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Small craft — Principal data

Petits navires — Données principales

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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

ISO 8666 was prepared by Technical Committee ISO/TC 188, *Small craft*.

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Small craft — Principal data

1 Scope

This International Standard establishes uniformity of definitions of main dimensions and related data, and of mass specifications and loading conditions. It applies to small craft having a length of the hull of up to 24 m.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 10240:—¹⁾, *Small craft — Owner's manual*

ISO 12217 (all parts), *Small craft — Stability and buoyancy assessment and categorization*

ISO 14946, *Small craft — Maximum load capacity* [ISO 8666:2002
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3 Terms and definitions

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

3.1

waterline

WL

intersection between the flotation plane and the hull which appears as a straight line in either the sheer plan or the body plan, but in its true form in the half-breadth plan

3.2

reference waterline

WL_{ref}

waterline in the fully loaded ready-for-use condition

3.3

sheerline

intersection between deck and hull, for rounded deck edges the natural intersection, or, where no deck is fitted or the hull extends above the deck (bulwark), the upper edge of the craft's hull

NOTE The upper position of the sheerline depends on the inclination between the hull/deck intersection and the actual deck (see Figure 3).

1) To be published. (Revision of ISO 10240:1995)

**3.4
transom beam**

B_T
maximum width of the hull at the transom at or below the sheerline, excluding extensions, handles and fittings

NOTE 1 Where spray rails act as chines or part of the planing surface, they are included in the transom beam measurement.

NOTE 2 For craft with a rounded or pointed stern or with a transom beam of less than half the maximum beam of the craft, the transom beam, B_T , is the widest beam at or below the sheerline at the aft quarter length of the hull forward of the stern.

**3.5
displacement**

mass of water displaced by the craft, including all appendages

NOTE Displacement is expressed in kilograms or tonnes.

**3.5.1
loaded displacement**

m_{LDC}
mass of the craft, including all appendages, when in the fully loaded, ready-for-use condition according to 7.3

**3.5.2
displacement volume**

V_D
volume of water displaced by the craft that corresponds to the displacement mass, as defined in 3.5

NOTE 1 Where the density of water used to calculate the volume of displacement is not salt water at a density of 1 025 kg/m³, the density of water used to calculate the volume of displacement is specified.

NOTE 2 Displacement volume is expressed in cubic metres.
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**3.6
tank capacity**

net usable volume of the tank(s) for the craft at rest at the reference waterline, WL_{ref}

4 Symbols, abbreviated terms and units

Unless specifically otherwise defined, the symbols, abbreviated terms and units used in this International Standard are given in Table 1.

Table 1 — Symbols, abbreviated terms and units

Symbol	Designation	Unit	Clause
A_S	Projected sail area	m ²	5.5.2
B_H	Beam of the hull	m	5.3.2
B_{max}	Maximum beam	m	5.3.1
B_{WL}	Beam at waterline	m	5.3.3
B_T	Transom beam	m	3.4
D_{max}	Maximum depth	m	5.4.1
$D_{LWL/2}$	Midship depth	m	5.4.2
F	Freeboard	m	5.4.3
F_A	Freeboard, aft	m	5.4.3.1
F_F	Freeboard, forward	m	5.4.3.3
F_M	Freeboard, midship	m	5.4.3.2
H_a	Air draught	m	5.4.6
L_H	Length of the hull	m	5.2.2
L_{max}	Maximum length	m	5.2.1
L_{WL}	Waterline length	m	5.2.3
m_G	Gross shipping mass	kg, t	6.2
m_{LDC}	Loaded displacement	kg	3.5.1
m_{LCC}	Light craft mass	kg, t	6.3
m_N	Net shipping mass	kg, t	6.1
m_P	Performance test mass	kg, t	6.4
m_T	Mass of craft when towed on trailer	kg, t	6.5
m_{MTL}	Maximum load	kg, t	6.6
T	Draught	m	5.4.4
T_C	Canoe body draught	m	5.4.4.3
T_{max}	Maximum draught	m	5.4.4.1
T_{min}	Minimum draught	m	5.4.4.2
V_D	Displacement volume	m ³	3.5.2
V	Volume of the craft	m ³	5.5.3
V_H	Volume of the hull	m ³	5.5.3.1
V_S	Volume of the superstructure	m ³	5.5.3.2
WL	Waterline		3.1
WL _{ref}	Reference waterline		3.2
β	Deadrise angle	degrees	5.5.1

5 Measurements

5.1 General

Measurements shall be established with the craft at rest at the reference waterline, WL_{ref} , unless otherwise stated.

5.2 Longitudinal

The lengths of a craft shall be measured parallel to the reference waterline and craft centreline as the distance between two vertical planes, perpendicular to the centreplane of the craft.

5.2.1 Maximum length, L_{max}

The maximum length, L_{max} , shall be measured in accordance with 5.2, one plane passing through the foremost part and the other through the aftermost part of the craft.

This length includes all structural and integral parts of the craft, such as wooden, plastic or metal stems or sterns, bulwarks and hull/deck joints.

This length includes parts which are normally fixed, such as fixed spars, bowsprits, pulpits at either end of the craft, stemhead fittings, rudders, outboard motor brackets, outdrives, waterjets and any propulsion units extending beyond the transom, diving and boarding platforms, rubbing strakes and permanent fenders.

Outdrives, waterjets, other propulsion units and all movable parts shall be measured in their normal operating condition to their maximum lengthwise extension when the craft is underway.

This length excludes:

- outboard motors;
- any other type of equipment that can be detached without the use of tools.

See Figure 1 for monohull measurements and Figure 2 for multihull measurements.

5.2.2 Length of the hull, L_H

The length of the hull, L_H , shall be measured in accordance with 5.2, one plane passing through the foremost part of the craft and the other through the aftermost part of the craft.

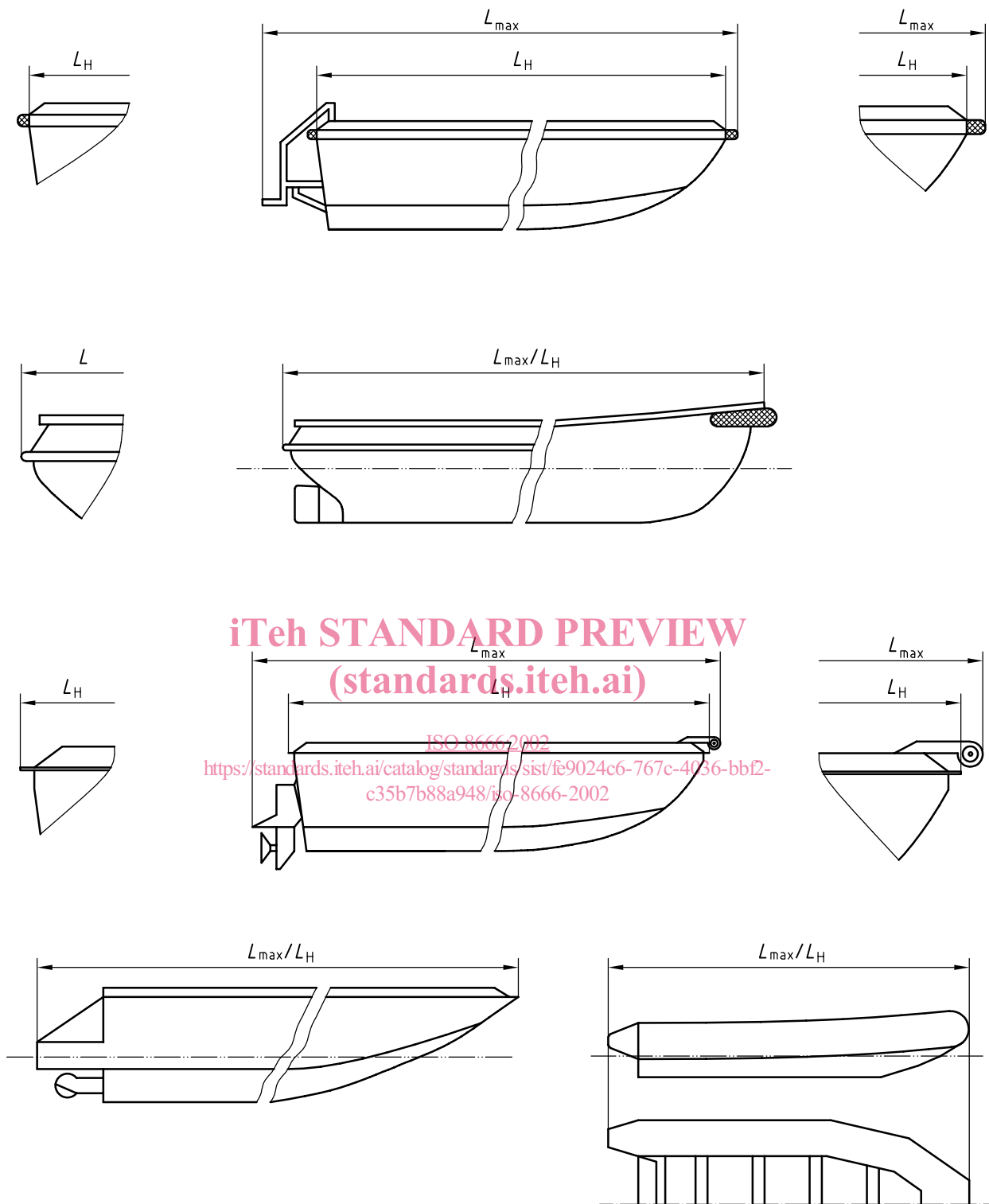
This length includes all structural and integral parts of the craft, such as wooden, plastic or metal stems or sterns, bulwarks and hull/deck joints.

This length excludes removable parts that can be detached in a non-destructive manner and without affecting the structural integrity of the craft, e.g. spars, bowsprits, pulpits at either end of the craft, stemhead fittings, rudders, outdrives, outboard motors and their mounting brackets and plates, diving platforms, boarding platforms, rubbing strakes and fenders.

This length does not exclude detachable parts of the hull, which act as hydrostatic or dynamic support when the craft is at rest or underway.

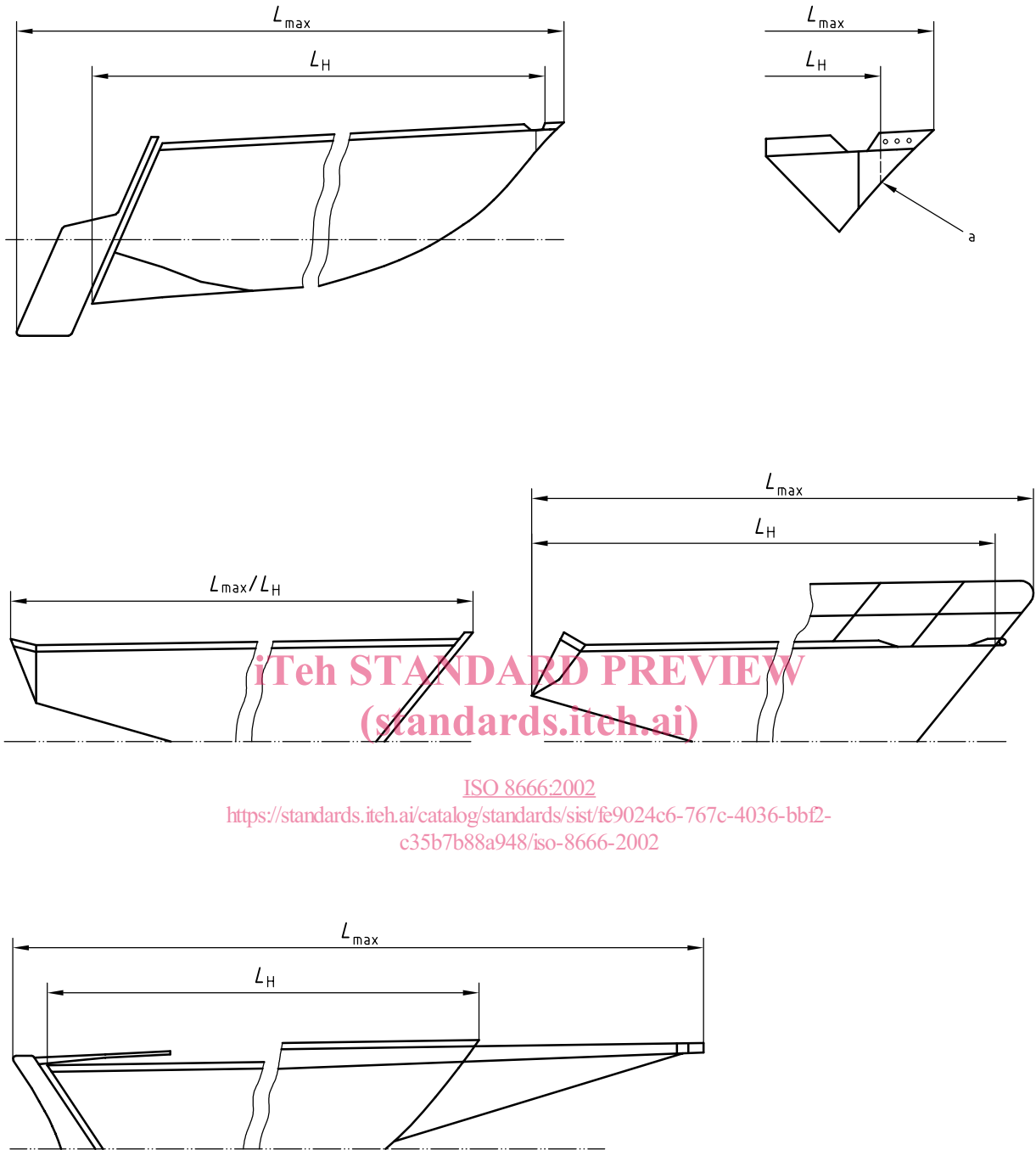
With multihull craft, the length of each hull shall be measured individually. The length of the hull, L_H , shall be taken as the longest of the individual measurements.

See Figure 1 for monohull measurements and Figure 2 for multihull measurements.



a) Determination of L_{max} and L_H for monohull powerboats

Figure 1 — Determination of L_{max} and L_H , for monohull boats



a Hall ends here.

b) Determination of L_{max} and L_H for monohull sailing boats

Figure 1 (continued)

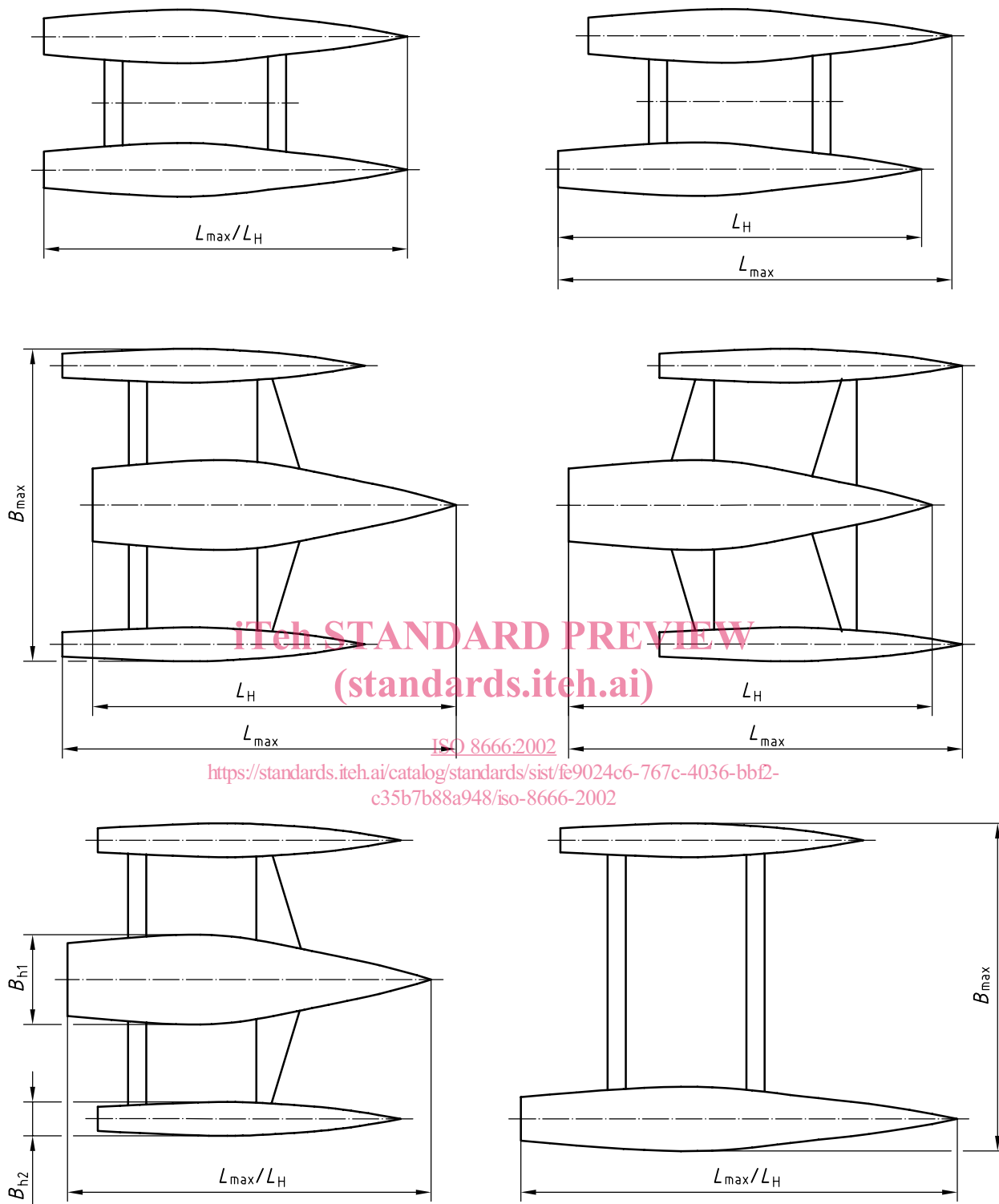


Figure 2 — Determination of L_{max} , L_H , B_{max} and B_H for multihulls