
**Small craft — Stability and buoyancy
assessment and categorization —**

**Part 2:
Sailing boats of hull length greater
than or equal to 6 m**

Petits navires — Évaluation et catégorisation de la stabilité et de la flottabilité —

Partie 2: Bateaux à voiles d'une longueur de coque supérieure ou égale à 6 m





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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#).

The committee responsible for this document is ISO/TC 188, *Small craft*.

This third edition cancels and replaces the second edition (ISO 12217-2:2013), of which it constitutes a minor revision. It incorporates the following modifications:

- Introduction: the reference to the European Directive has been updated (2013/53/EU);
- [Clause 1](#), [6.2.1.6 d\) 3\)](#), [7.6](#), [7.11](#), [7.12](#), [7.13](#), [Annex I](#), [Table I.2](#), and [Annex J](#), Worksheets 2, 12, 14 and 16: vulnerable has been replaced with susceptible;
- [Clause 3](#): definitions [3.1.1](#), [3.5.5](#), [3.5.6](#) and [3.6.11](#) have been amended;
- [Subclause 6.3.1](#): second item in the list has been inserted;
- [Subclauses 6.3.2.3](#) and [6.3.2.4](#): formulae coefficients have been corrected;
- [Subclause 6.6.2](#): exponent '0,3' has been deleted;
- [Subclause 6.6.7](#): symbols have been corrected;
- [Subclause 6.6.8](#): a note has been added to explain the phrase "fully flooded with water";
- [Clause 9.2](#): the text and [Table 11](#) have been amended;
- [Subclause H.3.2 c\)](#): the coefficient in the formula has been corrected;
- [Annex J](#): worksheets 1, 2, 5, 7, 12 and 16 have been corrected to align with corrections listed above;
- [Annex K](#) has been added;
- Bibliography: reference to ISO 7010 has been added;
- Editorial and cross-referencing corrections have been made to [Table 1](#), [Annex J](#), worksheets 1, 5, 7, 12, 14 and 16, and to [subclauses 6.3.1](#), [6.3.2.2](#) and [6.3.2.3](#).

ISO 12217-2:2015(E)

ISO 12217 consists of the following parts, under the general title *Small craft — Stability and buoyancy assessment and categorization*:

- *Part 1: Non-sailing boats of hull length greater than or equal to 6 m*
- *Part 2: Sailing boats of hull length greater than or equal to 6 m*
- *Part 3: Boats of hull length less than 6 m*

Introduction

This part of ISO 12217 enables the determination of limiting environmental conditions for which an individual boat has been designed.

It enables the boat to be assigned to a design category appropriate to its design and maximum load. The design categories used align with those in the Recreational Craft Directive of the European Union, EU Directive 2013/53/EU.

[Annex J](#) provides worksheets to assist in the systematic assessment of a boat according to this part of ISO 12217.

Small craft — Stability and buoyancy assessment and categorization —

Part 2: Sailing boats of hull length greater than or equal to 6 m

CAUTION — Compliance with this part of ISO 12217 does not guarantee total safety or total freedom of risk from capsizing or sinking.

IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.0

1 Scope

This part of ISO 12217 specifies methods for evaluating the stability and buoyancy of intact (i.e. undamaged) boats. The flotation characteristics of boats susceptible to swamping are also encompassed.

The evaluation of stability and buoyancy properties using this part of ISO 12217 will enable the boat to be assigned to a design category (A, B, C or D) appropriate to its design and maximum load.

This part of ISO 12217 is principally applicable to boats propelled primarily by sail (even if fitted with an auxiliary engine) of 6 m up to and including 24 m hull length. However, it can also be applied to boats less than 6 m if they are habitable multihulls or may be applied if they do not attain the desired design category specified in ISO 12217-3 and they are decked and have quick-draining recesses which comply with ISO 11812.

In relation to habitable multihulls, this part of ISO 12217 includes assessment of susceptibility to inversion, definition of viable means of escape and requirements for inverted flotation.

This part of ISO 12217 excludes:

- inflatable and rigid-inflatable boats covered by ISO 6185, except for references made in ISO 6185 to specific clauses of ISO 12217;
- gondolas and pedalos;
- surfboards including sailing surfboards; and
- hydrofoils and foil stabilized boats when not operating in the displacement mode.

NOTE Displacement mode means that the boat is only supported by hydrostatic forces.

It does not include or evaluate the effects on stability of towing, fishing, dredging or lifting operations, which need to be separately considered if appropriate.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2896:2001, *Rigid cellular plastics — Determination of water absorption*