818	108				X	

NOTE — X : for clear glass panes and obscured glass panes;
O : for obscured glass panes only.

6.2 Edges

All edges shall be arrissed and finished to remove sharpness and roughness. Edges of glass panes of nominal thickness over 12 mm shall be either ground flat and arrissed or finished by some other such process, providing the finished size conforms to the dimensional tolerances specified in table 1.

The width s and depth y of the arris (see figure 2) shall not exceed the dimensions given in table 2. Arrissing and/or grinding shall be carried out before toughening the glass.

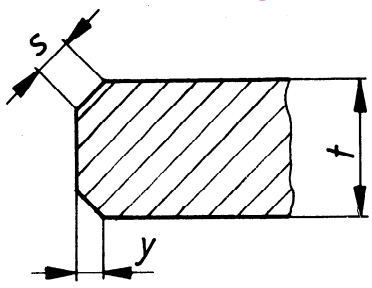

Figure 2 — Glass edges

Table 2

Dimensions in millimetres

t	s max.	y max.
8 10	2	1,5
12 15 19	2,5	1,8

7 Parallelism

The deviation from parallelism between the two surfaces of a clear glass pane shall not exceed the value given in figure 3.

Dimensions in millimetres

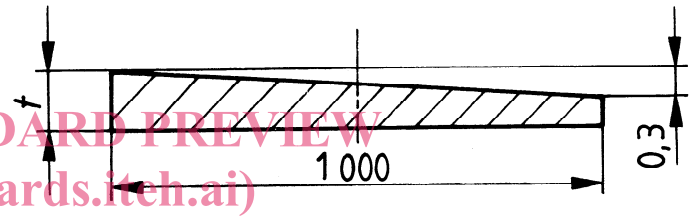

Figure 3 — Parallelism

8 Flatness

Bow in glass panes shall not exceed the value given in figure 4.

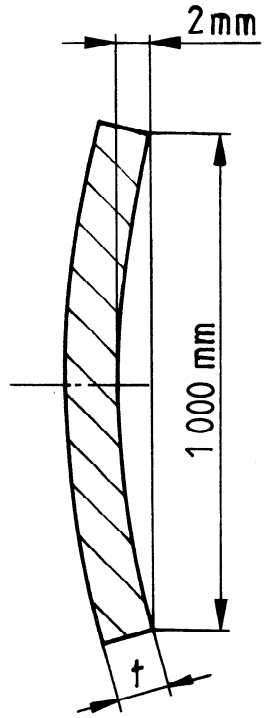

Figure 4 — Flatness

9 Testing

The glass panes shall be tested in accordance with ISO 614.

9.1 Sampling of glass panes

Each batch of glass panes shall be tested separately.

NOTE — A batch is defined as "a quantity of glass panes of the same nominal size and nominal thickness, produced in the same process under consistent controlled conditions".

Where a batch consists of four glass panes or less, each of the glass panes shall be tested.

Where a batch consists of more than four glass panes, the test shall be carried out on a random sample of four glass panes, or on 2 % of the batch, whichever figure is the greater.

9.2 Acceptance conditions

The following acceptance conditions are specified.

a) If each sample glass pane tested remains unbroken, the whole batch shall be accepted.

b) If one sample glass pane breaks during the test, a complete re-test shall be carried out on a further sample taken from the same batch.

c) If more than one glass pane breaks in the first test, the batch shall be rejected.

10 Designation

Glass panes conforming to this International Standard shall be designated by the following indications, in the order given :

a) denomination : Glass pane;

b) number of this International Standard : ISO 3254;

c) window number (see table 1);

d) nominal thickness of the glass pane (see table 1);

e) finish (see clause 5).

EXAMPLE

The designation for a toughened safety glass pane for window No. 6 (nominal size 560 mm × 800 mm) and nominal thickness t = 10 mm, clear finish (1) shall be

Glass pane ISO 3254-6 × 10-1

11 Marking

Each glass pane shall be marked as indicated in ISO 614.

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Descriptors : shipbuilding, windows, rectangular windows, glass, safety glass, heat-treated glass, specifications, dimensions, designation, sampling.

Price based on 3 pages