



SLOVENSKI STANDARD SIST EN ISO 8468:2000

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Ship's bridge layout and associated equipment - Requirements and guidelines (ISO 8468:1990)

Ship's bridge layout and associated equipment - Requirements and guidelines (ISO 8468:1990)

Gestaltung und Ausrüstung von Schiffsbrücken - Anforderungen und Regeln (ISO 8468:1990)

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Aménagement de la passerelle d'un navire et disposition de ses équipements annexes - Exigences et directives (ISO 8468:1990)

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Ta slovenski standard je istoveten z: EN ISO 8468:1994

ICS:

47.020.70	Navigacijska in krmilna oprema	Navigation and control equipment
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EUROPEAN STANDARD

EN ISO 8468

NORME EUROPÉENNE

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English version

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Page 2
EN ISO 8468:1994

Foreword

This European Standard has been taken over by the Technical Committee CEN/TC 300 "Sea-going vessels and marine technology" from the work of ISO/TC 8 "Seagoing vessels" of the International Organization for Standardization (ISO) and was adopted by ISO and CEN following a formal voting procedure.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 1995, and conflicting national standards shall be withdrawn at the latest by March 1995.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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The text of the International Standard ISO 8468:1990 "Ship's bridge layout and associated equipment - Requirements and guidelines" has been approved by CEN as a European Standard without any modification.



INTERNATIONAL STANDARD

**ISO
8468**

Second edition
1990-11-01

Ship's bridge layout and associated equipment — Requirements and guidelines

iTeh *Aménagement de la passerelle d'un navire et disposition de ses équipements
annexes — Exigences et directives*
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Reference number
ISO 8468 : 1990 (E)

ISO 8468 : 1990 (E)**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.

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.

International Standard ISO 8468 was prepared by Technical Committee ISO/TC 8, *Shipbuilding and marine structures*.

This second edition cancels and replaces the first edition (ISO 8468 : 1987), and incorporates draft addendum 1, circulated in 1988.

Annex A forms an integral part of this International Standard. Annex B is for information only.

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Ship's bridge layout and associated equipment — Requirements and guidelines

1 Scope

This International Standard specifies basic functional requirements for bridge configuration, bridge arrangement, bridge equipment and bridge environment. It has been developed to ensure that designs of ships' bridges provide adequately for the requirements for safe navigation to prevent confusion arising from bridge arrangements which are unusual.

Wherever applicable, guidelines have been drawn up for the methods and solutions to meet the functional requirements.

This International Standard applies to seagoing ships where bridge duty is regularly maintained.

Where there are physical limitations in applying this International Standard to small ships or to ships of unusual design, the general principles should still apply.

NOTE — Users of this International Standard should note that while attempting to observe its requirements they should, at the same time, ensure compliance with such statutory requirements, rules and regulations as may be applicable to the individual ship concerned.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2412 : 1982, *Shipbuilding — Colours of indicator lights*.

ISO 3434 : 1975, *Shipbuilding — Heated glass panes for ships' windows*.

ISO 3904 : 1990, *Shipbuilding — Clear-view screens*.

IEC 447 : 1974, *Standard directions of movement for actuators which control the operation of electrical apparatus*.

IMO Resolution A.343(IX), *Recommendation on Methods of Measuring Noise Levels at Listening Posts*.

IMO Resolution A.468(XII), *Code on Noise Levels on Board Ships*.

IMO Resolution A.574(XIV), *Recommendation on General Requirements for Electronic Navigational Aids*.

International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974).

International Regulations for Preventing Collisions at Sea, Annex III (as amended).

3 Definitions

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

3.1 bridge : That area from which the navigation and control of the ship is exercised, including the wheelhouse and bridge wings.

3.2 bridge wings : Those parts of the bridge on both sides of the ship's wheelhouse which extend to the ship's side.

3.3 catwalk : Extension to a deck that is wide enough to allow the passage of a man.

3.4 chartroom area : Part of the wheelhouse situated and equipped for adequate performance of voyage planning/plotting activities.

3.5 commanding view : View without obstructions which would interfere with the navigator's ability to perform his immediate task.

3.6 communications workstation : Workstation for operation and control of equipment for distress/safety communications and public correspondence communications.

ISO 8468 : 1990 (E)

3.7 conning position : Place on the bridge with a commanding view and which is used by navigators when commanding, manoeuvring and controlling a ship.

3.8 display : Means by which a device presents visual information to the navigator, including conventional instrumentation.

3.9 ergonomics : Application of the human factor in the analysis and design of equipment, work and working environment.

3.10 field of vision : Angular size of a scene that can be observed from a position on the ship's bridge.

3.11 helmsman : Person who steers a ship underway.

3.12 monitoring : Act of constantly checking equipment and environment in order to detect any changes.

3.13 navigating and manoeuvring workstation : Workstation where ship's speed and course are considered and controlled.

3.14 navigator : Person navigating, operating bridge equipment and manoeuvring the ship.

3.15 percentile : Percentage of population

3.16 seagoing ship : Ship navigating on the high seas, i.e. areas along coasts and from coast to coast.

3.17 superstructure : Decked structure, not including funnels, which is on or above the freeboard deck.

3.18 wheelhouse : Enclosed area of the bridge.

3.19 workstation : Position at which one or several tasks constituting a particular activity are carried out.

4 Bridge configuration

4.1 Field of vision

4.1.1 Every effort shall be made to place the bridge above all other superstructures.

4.1.2 The view of the sea surface from the conning position shall not be obscured by more than two ship lengths or 500 m, whichever is less, forward of the bow to 10° on either side irrespective of the ship's draught, trim and deck cargo (e.g. containers). (See figure 1.)

4.1.3 The height of the lower edge of the front windows shall allow a forward view over the bow for a person in a sitting position at the workstation.

Guidelines :

The height of the lower edge of front windows above the deck should be kept as low as possible, and should not, as far as practicable, be more than 1 000 mm.

4.1.4 The upper edge of the front windows shall allow a forward view of the horizon for a person in a standing position with an eye height of 1 800 mm at the navigating and manoeuvring workstation when the ship is pitching in heavy seas.

Guidelines :

The height of the upper edge of front windows above the deck should be as high as practicable and at least allow a forward view of the horizon when the bow is 10° below its position on even keel. The minimum height of the upper edge of front windows above the deck surface should be 2 000 mm. (See figure 2.)

The dimensions in figure 2 are based upon an eye height of 1 800 mm, referring to a person of a height of 1 900 mm, at a distance of 750 mm from the bridge front bulkhead.

For arrangements where the navigator would normally stand further back from the bridge front bulkhead, the same eye height should be used to determine the height of the upper edge of the front windows.

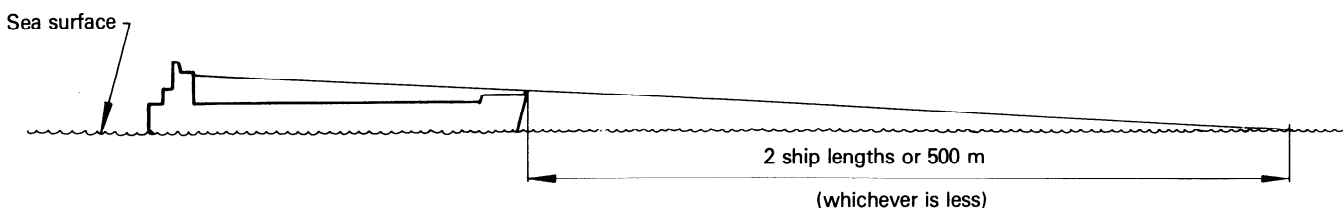


Figure 1 — Forward view

Dimensions in millimetres

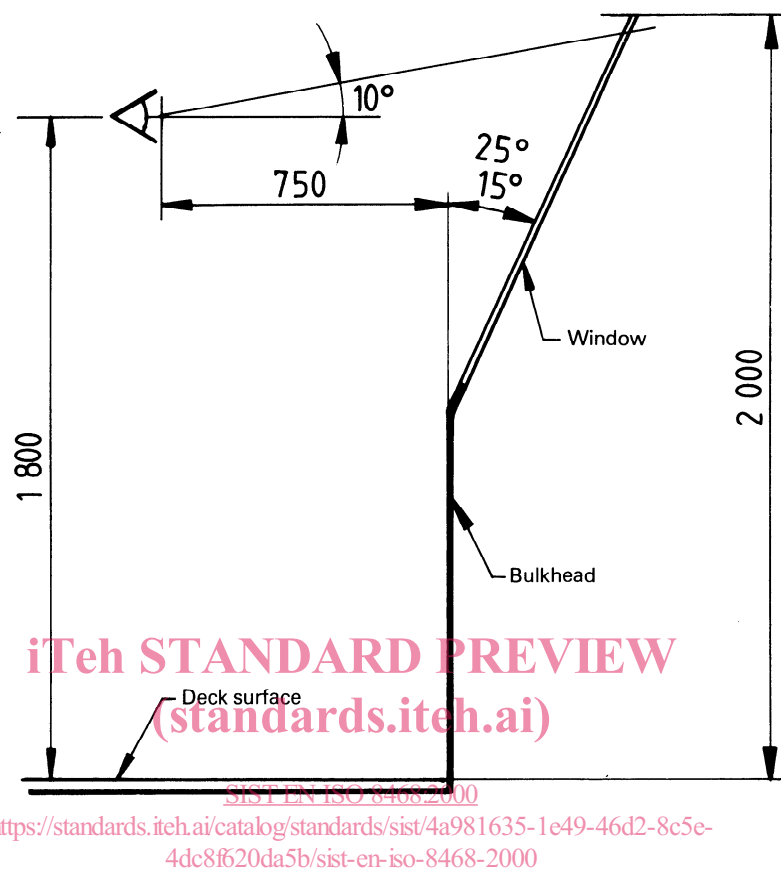


Figure 2 — Example of the height of upper edge of front windows in relation to eye height, distance from front bulkhead, slanting of bulkheads, etc., given a window slant of between 15° and 25°

4.1.5 It shall be possible to observe all objects necessary for navigation, such as ships and lighthouses, in any direction from inside the wheelhouse.

Guidelines :

There should be a field of view around the vessel of 360° obtained by an observer moving within the confines of the wheelhouse. (See figure 3.)

4.1.6 At the navigating and manoeuvring workstation and at the conning position, the navigator's field of view shall be sufficient to enable him to comply with the International Regulations for Preventing Collisions at Sea.

Guidelines :

a) The horizontal field of view from the navigating and manoeuvring workstation and from the conning position should at least extend over an arc from 22,5° abaft the beam on one side, through forward, to 22,5° abaft the beam on the other side. (See figure 4.)

b) From a monitoring workstation, the field of view should extend at least over an arc from 90° on the port bow, through forward, to 22,5° abaft the beam on starboard. (See figure 5.)

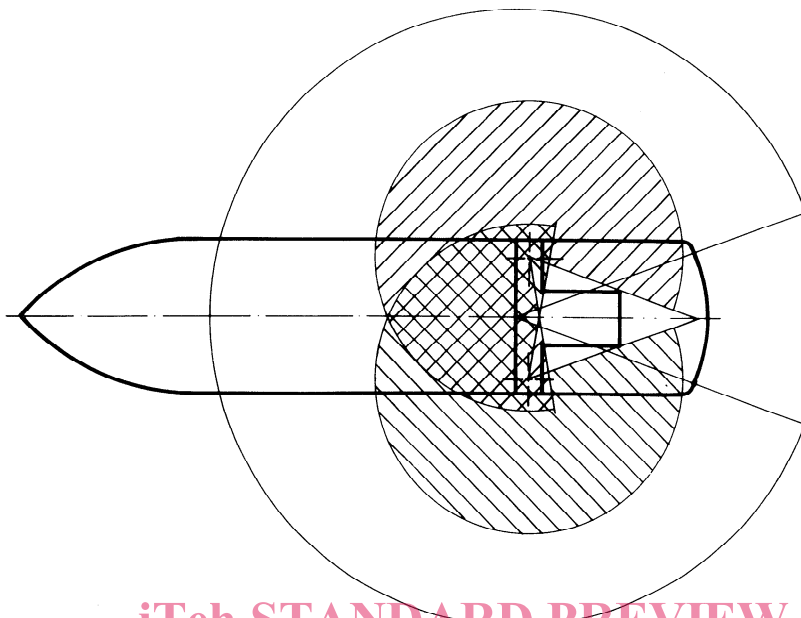
c) The field of vision from a workstation on the bridge wing should extend over an arc from at least 45° on the opposite bow through dead ahead and then aft to 180° from dead ahead. (See figure 6.)

4.1.7 The helmsman's field of vision shall be sufficiently wide to enable him to carry out his functions safely.

Guidelines :

The helmsman's field of vision from the workstation for manual steering should extend over an arc from dead ahead to at least 60° on each side. (See figure 7.)

NOTE — The workstation should not be placed immediately abaft the front windows in order to obtain the required field of vision.



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Figure 3 — 360° field of view

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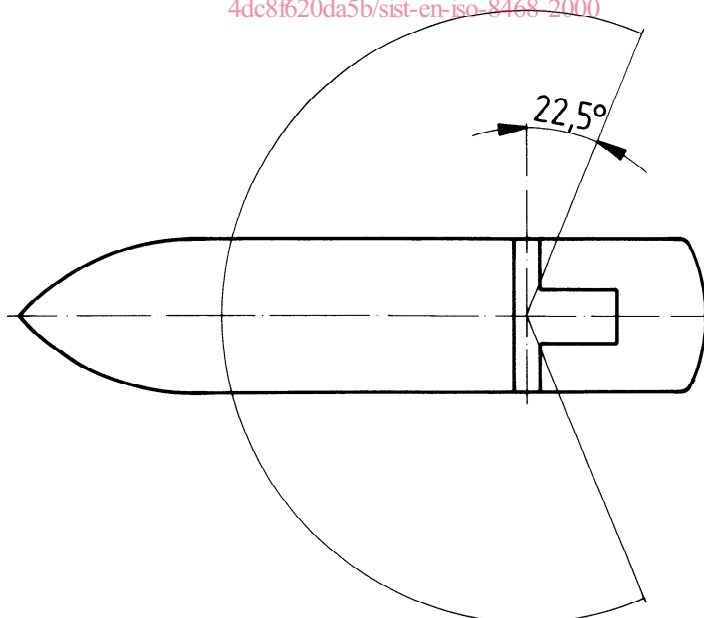
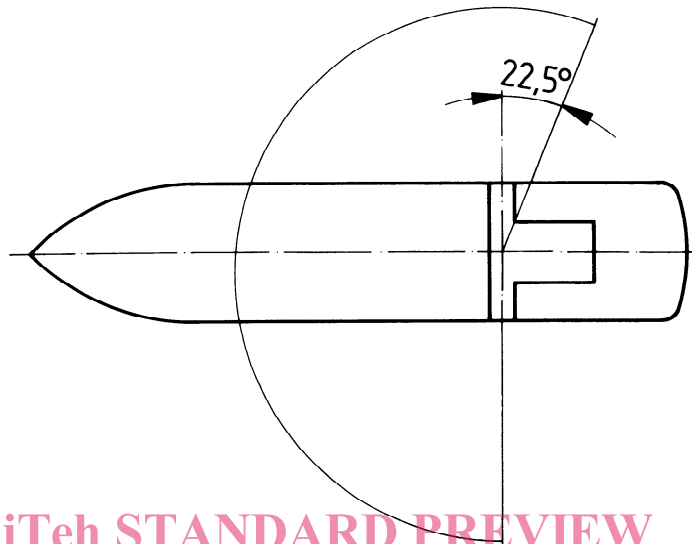


Figure 4 — Navigating and manoeuvring workstation and conning position



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Figure 5 – Monitoring workstation

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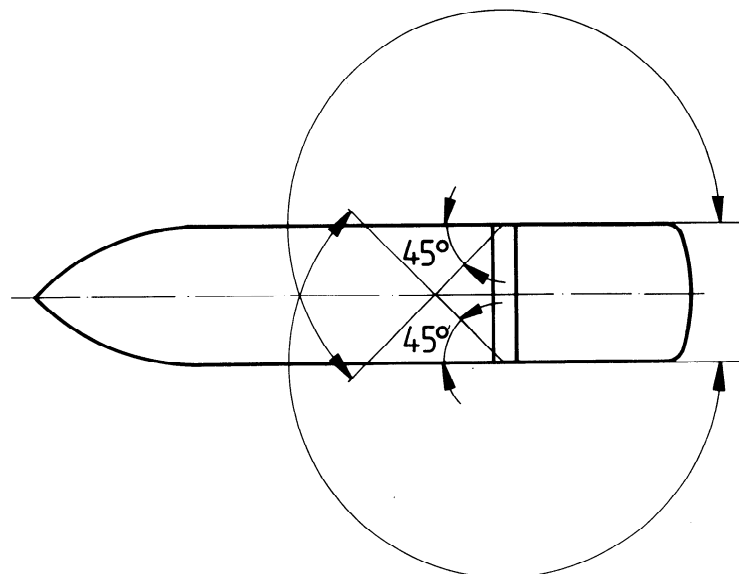


Figure 6 – Bridge wing workstation