

DIN EN ISO 12217-1:2016-08 (E)

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

Contents		Page
European foreword		4
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2013/53/EU aimed to be covered		5
Foreword		6
Introduction		8
1 Scope		9
2 Normative references		10
3 Terms and definitions		10
3.1 Primary.....		10
3.2 Downflooding.....		12
3.3 Dimensions, areas and angles.....		13
3.4 Condition, mass and volume.....		15
3.5 Other terms and definitions.....		17
4 Symbols		20
5 Procedure		21
5.1 Maximum load.....		21
5.2 Sailing or non-sailing.....		21
5.3 Tests and calculations to be applied.....		22
5.4 Variation in input parameters.....		23
6 Tests, calculations and requirements		23
6.1 Downflooding.....		23
6.1.1 Downflooding openings.....		23
6.1.2 Downflooding height.....		25
6.1.3 Downflooding angle.....		28
6.2 Offset-load test.....		28
6.2.1 Objective.....		28
6.2.2 Test.....		29
6.2.3 Requirements.....		29
6.3 Resistance to waves and wind.....		29
6.3.1 General.....		29
6.3.2 Rolling in beam waves and wind.....		29
6.3.3 Resistance to waves.....		30
6.4 Heel due to wind action.....		31
6.4.1 General.....		31
6.4.2 Calculation.....		31
6.4.3 Requirement.....		32
6.5 Recess size.....		32
6.5.1 Application.....		32
6.5.2 Simplified methods.....		33
6.5.3 Direct calculation method.....		34
6.5.4 Design category C boats using option 6.....		35

6.6	Habitable multihull boats	35
6.7	Motor sailers	35
	6.7.1 General.....	35
	6.7.2 Requirement.....	36
6.8	Flotation requirements.....	36
6.9	Detection and removal of water	36
7	Application	37
	7.1 Deciding the design category	37
	7.2 Meaning of the design categories.....	37
	Annex A (normative) Full method for required downflooding height.....	39
	Annex B (normative) Method for offset-load test	41
	Annex C (normative) Methods for calculating downflooding angle.....	49
	Annex D (normative) Method for measuring freeboard margin.....	51
	Annex E (normative) Determining the curve of righting moments.....	53
	Annex F (normative) Method for level flotation test	56
	Annex G (normative) Flotation material and elements	61
	Annex H (normative) Information for owner's manual.....	63
	Annex I (informative) Summary of requirements	65
	Annex J (informative) Worksheets.....	66
	Annex K (informative) Illustration of recess retention level.....	83
	Bibliography.....	84