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Small craft — Protection from falling overboard and means of reboarding

Petits navires — Prévention des chutes par-dessus bord et remontée à bord

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 188 *Small craft*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 464, *Small Craft*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 15085:2003), which has been technically revised. It also incorporates the Amendments ISO 15085:2003/Amd 1:2009 and ISO 15085:2003/Amd 2:2017.

The main changes are as follows:

- simplification of the document's arrangement;
- creation of a new approach with requirements based on risk assessment principles of deck zones;
- definition of "normal operation" and a longer list of functions to ensure safety;
- replacement of requirements for guard-rail and guard-line systems with a single concept of "falling overboard barrier";
- improvement of requirements on high speed craft;
- requirements for toe straps for sailing dinghies;
- amendment of means of reboarding.

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Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Small craft — Protection from falling overboard and means of reboarding

1 Scope

This document specifies the design as well as the construction and strength requirements for safety devices and arrangements intended to minimize the risk of persons falling overboard, and requirements to facilitate reboarding from the water, unaided, on small craft.

This document is applicable to the risk of falling overboard and does not apply to falling within the limits of the deck zone.

This document includes the use of toe straps for hiking out on small sailing boat, but it does not apply to the use of trapezes or similar devices that are designed to allow crew to operate sailing boat with their bodies entirely outside the periphery of the craft.

This document does not apply to the following small craft types:

- canoes, kayaks;
- personal watercraft including powered surfboards.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8666:2020, *Small craft — Principal data*

~~ISO 12217-1:2022, *Small craft — Stability and buoyancy assessment and categorization — Part 1: Non sailing boats of hull length greater than or equal to 6 m*~~

ISO 12217-2:2022, *Small craft — Stability and buoyancy assessment and categorization — Part 2: Sailing boats of hull length greater than or equal to 6 m*

ISO 12217-3:2022, *Small craft — Stability and buoyancy assessment and categorization — Part 3: Boats of hull length less than 6 m*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

craft small craft

recreational boat, and other watercraft using similar equipment, of up to 24 m length of hull (3.4) (L_H)

Note 1 to entry: The measurement methodology for the length of hull is defined in ISO 8666.

[SOURCE: ISO 8666:2020, 3.15, modified — Note 1 to entry added.]

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3.2

personal watercraft

watercraft intended for sports and leisure purposes, of less than 4 m in hull length, which uses a propulsion engine having a water jet pump as its primary source of propulsion and designed to be operated by a person or persons sitting, standing, or kneeling on, rather than within the confines of a hull

Note 1 to entry: The measurement methodology for the length of hull ~~(3.4)~~ is defined in ISO 8666:2020.

[SOURCE: ISO 13590:2022, 3.1]

3.3

design category

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

Note 1 to entry: The design categories are specified in ISO 12217-1.

3.4

length of hull

L_H

length of the hull shall be measured in accordance with [ISO 8666:2020](#)

~~Note 1: Length of hull is expressed in metres (m).~~

3.5

sailing boat

craft [\(3.1\)](#) for which the primary means of propulsion is by wind power, having reference sail area $(A_S) \geq 0,07(m_{LDC})^{2/3}$

[SOURCE: ISO 8666:2020, 3.11]

3.65

non-sailing boat

craft [\(3.1\)](#) ~~(3.4)~~ for which the primary means of propulsion is other than by wind power, having reference sail area $(A_S) < 0,07(m_{LDC})^{2/3}$

[SOURCE: ISO 8666:2020, 3.10]

3.76

high-speed craft

craft [\(3.1\)](#) having a maximum speed, in knots, greater than $7\sqrt{L_H}$ or 25 knots, whichever is the greater

Note 1 to entry: the conversion factor at the first instance: 1 knot = 1,852 km/h.

3.87

working deck

external deck areas defined by the manufacturer for people to stand or walk on during *normal operation* [\(3.27\)](#) ~~(3.29)~~ of the craft [\(3.1\)](#), -assigned into different *deck zones* [\(3.8\)](#) ~~(3.9)~~

3.98

deck zone

working deck [\(3.8\)](#) ~~(3.78)~~ area of the craft [\(3.1\)](#) where there is a risk of falling overboard during *normal operation* [\(3.27\)](#) ~~(3.28)~~ of the craft

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3.109

safety device

device that is used to prevent falling overboard or provide reboarding functions, either on its own or as a part of a system

Note 1 to entry: [Table 2](#) provides list of safety devices considered by this document.

3.110

slip-resistant surface

surface intentionally provided to increase grip between the foot (or shoe) and the surface of the deck

3.121

foot-stop

feature which provides a barrier or support for the foot

3.132

barrier to falling overboard

permanent structure designed to restrain person from falling overboard made of *guard-rails* [\(3.13\(3.14\)\)](#), *guard-lines* [\(3.14\(3.15\)\)](#), *coamings* [\(3.17\(3.18\)\)](#), bulwark or other elements, or combination of such

3.143

guard-rail

system of rigid structure designed to restrain person from falling overboard

3.154

guard-line

system of flexible lines supported by rigid structures or *stanchions* [\(3.15\(3.16\)\)](#), designed to restrain person from falling overboard

3.165

stanchion

upright bar or pole carrying a *guard-rail* [\(3.13\(3.14\)\)](#) or *guard-line* [\(3.14\(3.15\)\)](#)

3.176

pulpit

pushpit

rigid frame replacing or extending a *guard-rail* [\(3.13\(3.14\)\)](#) or *guard-line* [\(3.14\(3.15\)\)](#)

3.187

coaming

raised part of the deck or superstructures

3.198

handhold

device or part of the *craft* [\(3.1\)](#) intended to be gripped by hand to reduce the risk of falling overboard, even if it is not its main function

3.209

hooking point

specific device, *jack-line* [\(3.20\(3.21\)\)](#) or part of the *craft* [\(3.1\)](#) to which people can directly attach the hook of a safety harness, even if it is not its main function

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3.2120

jack-line

flexible line or rigid bar intended for the attachment of the line of a safety harness and allowing movement along its length

3.2221

reboard

action of a person to climb aboard a *craft* (3.1) from the water

3.2322

means of reboarding

rigid or flexible device or part of the hull which allows a person to *reboard* (3.21(3.22)) unaided

3.2423

strong point

fitting on a *craft* (3.1) designed to be used for the attachment of anchor chains, anchor lines, tow lines or warps

3.2524

body support

part of the *craft* (3.1) intended to provide support to the body of an occupant while underway

3.2625

seat

surface, horizontal or nearly horizontal, intended for a person to sit, with minimum dimensions of 400 mm width by 750 mm length inclusive of clear foot space in front of the seat

3.2726

outer deck edge

outboard deck edge at the periphery of the *craft* (3.1)

EXAMPLE Gunwale.

3.2827

normal operation

use of the product in the manner for which it is intended, and in accordance with the specifications, instructions and information provided by the manufacturer

3.2928

toe strap

device for retaining the crew's feet such that they can hike, i.e. extend their bodies beyond the periphery of the boat, in order to balance the *craft* (3.1), without falling overboard

3.30

habitable boat susceptible to inversion

~~habitable boat susceptible to inversion as defined in ISO 12217-1:2022, ISO 12217-2:2022 and ISO 12217-3:2022~~

~~Note 1 to entry: Habitable boats susceptible to inversion are habitable multihull boats complying with requirements of ISO 12217-1:2022 or ISO 12217-2:2022 or ISO 12217-3:2022.~~