



SLOVENSKI STANDARD
oSIST prEN 13281:2022
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Plovila za celinske vode - Varnostne zahteve za sprehajalne in delovne površine

Inland navigation vessels - Safety requirements for walkways and working places

Fahrzeuge der Binnenschifffahrt - Sicherheitsanforderungen an Verkehrswege und Arbeitsplätze

Bateaux de navigation intérieure - Exigences de sécurité relatives aux voies et lieux de travail

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ICS:

47.060 Jezerska in rečna plovila Inland navigation vessels

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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prEN 13281

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Will supersede EN 13281:2000

English Version

Inland navigation vessels - Safety requirements for walkways and working places

Bateaux de navigation intérieure - Exigences de
sécurité relatives aux voies et lieux de travail

Fahrzeuge der Binnenschifffahrt -
Sicherheitsanforderungen an Verkehrswege und
Arbeitsplätze

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

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

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European foreword

This document (prEN 13281:2022) 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 13281:2000.

Compared to EN 13281:2000, the following changes have been made:

- a. Editorial changes in definition 3.1 and 3.4;
- b. Essential requirement for traffic routes and side deck (4.2.1 and 4.2.2);
- c. Reference to swinging derrick deleted (2, 4.2.2 and 4.8);
- d. Emergency exits: dimension increased and access aids required (4.5.4);
- e. Reference to outboard ladders (4.6);
- f. Illuminance levels required (6);
- g. Bulwarks and hatch coamings: minimum height increased and slip-on elevations regulated (7.1);
- h. Basic requirement for handrails (7.2);
- i. Annex ZA has been deleted;
- j. Editorial adjustments.

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prEN 13281:2022 (E)**1 Scope**

This document specifies the safety requirements for walkways and working places on inland navigation vessels in the areas used for work.

Walkways in the passenger area are governed by requirements which are outside the scope of this standard.

Requirements related to the marking of safety and health protection are not covered by this standard.

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 526, *Inland navigation vessels - Gangway with a length not exceeding 8 m - Requirements, types*

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

EN 1502, *Inland navigation vessels - Boarding stairs*

EN 1864, *Inland navigation vessels - Wheelhouse - Ergonomic and safety requirements*

EN 1914, *Inland navigation vessels - Work boats, ship's boats and lifeboats*

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

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

EN 17361, *Inland navigation vessels - Outboard ladders*

EN 29519, *Shipbuilding and marine structures - Rungs for dog-step ladders (ISO 9519)*

EN ISO 14122-2, *Safety of machinery - Permanent means of access to machinery - Part 2: Working platforms and walkways (ISO 14122-2)*

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

3.1**walkway**

area in which people walk

EXAMPLE side decks, decks, entryways, aisles and passageways to working places

3.2**working place**

area in which an activity is carried out

3.3**clear width of the walkway**

distance between two perpendiculars through the points on components which project furthest into the walkway

3.4**side deck**

walkway along the side of the vessel in the area of the cargo room between fore deck and aft deck

4 Safety requirements for walkways**4.1 General**

Walkways shall be available in sufficient number and constructed and dimensioned in such a way that they can be walked along safely as specified herein.

4.2 Dimensions**4.2.1 General**

Walkways shall be arranged in such a way that in the event of stumbling or falling one cannot fall outboard.

Walkways shall have a clear width of at least 0,60 m and a height of at least 2,00 m.

Passageway access shall be at least 1,90 m high, whereas coamings up to a height of 0,40 m are not deducted from the clearance height.

4.2.2 Special requirements for side decks

In derogation from 4.2.1 the clear width of the side deck may

- a) be reduced to 0,54 m for hatch coaming heights up to 0,90 m if there is a clearance between the outer edge of the ship's wall and the inner edge of the cargo hold of at least 0,65 m above
- b) be reduced locally near to fittings which are required for the vessel operation:
 - to 0,50 m near to cocks for deck washing hoses, etc.;
 - to 0,40 m around bollards and cleats at deck level.

For ships with a length of less than 55 m or a beam less than 7,30 m with accommodation at the aft only or no accommodation, the clear width of the side deck may be reduced to 0,50 m.

4.3 Surface condition

Walkways shall

- have a slip-resistant surface R10 in accordance with EN ISO 14122-2;
- be constructed in such a way that water cannot accumulate on them;
- be firm, fair and free from hollows;
- be free from tripping hazards.

On deck walkways, the maximum permissible rise shall be 1 : 10 and the maximum permissible hollow shall be 1 : 20.

prEN 13281:2022 (E)**4.4 Steps in walkways****4.4.1 General**

Where there is a difference in height between continuing walkways of more than 0,50 m, stairs or climbing devices shall be fitted.

4.4.2 Stairs

4.4.2.1 Stairs shall be built into all the areas which are regularly accessed, such as accommodation, wheelhouse, engine rooms and working spaces.

4.4.2.2 Stairs shall be constructed in accordance with EN 13056. Stairs for machine rooms and working rooms may also be constructed in accordance with EN 790. In addition, they shall have the same width as the passageways or the adjoining walkways to which they lead.

4.4.2.3 External stairs shall be built longitudinally along the vessel.

4.4.3 Climbing devices

4.4.3.1 Spaces which are not mentioned in 4.4.2.1, may be equipped with a climbing device, preferably ladder, instead of stairs.

4.4.3.2 Cargo holds shall have at least two climbing devices positioned fore and aft, these shall be designed and constructed in such a way that they are protected against mechanical damage, e.g. in recesses.

4.4.3.3 Climbing devices shall be designed conforming to EN 13574.

4.4.3.4 Dog-step ladders shall be designed conforming to EN 29519.

4.4.3.5 Climbing devices shall be identifiable from above.

4.5 Exits, emergency exits

4.5.1 There shall be fixed railings in accordance with EN 711 along the sides of the deck near to the exits of deck structures and stairs.

4.5.2 Exits shall not be located near to dangerous equipment, such as operating machinery, winches, towing apparatus and loading equipment.

4.5.3 Machine rooms, working spaces, living spaces and the wheelhouse shall have two exits, one of which may be constructed as an emergency exit. Machine rooms and workings spaces with less than 35 m² and a max distance of 5 m between any working place and the exit are exempt from the requirement of having two exits.

4.5.4 Emergency exits shall

- be accessible on both sides;
- be marked on both sides;
- be capable of being opened in the direction of escape at all times without using tools or keys and with a force of not more than 160 N;

- be fitted with a device to keep them in position when in use;
- have a clear opening of at least 0,60 m², with the smallest dimension not less than 0,50 m for rectangular shapes.

NOTE Requirement in ES-TRIN for clear opening of emergency exit is 0,36 m².

If a climbing device is needed to reach the emergency exit, a fixed climbing device in accordance with 4.4.3 shall be provided as climbing aids for easy and quick use.

4.6 Boarding ladders and boarding stairs

Structural devices shall be provided at suitable points on board for the safe securing of boarding ladders in accordance with EN 1502 and boarding stairs in accordance with EN 17361.

4.7 Gangways

Structural devices shall be provided at suitable points on board for the safe positioning of gangways in accordance with EN 526.

4.8 Ship's boats

Equipment or devices shall be provided at suitable points on board for the safe mounting of ship's boats according to EN 1914 and their launching in accordance with the rules even in the case of failure of power drive.

5 Safety requirements for working places

5.1 General requirements

Working places shall be positioned and equipped to provide clear space for working, as specified herein.

The requirements in 4.3 shall be met.

The equipment shall be positioned and equipped to be used and maintained safely. Moving and hot parts shall be provided with protective devices.

5.2 Hatches and hatchway covers

5.2.1 Hatchway coamings shall be constructed at the hold side so that crane gear cannot snag on them.

5.2.2 Hatchway covers shall be designed

- to resist to structural flexing of the vessels;
- so that they can be secured against being lifted by wind;
- to avoid the risks presented by squeezing and shearing;
- to resist a loading of 1,5 kN/m², or they shall be marked that they cannot be walked on;
- be marked if they may be loaded by stowed cargo according to load and load positioning;
- and to be hinged, sliding or power-operated if the moving parts have a mass of more than 40 kg.

5.2.3 Rolling hatchway covers and lift trucks shall be fitted with blocks which automatically prevent unintentional longitudinal movement of more than 0,40 m and lock in the end position.

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5.2.4 It shall be possible to secure stacked parts of the hatchway cover.

5.2.5 In the case of power-operated hatchway covers, the operating elements shall be self-resetting. The power supply shall be cut off in a null position of the operating elements.

5.3 Working places on deck and inside the vessel

5.3.1 Working places inside the vessel shall conform to the relevant health and safety as well as ergonomics requirements. They shall be capable of being ventilated and temperature controlled.

Where possible, working places inside the vessels shall be lit by natural light.

5.3.2 Openings in decks and floor shall be fenced off or be capable of being secured against falling through.

5.3.3 Windows and skylights shall be constructed and arranged in such a way that they can be operated and cleaned.

5.4 Protection against noise and vibration

Working places shall be so located, constructed and installed that risks resulting from the emission of noise and vibration are reduced to the lowest possible level.

5.5 Wheelhouses and control positions

Wheelhouses and control positions, in particular

- safety and ergonomic requirements and
- visibility from the control position shall be designed in accordance with EN 1864.

5.6 Doors and covers

5.6.1 Doors and covers shall be capable of being opened and closed from both sides, this does not apply to covers which can be bolted.

5.6.2 Doors and covers shall be secured by:

- latches in the closed position;
- hold backs in the open position.

Hold backs are not necessary for covers capable of being completely turned down.

6 Lighting

Working places, living spaces and walkways shall be equipped with lighting. Lighting appliances on open decks shall be so installed as not to impede the recognition of signal lights.

The illuminance needs to be at least

- on walkway 100 lx;
- in the working places 200 lx;
- in areas with increased lighting needs 500 lx.