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Title: Draft BS EN 14504 Inland navigation vessels - Floating landing stages and floating bridges on inland waters - Requirements, tests.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Inland navigation vessels - Floating landing stages and floating bridges on inland waters - Requirements, tests

Bateaux de navigation intérieure - Embarcadères flottants et appontements flottants sur des eaux intérieures - Exigences, essais

Fahrzeuge der Binnenschifffahrt - Schwimmende Anlegestellen und schwimmende Brücken auf Binnengewässern - Anforderungen, Prüfungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 15.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (prEN 14504:2017) has been prepared by Technical Committee CEN/TC 15 “Inland navigation vessels”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 14504:2016.

The following changes have been made to EN 14504:2016:

- a) the title has been changed;
- b) definitions revised, new definition added;
- c) intact stability clarified (4.3.2);
- d) requirements on railings clarified (5.1);
- e) requirement for climbing equipment added (5.2.2);
- f) requirements for storage spaces clarified (5.6);
- g) requirements for marking (8) updated according to the changes in 5.2.2 and 5.6;
- h) requirements on Manufacturer's mark (8.4) clarified;
- i) load combinations clarified (A.2);
- j) requirements on live load explained in more detail (A.6);
- k) requirements on hydrodynamic actions explained in more detail (A.7);
- l) static pull clarified for the case that the vessel is moored to the shore (A.9);
- m) calculation of wind load clarified (A.11).

1 Scope

This European Standard specifies safety requirements for floating landing stages and floating bridges for passenger transport and their equipment.

Requirements for facilities for supply and waste disposals for vessels using these floating landing stages are not covered by this Standard.

This European Standard is not applicable to:

- floating landing stages for motor vehicle traffic;
- floating landing stages for recreational craft and inland navigation craft that are not vessels, e.g. floating equipment;
- more severe requirements for floating landing stages used for the transhipment of dangerous goods;
- any landing stages required between vessel and floating landing stage;
- specialized floating structures which are not used for passenger traffic or the berthing of vessels.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 711, *Inland navigation vessels - Railings for decks and side decks - Requirements, designs and types*

EN 790, *Inland navigation vessels - Stairs with inclination angles of 45° to 60° - Requirements, types*

EN 1492-4, *Textile slings - Safety - Part 4: Lifting slings for general service made from natural and man-made fibre ropes*

EN 13056, *Inland navigation vessels - Stairs with inclination angles of 30° to < 45° - Requirements, types*

EN 13281, *Inland navigation vessels - Safety requirements for walkways and working places*

EN 13411-2, *Terminations for steel wire ropes - Safety - Part 2: Splicing of eyes for wire rope slings*

EN 13574, *Inland navigation vessels - Permanently installed climbing devices with a length not exceeding 5 m*

EN 14144, *Lifebuoys - Requirements, tests*

EN 14145, *Holders for lifebuoys*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN ISO 1140, *Fibre ropes - Polyamide - 3-, 4-, 8- and 12-strand ropes (ISO 1140)*

EN ISO 1346, *Fibre ropes - Polypropylene split film, monofilament and multifilament (PP2) and polypropylene high-tenacity multifilament (PP3) - 3-, 4-, 8- and 12-strand ropes (ISO 1346)*

ISO 8793, *Steel wire ropes - Ferrule-secured eye terminations*

ISO 18421, *Ships and marine technology - Inland navigation vessels - Lifebuoy housings*

ISO 18422, *Ships and marine technology - Inland navigation vessels - Plate with instructions for rescue, resuscitation and first aid for drowning persons*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

floating establishment

floating landing stage or floating bridge on inland waters

3.1.1

floating landing stage

floating establishment used for berthing and mooring of vessels and for passenger travel

3.1.2

floating bridge

floating establishment without berth, used solely for passenger traffic and not for berthing or mooring vessels

3.2

floating body

one or more fixed buoyancy bodies with a traffic area and/or a connecting bridge support

3.3

buoyancy body

body capable of floating that either:

- consists of waterproof air chambers, or
- is completely filled with a closed-pore material

3.4

connecting bridge

movable walkway between floating body and shore

3.5

Anchorage for the floating establishment

device by which the floating establishment is secured to its berth

3.6

shore boom

spacer for floating body

3.7

freeboard

distance between water level and top of the buoyancy body

3.8**residual freeboard**

distance between the waterline and the upper edge of the buoyancy body in the event of a leak

3.9**safety distance**

distance between water level and lowest point of buoyancy body with air chambers that is no longer watertight

3.10**residual safety distance**

distance between the waterline and the lowest point of a buoyancy body with air chambers that is no longer watertight in the event of a leak

3.11**maximum draught level**

subsidence of the floating establishment when all actions are at maximum

4 General requirements**4.1 Components**

The floating structure consists of floating body, connecting bridge and anchorage.

4.2 Strength

The strength of the components of floating structures shall be fixed taking into account the actions described in Annex A.

Test as specified in 7.2.

4.3 Buoyancy and stability**4.3.1 General**

In combination with the following proof of buoyancy and stability, for floating establishments the effects in accordance with Annex A shall have a partial safety coefficient of $\gamma_F = 1,0$.

4.3.2 Intact stability

At maximum draught level a

- freeboard of at least 0,15 m,
- safety clearance of at least 0,30 m, and
- heeling angle of no more than 10°

shall be maintained.

In addition, the metacentric height for floating establishments under option A (see 4.4) under impacts as per A.5 to A.7 and A.11 shall be at least 0,15 m. For these structures, heeling motions caused by the vessel's movement or by the mooring equipment as well as open areas of liquid, which occur during the operation of the floating establishment, shall also be taken into consideration.

Test as specified in 7.3.1.

4.3.3 Damaged stability

If an air chamber is damaged, the watertight integrity and stability shall be ensured. In this case, a residual freeboard and a residual safety distance each of not less than 10 cm shall be maintained; if greater safety clearances or residual freeboards are required, these shall be taken into account.

Free surfaces of liquids that can occur during operation shall also be taken into account.

If all buoyancy bodies are completely filled with a material according to 4.5.4, proof of leak stability may be omitted.

Test as specified in 7.3.2.

4.4 Anchorages for floating establishments

Floating establishments shall be anchored in their positions to prevent them from being torn loose or being displaced by currents, wind, waves, fluctuations in water level or the draught or wash of passing vessels or possible special loads. In the case of floating landing stages, the influence of berthing ships shall also be taken into consideration. The functioning capability of the anchoring of the floating establishment shall also be proven for the case that the floating body of the floating establishment springs a leak.

Anchorage for the floating establishment shall comply with one of the following two options:

a) Option A:

The floating establishment shall be secured to the land by means of:

- 1) chains,
- 2) cables,
- 3) synthetic ropes as per EN ISO 1140 or EN ISO 1346,
- 4) a pier anchor of appropriate strength and length, or
- 5) the connecting bridge.

The fastenings shall be secured against deliberate undoing. This requirement is considered to be met if it is not possible to undo the fastenings without the use of a tool.

Rope end connections shall be designed as splicers according to EN 13411-2 or by means of aluminium ferrules according to ISO 8793. Plastic rope end connections shall be designed according to EN 1492-4.

b) Option B:

The floating establishment shall be attached to guides or dolphins in accordance with 4.5.3.

4.5 Structural requirements

4.5.1 General

The floating establishment shall be designed so that it can follow all changes in water level during operation.