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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 1095

SHIPBUILDING DETAILS

TOUGHENED GLASSES FOR SHIPS' SIDE SCUTTLES AND FIXED LIGHTS

1st EDITION

June 1969

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BRIEF HISTORY

The ISO Recommendation R 1095, *Shipbuilding details – Toughened glasses for ships' side scuttles and fixed lights*, was drawn up by Technical Committee ISO/TC 8, *Shipbuilding details*, the Secretariat of which is held by the Nederlands Normalisatie-Instituut (NNI).

Work on this question led to the adoption of a Draft ISO Recommendation.

In March 1967, this Draft ISO Recommendation (No. 1162) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Ireland	Sweden
Belgium	Israel	Switzerland
Brazil	Italy	Thailand
Bulgaria	Japan	Turkey
Czechoslovakia	Netherlands	U.A.R.
Finland	Poland	United Kingdom
France	South Africa, Rep. of	Yugoslavia
India	Spain	

One Member Body opposed the approval of the Draft :

Germany

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in June 1969, to accept it as an ISO RECOMMENDATION.

ISO Recommendation | R 1095 | June 1969

SHIPBUILDING DETAILS

TOUGHENED GLASSES FOR SHIPS' SIDE SCUTTLES AND FIXED LIGHTS

1. SCOPE

This ISO Recommendation concerns manufacture, dimensions, tolerances, marking and designation of clear and frosted toughened glasses for ships' side scuttles and fixed lights.

NOTE. – For ships' side scuttles, see ISO Recommendation R . . . *, *Ships' side scuttles*.

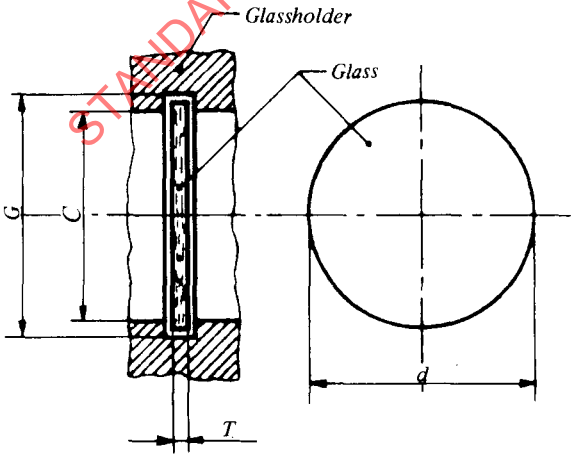
2. MANUFACTURE

Toughened glass is produced by subjecting glass to a process of heating and rapid cooling so as to induce high compressive stresses in the surface zones balanced by high tension in the central plane. This treatment endows the glass with greatly increased resistance to external forces such as mechanical loading and thermal shock.

For glasses up to and including 6 mm thick, the glass shall not show bow greater than 3 mm per metre when it is placed on a flat surface on its convex side. For glasses more than 6 mm thick, the glass shall not show bow greater than 2 mm per metre when it is placed on a flat surface on its convex side.

For all glasses, the difference in parallelism between the two surfaces of the glass shall not exceed 0.2 mm per metre.

3. DIMENSIONS AND TOLERANCES



N = nominal dimension of side scuttle or fixed light

C = clear light size

d = diameter of toughened glass

T = nominal thickness of toughened glass

G = diameter of glass recess

* At present at the stage of draft proposal.

3.1 Diameter of glasses and their recesses

TABLE 1

Dimensions in millimetres

N	*C*	*d*		*G*
		maximum	minimum	
150	150	165	163	167
200	200	215	213	217
250	250	265	263	267
300	300	319	316	322
350	350	369	366	372
400	400	419	416	422
450	450	469	466	472
500	500	519	516	522

3.2 Thickness of toughened glasses

TABLE 2

Dimensions in millimetres

N	*T*		
150	4	6	
200	6	8	10
250	6	8	12
300	8	10	15
350	8	12	15
400	10	12	
450	10	15	
500	12		

3.3 Tolerance on toughened glass thickness

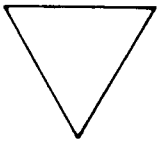
The tolerances on the thickness of the toughened glasses are

± 0.2 mm for glass thicknesses 4 and 6 mm;

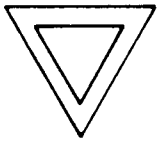
± 0.3 mm for glass thicknesses 8, 10, 12 and 15 mm.

4. MARKING

Clear toughened glasses should be marked by an equilateral triangle, as indicated.



Frosted and other non-transparent toughened glasses should be marked by a double equilateral triangle, as indicated.



The nominal thickness of the toughened glass may be added within the triangle(s).

Examples :