SLOVENSKI STANDARD
oSIST prEN ISO 15085:2023

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Nadomešča:
SIST EN ISO 15085:2004

Mala plovila - Preprečevanje padca človeka v vodo in reševanje iz nje (zaščita in oprema) (ISO/DIS 15085:2023)

Small craft - Man-overboard prevention and recovery (ISO/DIS 15085:2023)

Kleine Wasserfahrzeuge - Verhütung von Mann-über-Bord-Unfällen und Bergung (ISO/DIS 15085:2023)

Petits navires - Prévention des chutes par-dessus bord et remontée à bord (ISO/DIS 15085:2023)

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ICS:

13.340.60	Zaščita pred padci in zdrsi	Protection against falling and slipping
47.080	Čolni	Small craft

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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

ICS: 47.080

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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 documents 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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*.

This second edition cancels and replaces the first edition (ISO 15085:2003), which has been technically revised.

The main changes are as follows:

— simplify the arrangement of the document;

— define new approach to set requirements according to a risk assessment principle on a craft with deck zones;

— include “normal operation” and a wider list of functions to ensure safely;

— Replace requirement for guard-rails and guard-lines systems with one single concept of falling overboard barrier;

— improve requirements on hight speed craft;

— include toe straps requirements for sailing dinghies;

— include amendment on means of reboarding.

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.

Small craft — Man-overboard prevention and recovery

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 falling overboard, and requirements to facilitate reboarding from the water unaided, on small craft

This document only addresses the risk of falling overboard, and not of falling within the limits of the deck zone.

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

This document is not applicable 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 8666:2016, *Small craft — Principal data*

ISO 12217-1:2015, *Small craft — Stability and buoyancy assessment and categorization — Part 1: Non-sailing boats of hull length greater than or equal to 6 m*

ISO 12217-2:2015, *Small craft — Stability and buoyancy assessment and categorization — Part 2: Sailing boats of hull length greater than or equal to 6 m*

ISO 12217-3:2015, *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 has been added.]

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 is defined in ISO 8666.

[SOURCE: ISO 13590:2022]

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 according to ISO 8666:2016

Note 1 to entry: length of hull is expressed in metres (m).

3.5
sailing boat
craft for which the primary means of propulsion is by wind power, having reference sail area (AS) ≥ $0{,}07(m_{LDC})^{2/3}$

[SOURCE: ISO 8666:2016, 2.9]

3.6
non-sailing boat
craft for which the primary means of propulsion is other than by wind power, having reference sail area (AS) < $0{,}07(m_{LDC})^{2/3}$

[SOURCE: ISO 8666:2016, 2.8]

3.7
high-speed craft
craft having a maximum speed, in knots, greater than 7 $\sqrt{L_H}$ or 25 knots, whichever is the greater

3.8
working deck
external deck areas defined by the manufacturer for people to stand or walk during *normal operation* (3.28) of the craft, divided in different *deck zones* (3.9)

3.9
deck zone
working deck areas of the craft exposed to the risk of falling overboard, that may be occupied by a person during *normal operation* (3.28) of the craft

3.10
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: see Table 2 for safety devices considered by this document

3.10.1
slip-resistant surface
surface intentionally provided to increase adherence between the foot (or shoe) and the surface of the deck

3.11
foot-stop
feature which provides a barrier or support for the foot

3.12
fall overboard barrier
permanent structure designed to restrain crew from falling overboard made of *guard-rails* (3.13), *guard-lines* (3.14), *coamings* (3.17), bulwark or other elements, or combination of such

3.13
guard-rail
system of rigid structure designed to restrain crew from falling overboard

3.14
guard-line
system of flexible lines supported by rigid structures or *stanchions* (3.15), designed to restrain crew from falling overboard

3.15
stanchion
upright bars or poles carrying *guard-rail* (3.13) or *guard-line* (3.14)

3.16
pulpit
pushpit
rigid frame replacing or extending a guard-line or *guard-rail* (3.13)

3.17
coaming
raised part of the deck or superstructures

3.18
handhold
device or part of the craft intended to be gripped by hand to reduce the risk of falling overboard, even if it is not its main function

3.19
hooking point
specific device, *jack-line* (3.20) or part of the craft to which people can directly attach the hook of a safety harness, even if it is not its main function

3.20
jack-line
flexible line or rigid bar intended for attachment of the line of a safety harness allowing movement along its length

3.21
reboard
action of a person to climb aboard a craft from the water

3.22
means of reboarding
rigid or flexible fitting or part of the hull which allows a person to reboard unaided

3.23
strong point
fitting on a craft designed to be used for the attachment of anchor chains, anchor lines, tow lines, and warps

3.24
body support
part of the craft intended to provide support to the body of an occupant while underway

3.25
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

3.26
occupancy area
clear space within the confines of the craft intended for persons to stand or lean provided that a minimum area measuring 400 mm × 400 mm is available for each person so accommodated

3.27
outer deck edge
outboard deck edge at the periphery of the craft

Note 1 to entry: Example: gunwhale

3.28
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

3.29
toe strap
device for retaining the crew's feet such that they may hike, i.e. extend their bodies beyond the periphery of the boat, in order to balance the craft, without falling overboard

4 General requirements

4.1 Prevention from falling overboard

To address the prevention of persons falling overboard, this document requires the craft to be provided with safe access to and use of areas required for its safe operation.

According to the type of the craft, the intended use and the design category, this document requires the manufacturer to:

— assign deck zones according to subclause 4.2;

— install safety devices to these deck zones according to subclause 4.3.

There can be areas which are not intended to accommodate persons, as identified by the manufacturer. Those areas are not considered to be part of the deck zones.

Any deck zone and/or area not intended to accommodate persons shall be described in the craft owner's manual.

4.2 Deck zones

Table 2 assigns zones to deck areas of the craft.

Table 1 — Deck zones

Deck zones Z1 to Z4			
Z1 Deck areas that require access at any time, including at least the following	**Z2** Deck areas that require access at aspeed of 4 knots and below, including at least the following	**Z3** Deck areas that require access when nearly stationary including at least the following	**Z4** Deck areas not belonging to deck zone 1 or 2 or 3
— Helm position — Emergency steering position — Emergency controls [a] — Manual bilge pump(s) — Sail handling equipment [b] — Sail hoist areas if primary controls are not in the cockpit — Main companionway(s) — Occupancy areas and seats located in	— Engine space — Emergency steering installation — Means of accepting a tow — Sail hoist areas if primary controls are in the cockpit — Occupancy areas and seats located in — Liferaft stowage	— Mooring strong points — Means of reboarding — Boarding — Occupancy areas and seats located in	— Occupancy areas and seats located in
[a] Examples of emergency controls: fuel shut-off release, fire extinguisher release.			
[b] Examples of sail handling equipment: main sail and genoa winches.			

Manufacturer shall ensure the craft can accommodate the maximum recommended persons in a combination of Deck zone Z1 and/or Z4 and/or the interior of the craft.

Manufacturer shall consider the relevant risk of falling overboard from each deck zone Z1 to Z3 to define its occupancy areas and seats.

Where different maximum recommended number of persons are assigned to different design categories for a craft, manufacturer shall ensure the requirements of this document are met for each design category.

4.3 Set of requirements according to design category and type of craft

The requirements are presented in Table 4. For each option related to a design category, the corresponding safety devices which are required are identified by their index number from Table 3.

When required, the safety devices shall fulfil all the requirements of the relevant clause.

In addition to the requirements set in Table 4:

— all types of craft shall comply with the requirements of Clause 13 dedicated to means of reboarding;

— all type of craft with elevated parts where crew can access shall comply with the requirements of subclause 8.4 dedicated to risk of falling overboard from elevated parts

— habitable multihull susceptible to inversion shall comply with the requirements of subclause 9.3.

Table 3 provides the list of safety devices.