INTERNATIONAL STANDARD

ISO 6185-4

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Inflatable boats —

Part 4: Boats with a hull length of between 8 m and 24 m with a motor power rating of 15 kW and greater

Bateaux pneumatiques —

Partie 4: Bateaux d'une longueur de coque comprise entre 8 m et 24 m et d'une puissance moteur nominale supérieure ou égale à 15 kW

Reference number
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Contents

Page

Foreword v
Introduction vi
1 Scope 1
2 Normative references 1
3 Terms and definitions 3
4 Symbols 4
5 Materials 5
5.1 General 5
5.2 Materials making up the buoyancy tube 5
5.3 Wood 7
5.4 Metal parts 7
5.5 Glass-reinforced plastics 8
5.6 Other materials 8
5.7 Buoyant material used in foam-filled buoyancy tubes 8
6 Functional components 9
6.1 Conditioning 9
6.2 Buoyancy tube and hull fittings (items bonded to the buoyancy tube) 9
6.3 Valves (if applicable) 10
6.4 Transom 10
6.5 Hull interior drainage 10
6.6 Remote steering system (where offered as standard or optional equipment) 10
6.7 Towing, anchoring and mooring strong points 11
6.8 Seating and attachment systems (where offered as standard or optional equipment) 11
6.9 Electrical installations (where offered as standard or optional equipment) 11
6.10 Engine and engine spaces 11
6.11 Ventilation of petrol motor and petrol tank compartments (where applicable) 11
6.12 Devices for lifting the boat (if applicable) 12
6.13 Fire protection (if applicable) 12
6.14 Openings in hull, deck or superstructure 12
6.15 Gas systems 12
6.16 Navigation lights 12
6.17 Discharge prevention 12
6.18 Noise emissions (applicable to inboard engines installations without integral exhaust) 12
7 Safety requirements of the completed boat 12
7.1 Maximum permissible number of persons (crew limit) 12
7.2 Motor power calculation 13
7.3 Maximal manoeuvring speed (if applicable) 13
7.4 Static stability of the boat 16
7.5 Maximum load capacity 17
7.6 Buoyancy requirements 17
7.7 Compartmentation (inflatable buoyancy tubes) 18
7.8 Nominal pressures (inflatable buoyancy tubes) 18
7.9 Strength of the inflatable buoyancy tube 18
7.10 Man overboard prevention and recovery 19
7.11 Field of vision from the helm position 19
7.12 Provision for a liferaft or liferafts 19
7.13 Self-bailing 19
7.14 Buoyancy tube attachment strength test (type test only) 20

7.15 Strength of the rigid structure (type test only) 22
7.16 Strength of principal factory-fitted accessories 22
8 Builder's plate(s) 24
9 Owner's manual 24
10 Standard equipment 25
Annex A (informative) **Typical Type IX powered boat 26**
Annex B (informative) **Typical Type X powered boat 28**
Bibliography 29

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 6185-4 was prepared by Technical Committee ISO/TC 188, *Small craft*.

This first edition, together with ISO 6185-1, ISO 6185-2 and ISO 6185-3, cancels and replaces ISO 6185:1982, which has been technically revised.

ISO 6185 consists of the following parts, under the general title *Inflatable boats*:

— *Part 1: Boats with a maximum motor power rating of 4,5 kW*

— *Part 2: Boats with a maximum motor power rating of 4,5 kW to 15 kW inclusive*

— *Part 3: Boats with a maximum motor power rating of 15 kW and greater*

— *Part 4: Boats with a hull length of between 8 m and 24 m with a motor power rating of 15 kW and greater*

Introduction

ISO 6185 is subdivided into four parts as shown in Figure 1.

It excludes

a) single-chamber boats,

b) boats of less than 1 800 N buoyancy, and

c) boats made from unsupported materials of more than 12 kN inflated buoyancy and powered by motors of power $P > 4{,}5$ kW.

It is not applicable to aquatic toys, nor to inflatable liferafts which are specified in ISO 9650.

ISO 6185-1:

— Type I Boats with $L_H < 8$ m propelled exclusively by manual means.

— Type II Powered boats with $L_H < 8$ m with a power $P \leq 4{,}5$ kW.

— Type III Canoes and kayaks with $L_H < 8$ m.

— Type IV Sail boats with $L_H < 8$ m with a sail area less than or equal to 6 m^2.

ISO 6185-2:

— Type V Powered boats with $L_H < 8$ m with a power 4,5 kW $< P \leq 15$ kW.

— Type VI Sail boats with $L_H < 8$ m with a sail area greater than 6 m^2.

ISO 6185-3:

— Type VII Powered boats with $L_H < 8$ m with a power $P \geq 15$ kW.

— Type VIII Powered boats with $L_H < 8$ m with a power $P \geq 75$ kW.

ISO 6185-4:

— Type IX Powered boats (design categories C and D) with 8 m $< L_H \leq 24$ m with power $P \geq 15$ kW.

— Type X Powered boats (design category B) with 8 m $< L_H \leq 24$ m with power $P \geq 75$ kW.

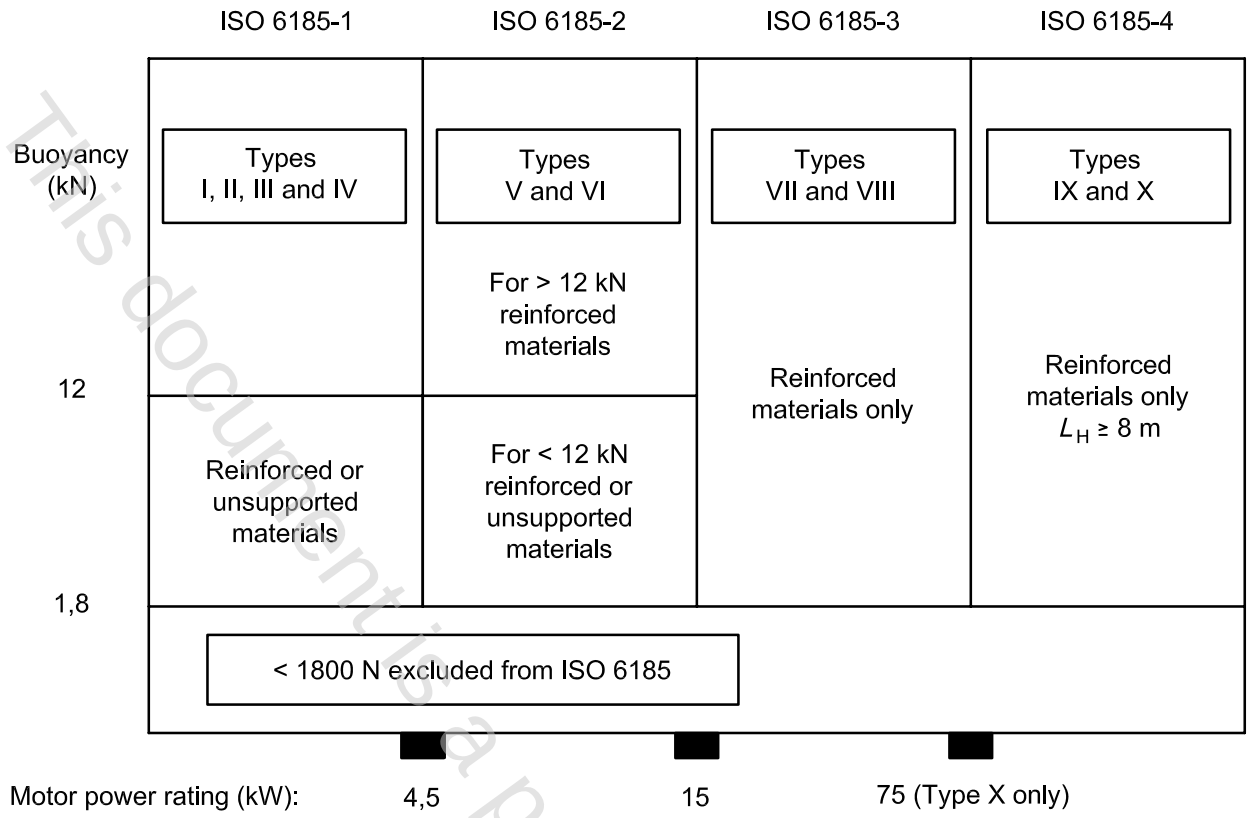

Figure 1 — Illustration of how ISO 6185 is subdivided

This part of ISO 6185 enables the boat to be assigned to a design category appropriate to its design and maximum load. The 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.

Inflatable boats —

Part 4: Boats with a hull length of between 8 m and 24 m with a motor power rating of 15 kW and greater

WARNING — Attention is drawn to the completion process whereby structural items, for example steering consoles, seats and superstructures, are installed by parties other than the manufacturer of the boat. These items should be installed to comply with the relevant clauses of this part of ISO 6185 so it can be ensured that any such installations do not invalidate the original assessment.

1 Scope

This part of ISO 6185 specifies the minimum safety characteristics required for the design, materials, manufacture and testing of rigid inflatable boats (RIBs) with a hull length of between 8 m and 24 m and with a motor power rating of 15 kW and greater.

This part of ISO 6185 is applicable to Type IX and Type X RIBs intended for use within the operating temperatures of −20 °C to +60 °C.

— Type IX: Powered boats, fitted with a buoyancy tube covering at least 85 % of the port and starboard sides, suitable for navigation in inshore and sheltered waters, up to and including wind force 6 Beaufort and significant wave heights up to 2 m (design categories C and D), with a hull length of between 8 m and 24 m and with a motor power rating of 15 kW and greater.

— Type X: Powered boats, fitted with a buoyancy tube covering at least 85 % of the port and starboard sides, suitable for navigation in waters, up to wind force 8 Beaufort and significant wave heights up to 4 m (design category B), with a hull length of between 8 m and 24 m and with a motor power rating of 75 kW and greater.

NOTE 1 General arrangements of typical boats of Types IX and X are given in Annexes A and B, respectively.

NOTE 2 For boats with power ratings of 4,5 kW and less, refer to ISO 6185-1. For boats with power ratings of 4,5 kW to 15 kW inclusive, refer to ISO 6185-2. For boats with a hull length of less than 8 m and power rating of 15 kW and greater, refer to ISO 6185-3.

Boats outside these types or outside of Type IX and Type X, as defined, are outside of the scope of ISO 6185.

NOTE 3 For inflatable boats with a hull length greater than 8 m, it is suggested to use the requirements of ISO 6185-3.

2 Normative references

The following referenced documents are indispensable for the application 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 1817, *Rubber, vulcanized — Determination of the effect of liquids*

ISO 2411, *Rubber- or plastics-coated fabrics — Determination of coating adhesion*

ISO 3011, *Rubber- or plastics-coated fabrics — Determination of resistance to ozone cracking under static conditions*

ISO 4674-1, *Rubber- or plastics-coated fabrics — Determination of tear resistance — Part 1: Constant rate of tear methods*

ISO 4675, *Rubber- or plastics-coated fabrics — Low-temperature bend test*

ISO 6185-3:2001, *Inflatable boats — Part 3: Boats with a maximum motor power rating of 15 kW and greater*

ISO 7010:2011, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 8099, *Small craft — Toilet waste retention systems*

ISO 8666, *Small craft — Principal data*

ISO 8847, *Small craft — Steering gear — Cable and pulley systems*

ISO 8848, *Small craft — Remote steering systems*

ISO 9093 (all parts), *Small craft — Seacocks and through-hull fittings*

ISO 9094, *Small craft — Fire protection*[1)]

ISO 10087, *Small craft — Craft identification — Coding system*

ISO 10088, *Small craft — Permanently installed fuel systems*

ISO 10133, *Small craft — Electrical systems — Extra-low-voltage d.c. installations*

ISO 10239, *Small craft — Liquefied petroleum gas (LPG) systems*

ISO 10240, *Small craft — Owner's manual*

ISO 10592, *Small craft — Hydraulic steering systems*

ISO 11105, *Small craft — Ventilation of petrol engine and/or petrol tank compartments*

ISO 11591, *Small craft, engine-driven — Field of vision from helm position*

ISO 11812:2001, *Small craft — Watertight cockpits and quick-draining cockpits*

ISO 12215-3:2002, *Small craft — Hull construction and scantlings — Part 3: Materials: Steel, aluminium alloys, wood, other materials*

ISO 12215-5, *Small craft — Hull construction and scantlings — Part 5: Design pressures for monohulls, design stresses, scantlings determination*

ISO 12215-6, *Small craft — Hull construction and scantlings — Part 6: Structural arrangements and details*

ISO 12216, *Small craft — Windows, portlights, hatches, deadlights and doors — Strength and watertightness requirements*

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1) To be published. (Technical revision of ISO 9094-1:2003 and ISO 9094-2:2002.)

ISO 12217-1:—[2)], *Small craft — Stability and buoyancy assessment and categorization — Part 1: Non-sailing boats of hull length greater than or equal to 6 m*

ISO 13297, *Small craft — Electrical systems — Alternating current installations*

ISO 14945, *Small craft — Builder's plate*

ISO 14946:2001, *Small craft — Maximum load capacity*

ISO 15084, *Small craft — Anchoring, mooring and towing — Strong points*

ISO 15085:2003, *Small craft — Man-overboard prevention and recovery*

ISO 21487, *Small craft — Permanently installed petrol and diesel fuel tanks*

3 Terms and definitions

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

3.1
rigid inflatable boat
RIB
buoyant structure comprising two essential parts: a lower hull formed by a rigid structure, achieving part of its intended shape with a non-rigid buoyancy tube that is of either inflatable or foam-filled type and where the buoyant volume of the buoyancy tube comprises not less than 50 % of the total required buoyant volume of the boat (3.4)

NOTE Tubes made from rigid aluminium, rotomoulded polyethylene, glass-reinforced plastic or other rigid materials are excluded.

3.2
inflatable buoyancy tube
multi-chambered inflatable buoyancy tube attached to the length of both port and starboard sides of the hull when the boat is in use, and inflated with air

3.3
foam-filled buoyancy tube
buoyancy tube attached to the length of both port and starboard sides of the hull when the boat is in use, and filled with resilient closed-cell type foam

NOTE For material requirements, see 5.7.

3.4
buoyancy of a RIB
buoyancy comprising the buoyant volumes of the buoyancy tube (3.2 and 3.3), added to the permanent inherent buoyancy (3.5), added to the permanent sealed buoyancy (3.6), added to the inherent buoyancy of the rigid parts of the boat (3.7)

3.5
permanent inherent buoyancy
buoyancy provided by non-intercellular (closed-cell) foam or other materials, contained within the hull and cockpit, which are less dense than fresh water

NOTE For material requirements, see ISO 12217-1:—, Annex F.

2) To be published. (Technical revision of ISO 12217-1:2002.)