INTERNATIONAL STANDARD

ISO 15085

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Small craft — Man-overboard prevention and recovery

Petits navires — Prévention des chutes d'homme à la mer et remontée à bord

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Contents

Page

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 15085 was prepared by Technical Committee ISO/TC 188, *Small craft*.

Introduction

This International Standard is based on the idea that safety on board of small craft is not obtained through one simple safety item, but through the conjunction of several items.

It is also based on the knowledge that there is not one single set of safety items per design category and boat type, but several. In some instances, it therefore provides the boat builder with different options according to the general use he intends for the boat, within its design category.

The main issue is the definition of the working deck, up to the boat builder, and as people present on the working deck under normal operation, i.e. under way, shall be protected. This definition is of major importance. For example, on some boats the working deck is limited to the cockpit, whereas in others it encompasses the whole deck area.

Access to and use of strong points is a separate issue and is therefore treated differently: this access and use is needed, but not necessarily when the boat is under way and never at full speed, hence not necessarily on the working deck.

Small craft — Man-overboard prevention and recovery

1 Scope

This International Standard specifies the design as well as the construction and strength requirements for safety devices and arrangements intended to minimize the risk of falling overboard, and requirements to facilitate reboarding.

It describes means which can be used individually or combined to achieve these objectives, and applies to small craft of up to 24 m length of hull.

This International Standard is not applicable to the following boat types:

— aquatic toys;

— canoes, kayaks, or other boats with a beam less than 1,1 m;

— personal watercraft, covered by ISO 13590;

— inflatable boats with a hull length of less than 8 m, covered by ISO 6185.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 8666:2002, *Small craft — Principal data*

ISO 12217 (all parts):2002, *Small craft — Stability and buoyancy assessment and categorization*

3 Terms and definitions

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

3.1
design category
description of the sea and wind conditions for which a boat is assessed to be suitable

NOTE The applicable design categories are summarized in Table 1.

Table 1 — Definitions of the design categories

Design category	Wind speed (Beaufort scale)	Significant wave height m
A - “Ocean”	> 8	> 4
B - “Offshore”	⩽ 8	⩽ 4
C - “Inshore”	⩽ 6	⩽ 2
D - “Sheltered waters”	⩽ 4	⩽ 0,3

3.2
length of hull
L_H
length of the hull according to ISO 8666

NOTE Length of hull is expressed in metres (m).

3.3
sailing boat
boat designed to use sails as its primary means of propulsion, as defined in ISO 8666

3.4
non-sailing boat
boat not corresponding to the definition of a sailing boat

EXAMPLE Motor-boat, rowing boat.

3.5
high-speed boat
motor boat having a maximum speed, in knots, greater than $10\sqrt{L_H}$ or 25 knots, whichever is the greater

3.6
working deck
external areas defined by the boat builder for people to stand or walk during normal operation of the boat

NOTE 1 The working deck is normally composed of rigid parts of the boat, such as decks, coach-roofs, superstructures, flying bridges, etc. but may also consist of flexible parts, such as trampolines and nets.

NOTE 2 On some boats the working deck is limited to the cockpit, the foredeck only being used for access to strong points.

NOTE 3 Unless specifically stated by the boat builder, areas having an inclination of more than 25° to the horizontal in a longitudinal direction, or more than 30° in a transverse direction, are not considered to be part of the working deck.

3.7
slip-resistant surface
surface intentionally prepared, machined, covered, moulded, etc. to provide increased adherence between the foot (or shoe) and the surface of the deck

EXAMPLE Paint with “non-slip” characteristics, diamond head patterned moulded deck, “non-skid” covering, unpainted wooden decks, trampolines.

3.8
foot-stop
machined, moulded or fitted, relief or projection of the deck, or any other device, which provides a barrier or a support for the foot when the boat is heeling or rolling

EXAMPLE Toe rails, bulwarks, coamings.

3.9
guard-rail
permanent rigid structure designed to restrain people from falling overboard

NOTE An intermediate line/rail may be required (see clause 10), which may be flexible.

EXAMPLE Timber, or metallic rigid rail.

3.10
guard-line
system of flexible lines supported by rigid structures or stanchions, designed to restrain people from falling overboard

NOTE An intermediate line/rail may be required (see clause 10), which may be flexible.

3.11
stanchion
vertical bars or poles carrying guard-rail or guard-line

3.12
pulpit
rigid frame replacing or extending a guard-line or guard-rail

EXAMPLE Stem pulpit, mast pulpit, stern pushpit.

NOTE Usually, pulpits are forward of the boat and pushpits are aft.

3.13
coaming
raised part of the deck or superstructures, often used to reduce the ingress of water in a protected area

3.14
handhold
any part of the boat that may be gripped by hand to reduce the risk of falling overboard, even if it is not its main function

EXAMPLE Handle, shroud, seat edge, cleat, top of windscreen, steering wheel, foot strap of sailing dinghy.

3.15
hooking point
eye, fitting, or any device to which people can clip directly a safety harness and be able to move around an area of the working deck, even if it is not its main function, for example jack-line, shroud, rod chainplate

3.16
jack-line
flexible line or rigid bar intended for attachment of the safety harness allowing safe movement of the crew along its length when attached

3.17
reboarding means
rigid or flexible fitting or part of the hull which allows a person to reboard without assistance

3.18
strong point
point used for one of the following purposes; an item may have a multiple purpose:

— anchoring;

— mooring;

— towing or being towed

4 General requirements

4.1 Functions of the working deck

Safe access to the following areas shall be provided either via the working deck, the interior of the boat or combination thereof:

— boat steering including emergency steering;

— strong points;

— sail handling and trimming;

— interior;

— engine room compartment.

If appropriate, a text or a sketch in the owner's manual shall indicate the working deck area(s) as defined by the boat builder.

4.2 Means of protection

Protection against falling overboard from the working deck shall be achieved by applying one of the relevant options as listed in Table 3 or Table 4, taking into account the type or design of the craft and the intended use, within the limits of the design category chosen.

It is possible to apply different options to specific areas of the boat.

4.3 Minimum width of decks

In order to enable a safe foot treading, the working deck area adjacent to the outer deck edge, whether lateral or longitudinal, shall both

— be free, continuous and not angled transversally more than 15° from the horizontal, when the boat is upright

— have a width of at least 100 mm for design category D, 120 mm for category C, and 150 mm for category A or B

measured perpendicular

— to the foot stop inner limit or

— the lateral outer deck edge of the deck if there is no foot stop.

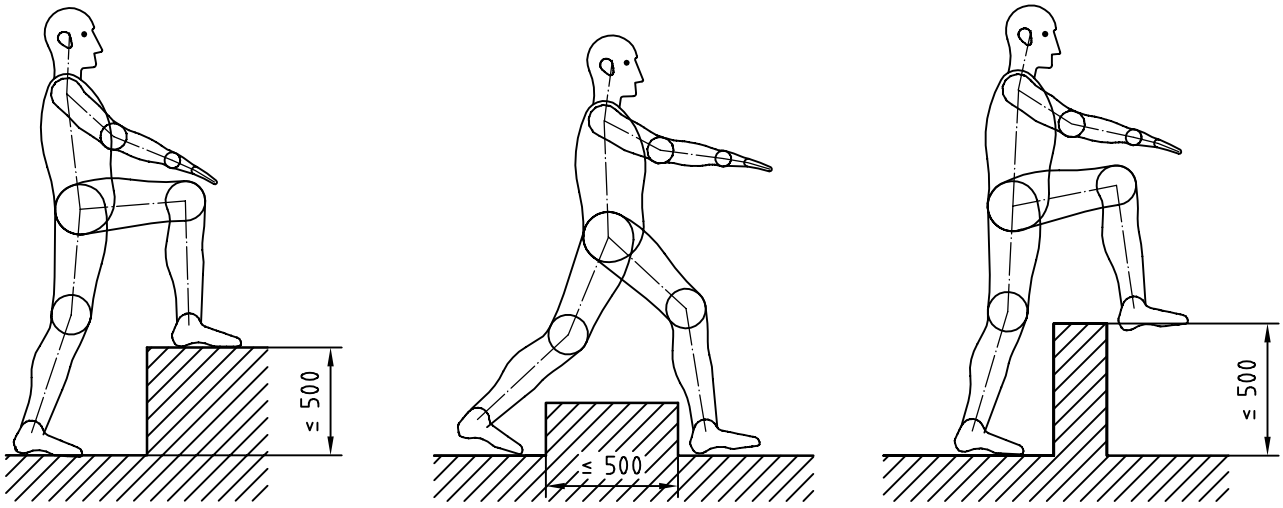
NOTE The above requirements imply that deck areas having a width less than required above cannot be considered as part of the working deck, and that adjacent wide side or aft cockpit coamings need to fulfil the requirement of lateral deck, like, for example, the ones on guard-rail height of clause 10, if relevant.

4.4 Continuity of the working deck

Working deck areas shall be connected, this may include passage through the interior.

Special provision shall be made where changes in elevation or obstacles have to be surpassed. Steps higher than 500 mm [see Figure 1 a)] and obstacles higher or longer than 500 mm shall be avoided [see Figures 1 b) and 1 c)].

Dimensions in millimetres



a) Step b) Long obstacle c) High obstacle

Figure 1 — Diagram illustrating some requirements of 4.4

5 Safety devices

The specific requirements for each safety device are given in clause 6.

Table 2 lists the nine different safety devices and the clause numbers where their requirements are described.

Table 2 — List of safety devices

Number	Name of safety device	Clause to be considered
1	Slip resistant surface	7
2	Foot-stop	8
3	Handholds	9
4	Low guard-rail or low guard-line ($h \geqslant 450$ mm)	10, 11
5	High guard-rail or high guard-line ($h \geqslant 600$ mm)	11, 12
6	Hooking points	13
7	Jack-line attachment points	14
8	Body support on high-speedboat (if relevant)	15
9	Means of reboarding	16
NOTE The safety devices are not listed in order of importance: devices 1 to 5 are placed in the Table starting from deck level upwards, device 8 is only relevant on high-speed boats, device 9 is required on any boat.		