INTERNATIONAL STANDARD 1751

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Shipbuilding — Ships' side scuttles

Construction navale — Hublots de navires

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

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.

International Standard ISO 1751 was developed by Technical Committee ISO/TC 8, *Shipbuilding,* and was circulated to the member bodies in July 1975.

It has been approved by the member bodies of the following countries :

Australia	France	Norway
Austria	Germany	Romania
Belgium	Ireland	Sweden
Bulgaria	Italy	Turkey
Canada	Japan	United Kingdom
Czechoslovakia	Korea, Dem. P. Rep. of	Yugoslavia
Finland	Netherlands	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Poland
U.S.S.R.

This International Standard cancels and replaces ISO Recommendation R 1751-1971, of which it constitutes a technical revision.

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Shipbuilding — Ships' side scuttles

0 INTRODUCTION

This International Standard is based on the experience of side scuttle and glass manufacturers, shipbuilders and authorities who apply to ships the Regulations of the International Convention for the Safety of Life at Sea, 1960[1] and of the International Convention on Load Lines, 1966.

1 SCOPE AND FIELD OF APPLICATION

This International Standard gives definitions and lays down a classification (types and models), the dimensions for interchangeability and construction, materials, testing, and designation of ships' side scuttles.

2 REFERENCES

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

ISO 1095, *Shipbuilding — Toughened safety glass panes for ships' side scuttles.*

ISO 3902, *Shipbuilding — Gaskets for ships' side scuttles and rectangular windows.*

ISO 5780, *Shipbuilding — Ships' side scuttles — Positioning.*[2]

ISO 5797, *Shipbuilding — Fire resistant glass panes for ships' side scuttles and rectangular windows.*[3]

ISO 5895, *Shipbuilding — Ships' side scuttles — Installation.*[3]

3 DEFINITIONS

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

3.1 ships' side scuttle : An opening hinged round window or non-opening round window with or without deadlight, made of metallic material having a glass pane with dimensions and of materials according to ISO 1095, which is used in ships in accordance with the relevant regulations. (See clause 11.)

NOTE — All other kinds of round window, for example non-opening very light type with main frame of Z-shaped profile and other special types, do not belong, in the sense of this International Standard, to the type "ships' side scuttle".

3.1.1 left-hand model (L) : An opening model with the hinge of the glassholder on the left side when viewed from the side towards which it opens and the deadlight opening upwards. (See figure 1.)

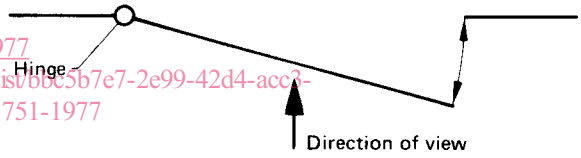


FIGURE 1 — **Left-hand side scuttle**

3.1.2 right-hand model (R) : An opening model with the hinge of the glassholder on the right side when viewed from the side towards which it opens and the deadlight opening upwards. (See figure 2.)

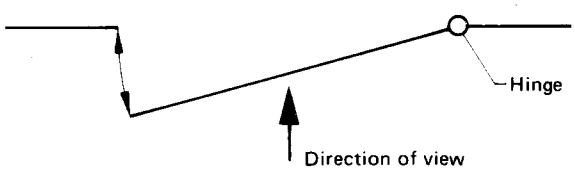


FIGURE 2 — **Right-hand side scuttle**

3.1.3 common hinge model (S) : An opening model with both the glassholder and the deadlight on the same hinge.

1) To be replaced by the Regulations of the International Convention for the Safety of Life at Sea, 1974, when they are brought into force.

2) At present at the stage of draft.

3) In preparation.

3.2 Components

The denomination of the main components of side scuttles is given in table 1. (See figures 3 and 4.)

NOTE – Figures 3 and 4 do not define the construction of the side scuttles; they are only examples.

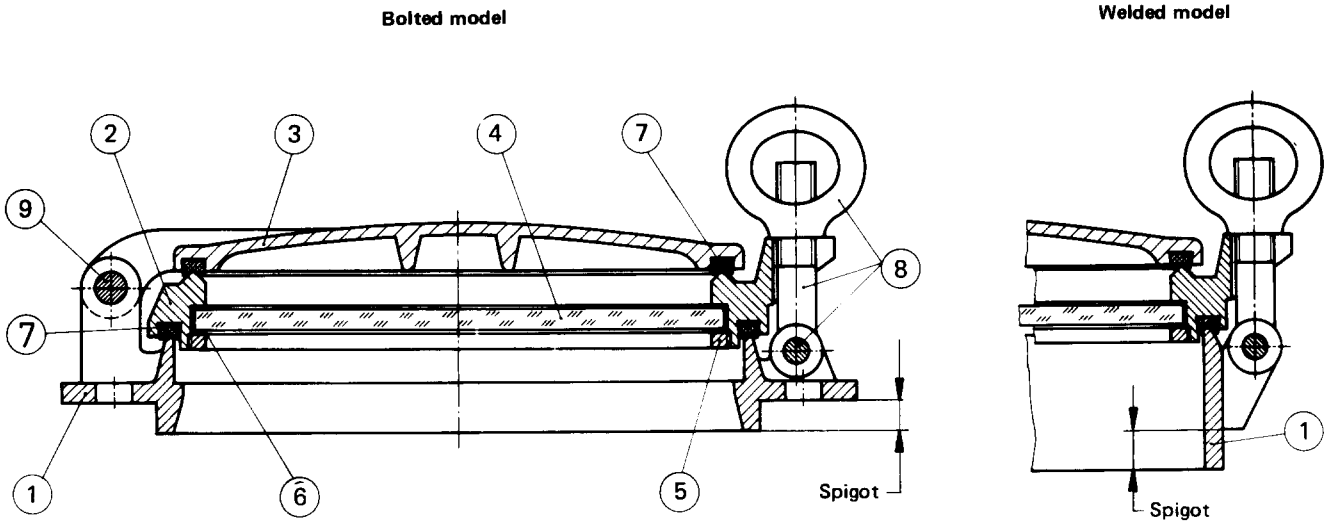


FIGURE 3 – **Opening side scuttle with deadlight**

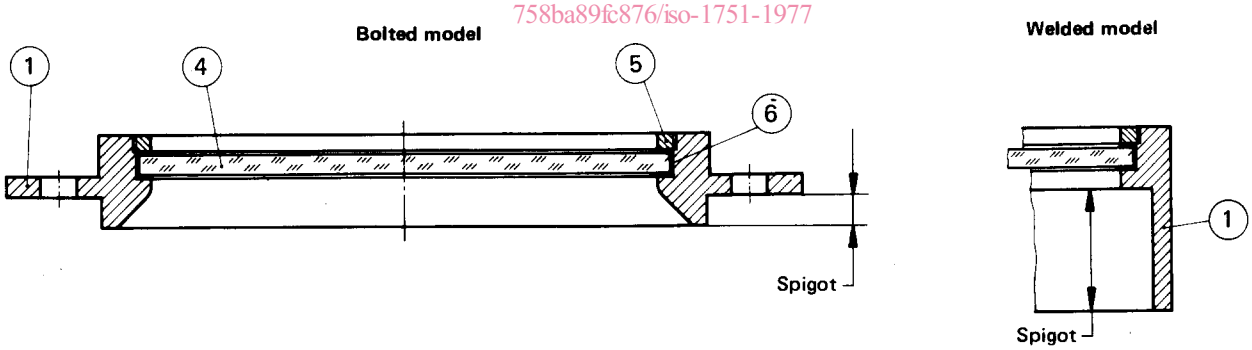


FIGURE 4 – **Non-opening side scuttle without deadlight**

TABLE 1 – **Components**

Component No.	Denomination of main components
1	Main frame
2	Glassholder
3	Deadlight
4	Glass pane
5	Glass retaining ring
6	Glazing material
7	Gasket (for glassholder and deadlight)
8	Closing device (swingbolt, nut and pin)
9	Hinge pin

4 CLASSIFICATION

Side scuttles shall be classified by types, models and nominal sizes in accordance with 4.1, 4.2 and 4.3 respectively.

Further classification characteristics are the material classes. See 7.1.

NOTE – For a survey of the standardized side scuttles, see 5.1 to 5.4.

4.1 Types

- Type A : heavy-type side scuttle;
- Type B : medium-type side scuttle;
- Type C : light-type side scuttle.

NOTE – The differentiation between the types A, B and C is derived from the thickness of the glass pane (tables 4 to 7) and the tensile strength and elongation of the material for the main components (tables 12 and 13).

4.2 Models

Models are designated according to their principal characteristics as given in table 2.

TABLE 2 – **Principal characteristics of models**

Opening or non-opening	Dead-light	Further attributes		Fastening: bolted (B)	Fastening: welded (W)
				code for designation of model	
Opening	with	left-hand	(L)	LB	LW
		right-hand	(R)	RB	RW
		common hinged	(S)	SB	SW
	without	–		LRB	LRW
Non-opening	with[1] without[2]	–		NB	NW

1) For types A and B.

2) For type C.

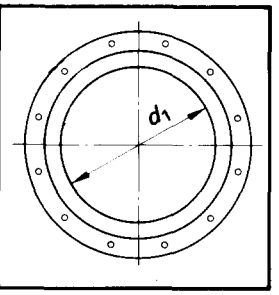
4.3 Nominal sizes

The nominal size is the clear light diameter d_1 of the side scuttle. (See table 3.)

TABLE 3 – **Nominal sizes**

Dimensions in millimetres

Nominal size d_1		
type A	type B	type C
	200	
	250	
	300	
	350	
	400	
–	450	



5 MAIN DIMENSIONS

The main dimensions of a side scuttle shall be as given in the tables 4 to 7. Figures 5 to 12 in 5.1 to 5.4 do not define the construction; they are only intended to indicate the standardized dimensions given in the tables.

5.1 Opening side scuttles with deadlight (types A and B)

5.1.1 *Bolted models*

Model LB
left-hand opening

Model RB
right-hand opening

Model SB
common hinged

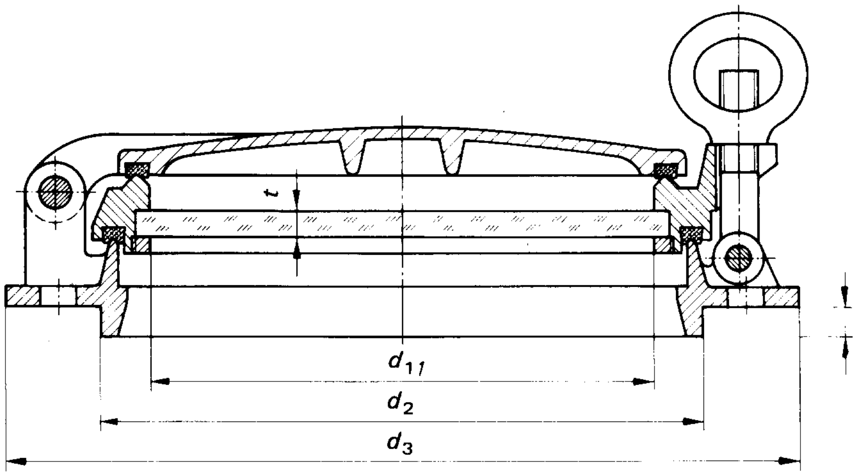


FIGURE 5 — **Opening side scuttle with deadlight, bolted**

5.1.2 *Welded models*

Model LW
left-hand opening

Model RW
right-hand opening

Model SW
common hinged

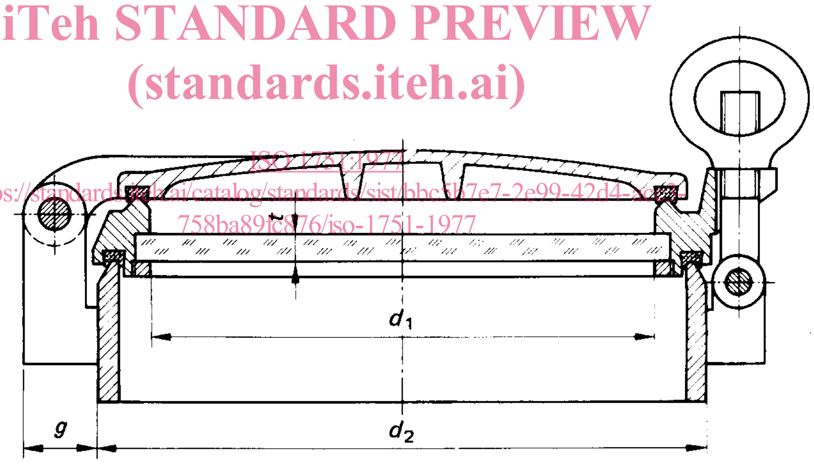


FIGURE 6 — **Opening side scuttle with deadlight, welded**

TABLE 4 — **Opening side scuttles with deadlight**

Dimensions in millimetres

Type	**Nominal size** d_1		d_2	d_3 max.	g max.	**Glass thickness** t 1)		**Minimum numbers of fasteners** 2)			
						type A	type B	type A glass-holder	type A dead-light	type B glass-holder	type B dead-light
A and B	200	200	250	350	50	10	8	2	2	2	2
	250	250	305	400	47,5	12	8	3	3	3	2
	300	300	360	450	45	15	10	3	3	3	2
	350	350	410	500	45	15	12	3	3	3	3
	400	400	460	550	45	19	12	3	3	3	3
B	–	450	510	600	45	–	15	–	–	4	3

1) In special cases a greater glass thickness shall be used for obscured glass panes. (See table 9.)

2) The number of fasteners comprises swingbolts and hinges with round hole. (See 6.4.)

5.2 Opening side scuttles without deadlight (type C)

5.2.1 *Bolted models*

Model LRB

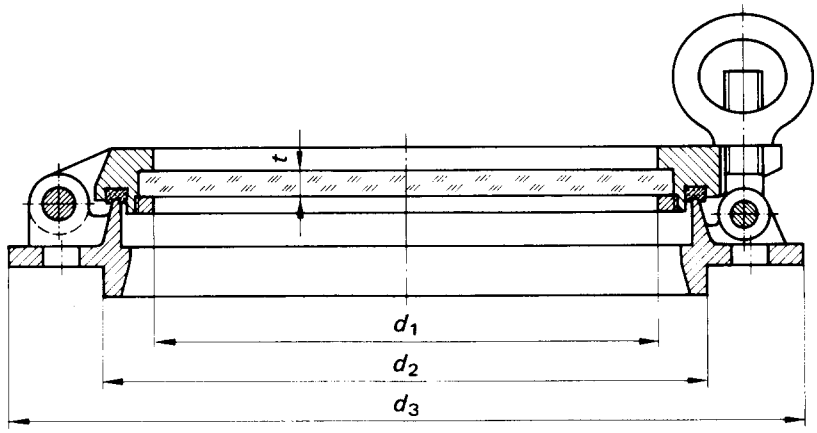


FIGURE 7 – **Opening side scuttle without deadlight, bolted**

5.2.2 *Welded models*

Model LRW

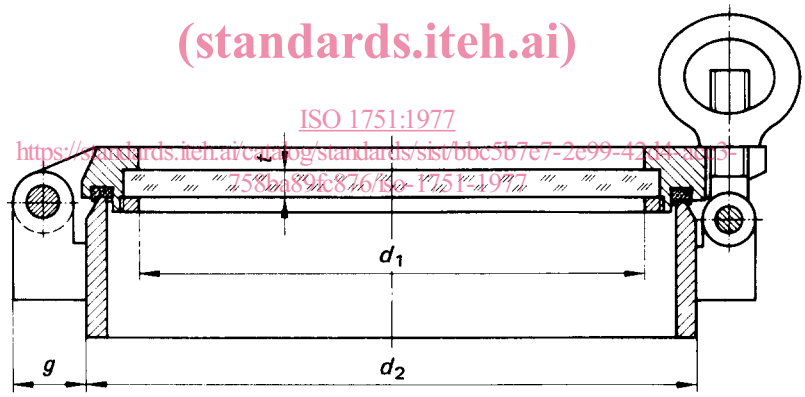


FIGURE 8 – **Opening side scuttle without deadlight, welded**

TABLE 5 – **Opening side scuttles without deadlight**

Dimensions in millimetres

Type	Nominal size d_1	d_2	d_3 max.	g max.	Glass thickness t [1]	Minimum number of fasteners [2]
						glassholder
C	200	250	350	50	6	2
	250	305	400	47,5	6	2
	300	360	450	45	8	3
	350	410	500	45	8	3
	400	460	550	45	10	3
	450	510	600	45	10	3

1) In special cases a greater glass thickness shall be used for obscured glass panes. (See table 9.)

2) The number of fasteners comprises swingbolts and hinges with round hole. (See 6.4.)