

This is a preview of "ISO 12217-2:2013". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2013-03-01

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



Reference number
ISO 12217-2:2013(E)

© ISO 2013

This is a preview of "ISO 12217-2:2013". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 12217-2:2013". Click here to purchase the full version from the ANSI store.

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
3.1 Primary	2
3.2 Hazards	4
3.3 Downflooding	4
3.4 Dimensions, areas and angles	5
3.5 Condition, mass and volume	6
3.6 Other terms and definitions	9
4 Symbols	11
5 Procedure	13
5.1 Maximum load	13
5.2 Sailing or non-sailing	13
5.3 Tests, calculations and requirements to be applied	13
5.4 Variation in input parameters	13
6 Requirements for monohull boats	13
6.1 Requirements to be applied	13
6.2 Downflooding	14
6.3 Recess size	18
6.4 Minimum righting energy	21
6.5 Angle of vanishing stability	21
6.6 Stability index (STIX)	23
6.7 Knockdown-recovery test	26
6.8 Wind stiffness test	27
6.9 Flotation requirements	30
6.10 Capsizes-recovery test	30
6.11 Detection and removal of water	32
7 Requirements for catamarans, trimarans and form-stable monohulls	33
7.1 Requirements to be applied	33
7.2 Downflooding openings	33
7.3 Downflooding height	33
7.4 Recess size	33
7.5 Stability information	33
7.6 Safety signs	34
7.7 Bare poles factor	35
7.8 Rolling in breaking waves	35
7.9 Pitchpoling	36
7.10 Diagonal stability	36
7.11 Habitable multihull boats	36
7.12 Buoyancy when inverted	38
7.13 Escape after inversion	38
8 Safety signs	39
9 Application	40
9.1 Deciding the design category	40
9.2 Meaning of the design categories	40
Annex A (normative) Full method for required downflooding height	42
Annex B (normative) Methods for calculating downflooding angle	44
Annex C (normative) Determining the curve of righting moments	47

This is a preview of "ISO 12217-2:2013". [Click here to purchase the full version from the ANSI store.](#)

Annex D (normative) Method for calculating reserve of buoyancy after inversion or swamping	50
Annex E (normative) Flotation material and elements	52
Annex F (normative) Information for owner's manual	54
Annex G (normative) Determination of safe wind speed information	58
Annex H (normative) Determination of longitudinal righting characteristics	61
Annex I (informative) Summary of requirements	64
Annex J (informative) Worksheets	67
Bibliography	86

This is a preview of "ISO 12217-2:2013". [Click here to purchase the full version from the ANSI store.](#)

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 2.

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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12217-2 was prepared by Technical Committee ISO/TC 188, *Small craft*.

This second edition cancels and replaces the first edition (ISO 12217-2:2002), which has been technically revised.

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*

This is a preview of "ISO 12217-2:2013". [Click here to purchase the full version from the ANSI store.](#)

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 94/25/EC as amended by Directive 2003/44/EC.

Annex J provides worksheets to assist in the systematic assessment of a boat according to this part of ISO 12217.