International Standard 6454

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Shipbuilding — Strum boxes

Construction navale — Crépines d'aspiration dans les cales

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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.

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 6454 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

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Shipbuilding — Strum boxes

1 Scope and field of application

This International Standard specifies the major dimensions of strum boxes installed at the end of bilge suction pipes to prevent pipe obstruction by solid matter.

Strum boxes complying with this International Standard are not acceptable for bilge suction pipes in machinery spaces and shaft tunnels.

This International Standard applies to deep sea ships and inland navigation ships.

NOTE — Users of this International Standard should note that while observing the stated requirements, they should at the same time ensure compliance with such statutory requirements, rules and regulations as may be applicable to the individual ship concerned.

2 References

ISO 1461, *Metallic coatings — Hot dip galvanized coatings on fabricated ferrous products — Requirements.*

ISO 4200, *Plain end steel tubes, welded and seamless — General tables of dimensions and masses per unit length.*

3 Definition

For the purpose of this International Standard, the following definition is applicable :

strum box nominal size (DN) : The nominal size of the bilge pipe.

4 Types of strum box

Four types of box are specified :

Type R2 : Cylindrical box, with a perforated cylindrical part and a non-perforated top plate.

Type R3 : Cylindrical box, with a perforated cylindrical part and a perforated top plate.

Type S2 : Square box, with perforated sides and a non-perforated top plate.

Type S3 : Square box, with perforated sides and a perforated top plate.

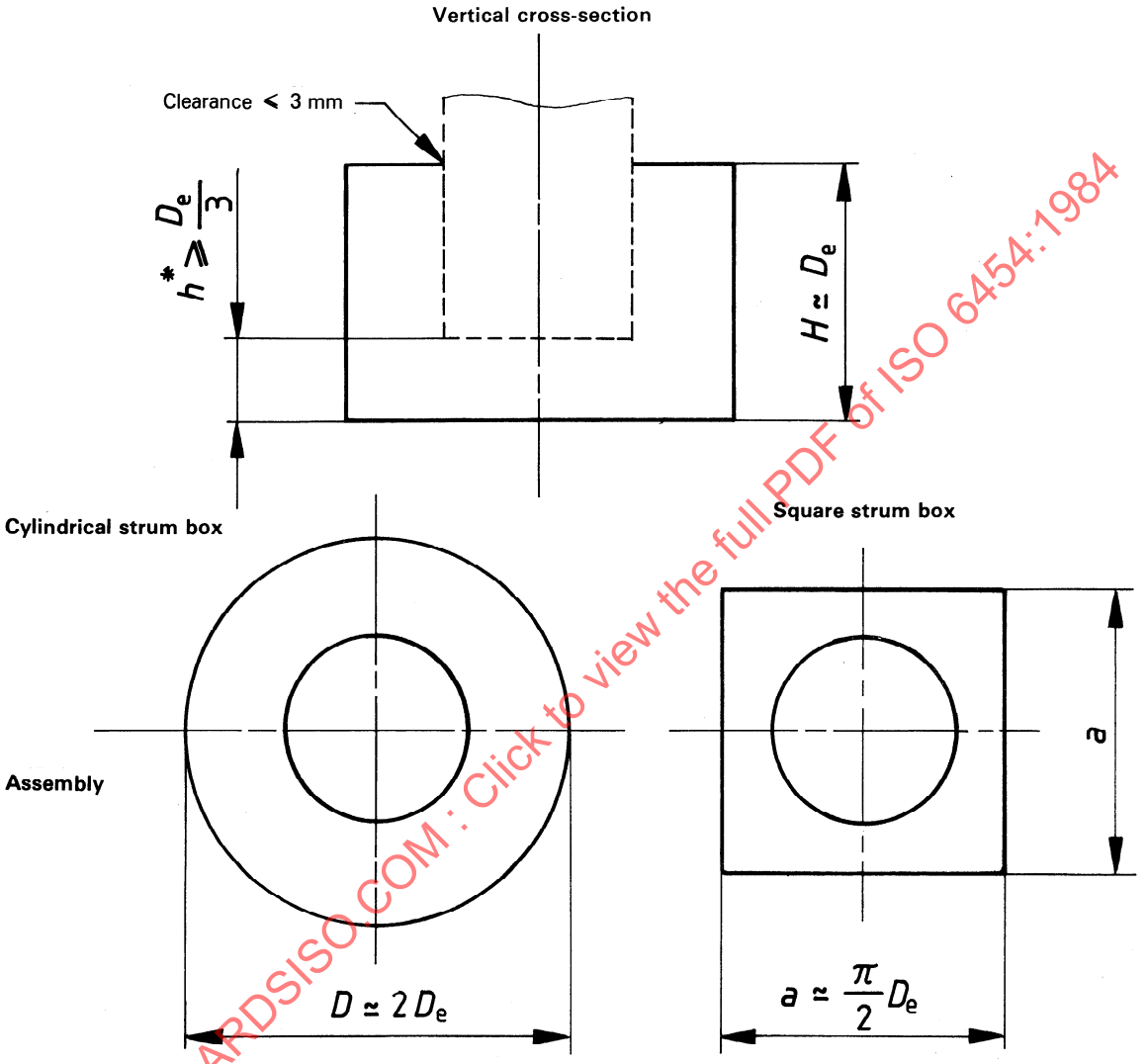
NOTES

1 The code used for indicating the type of strum box comprises a letter for the form of strum box (R : round, S : square) and a number for the minimum ratio of the total hole area to the pipe section (see 6.2).

2 Where the strum box is provided with a base which is perforated, this area shall be disregarded for the purposes of clause 6.

5 Dimensions

Dimensions are given in the figure and table below, where D_e is the outside diameter of the pipe.



Dimensions in millimetres

DN	32**	40**	50	65	80	100	125	150	200	250	300	350
D_e	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273	323,9	355,6
H	43	49	61	76	89	115	140	169	220	273	324	356
h	15	17	21	26	30	39	47	57	73	91	108	119
D	85	95	120	150	180	230	280	335	440	545	650	710
a	65	75	95	120	140	180	220	265	345	430	510	560

* Dimension h is to be obtained by adjustment during the installation of the piping system.

** See note to clause 1.

6 Perforated plate

6.1 The area of each hole shall be approximately 79 mm^2.

6.2 The ratio of the total hole area to the pipe section $\left[\frac{\pi}{4} D_e^2\right]$ shall be :

— greater than 2 for models R2 and S2;

— greater than 3 for models R3 and S3.

6.3 The ratio of the total hole area to the total perforated plate area shall be not less than 0,30.

7 Construction

Strum boxes shall be constructed in such a manner as to permit easy dismantling.

The gap between the pipe and the bore of the top plate shall not exceed 3 mm.

8 Materials

Strum boxes fabricated from carbon steel shall be of not less than 3 mm thickness.

After manufacture, they shall be hot dip galvanized, or covered with any other efficient coating subject to agreement between supplier and purchaser. In the case of protection by hot dip galvanizing, the mass of zinc deposited on all faces shall be not less than 600 g/m^2.

An alternative material of suitable thickness may be used providing it is acceptable for the environmental conditions (corrosion, etc.) and the associated materials.

9 Designation

A strum box that conforms to this International Standard shall be designated, in order, by

a) the name : strum box;

b) a reference to this International Standard : ISO 6454;

c) the type (see clause 4) : R or S;

d) the nominal size (DN) (see clause 3) : for example, 300.

Example

Cylindrical strum box with a perforated top plate (type R3), nominal size (DN) 300 mm :

Strum box ISO 6454 - R3 - 300

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