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Laki Liikenne- ja viestintävirastosta (935/2018), 2 §

Modification details:
Replaces the instructions "Fairway terminology" 4956/1021/2011 of the Finnish Transport Agency.

Fairway terminology

Foreword

The purpose of the descriptions is to clarify the meaning of terms connected with fairways/channels, their interpretation and the responsibility of authorities providing fairways/channels.

The descriptions are primarily connected with public channels and the terminology associated with them. The actual definitions are written in bold print. Concepts relating to draught and fairway areas, geometry and headroom are illustrated by drawings.

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1 Channel

A channel is a continuous water route between two end points. It is marked at sea and presented on a chart.

Pursuant to the Water Act (587/2011), a public channel refers to a channel in a watercourse or the sea which, based on the provisions of the Act, has been declared a public channel or a public local channel. Other channels are private.

After receiving an application from the Finnish Transport Infrastructure Agency to this effect, the Regional State Administrative Agency can assign a part of a waterway that needs to be kept open for public waterborne traffic as a public channel. By an application from any other party, such waterway can be assigned as a public local channel. The channel information is confirmed in a decision by the Finnish Transport and Communications Agency.

Public channels are marked on nautical charts maintained by the Finnish Transport and Communications Agency.

All channels on the Finnish coast and inland waterways, except for channels and sections of channels on the open sea or in other deep, open waters, are regarded 'narrow channels' as referred to in the Rules of the Road at Sea.

NB. In this text the word ‘channel’ is used as a general term for all waterways including sea channels, inland waterways and fairways.

2 Channel alignment and navigation line

The channel alignment delineates the location of the channel in the water area.

In principle, the channel alignment consists of sequential, straight navigation lines. The navigation lines are interconnected by bends (arcs). The alignment can also be shown by means of a free line (small craft routes, the alignment of shallow channels in narrow straights).

The navigation line delineates the track that the ship is expected to follow in the channel.

Navigation lines may be marked by leading marks.

For wide, two-way channels normally only one alignment is shown (single navigation lines).

The navigation line is not necessarily situated in the middle of the fairway area.

The channel alignment is unambiguously shown by means of coordinates in the waterway design documents and on the waterway chart, which is submitted to the Regional State Administrative Agency in connection with the application to make a channel public pursuant to the Water Act.

Data about the location of the channel alignment/navigation lines is stored and maintained in the Fairway Register of the Finnish Transport Infrastructure Agency.

The channel alignment is shown on nautical charts by means of a continuous line.

3 Channel location

The location of a channel is an expression used in the Water Act, referring to the place and course of the channel in the water area.

In documents for applications pursuant to the Water Act, the location is shown by indicating both the fairway area and the channel alignment unambiguously on a chart tied to the coordinate system. The location is indicated on nautical charts as a channel alignment, if not otherwise. For merchant fairways, usually also the fairway area is indicated on the nautical charts.

4 Design draught

The design draught of a channel refers to the planned draught at which the design vessel can normally use the channel. The design draught is determined from the reference level. The difference between the actual water level and the reference level is taken into account as an increase or reduction in the design draught indicated for the channel.

In the old mean water level system, the reference level is the Mean Sea Level of a certain year (MSL), and in the new N2000 system it is the system's 0 level. In inland waters, the reference level is generally the low water level of the navigation season (LWnav).

The design draught does not guarantee that any vessel in any circumstances and conditions could use the channel without risk of grounding, even if her draught, does not exceed the design draught of the channel, corrected for current water-level. Correspondingly, a vessel may, under certain circumstances and when taking into consideration the conditions, vessel properties, safe clearance depth of the channel and the vessel's dynamic draught as well as other available data, use the channel when her draught exceeds the stated design draught of the channel, corrected for current water level.

The design draught of a public channel is confirmed by Traficom's decision.

For shallow channels, the design draught is indicated on nautical charts with a depth figure in connection with the navigation line. For coastal merchant shipping lanes, the design draught is given in other nautical publications and on fairway cards.

5 Gross Underkeel clearance

The gross underkeel clearance (grossUKC) of a channel refers to the additional depth planned for the channel in addition to its design draught.

The gross underkeel clearance is necessary in order to compensate for the vertical movements of a vessel underway as well as to maintain the maneuverability of the vessel and avoid groundings.

The gross underkeel clearance of the channel is the sum of the motion allowance planned for the channel and the net underkeel clearance. Correspondingly, gross underkeel clearance is the difference between the channel's safe clearance depth and its design draught. The gross underkeel clearance may vary in different sections of the channel.

The gross underkeel clearance values of merchant shipping lanes are presented in certain nautical publications as well as on fairway cards.

6 Safe clearance depth

The safe clearance depth (swepth depth) of a channel refers to the depth to which it has been secured that the channel is clear.

The safe clearance depth is determined as the sum of the channel's design depth, the motion allowance of the vessel and the net underkeel clearance. The safe clearance depth may vary in different sections of the channel depending on the motion allowance specified for the channel, even if the design draught in the channel remains the same.

The determination of the safe clearance depth is based on the reference level, which in sea areas in the old mean water level system is the Mean Sea Level of a certain year (MSL) and in the new N2000 system the 0 level of the system. In inland waters, the reference level is generally the low water level of the navigation season (LWnav).

The safe clearance depth of a channel is confirmed by Traficom's decision.

In coastal merchant shipping lanes, the safe clearance depth is presented on nautical charts and in other nautical publications as well as on the fairway cards of the channels.

7 Motion allowance

The motion allowance of a channel refers to the planned additional depth of the channel in addition to the design draught, reserved for vessel motion.

Motion allowance is necessary in order to compensate for the vertical movements of a vessel underway. The motion allowance of a channel is the difference between its gross and net underkeel clearance. The motion allowance may vary in different sections of the channel. The values of motion allowance for merchant shipping lanes are presented in certain nautical publications as well as on fairway cards.

8 Dynamic draught

The dynamic draught of a channel refers to the level the vessel's keel may reach when the vessel moves in the channel.

The dynamic depth is the sum of the channel's design draught and the motion allowance reserved for the vessel in the channel. The dynamic draught is specified for merchant shipping lanes in connection with channel design. The dynamic draught may vary in different sections of the channel.

The values of dynamic draught in coastal merchant shipping lanes are presented in certain nautical publications as well as on fairway cards.

9 Net Underkeel clearance

Net underkeel clearance (netUKC) refers to the minimum distance between the vessel's keel and the channel's safe clearance depth that should always remain under the vessel's keel while the vessel is underway.

The net underkeel clearance is the difference between the channel's safe clearance depth and the dynamic draught. The net underkeel clearance is specified for merchant shipping lanes in connection with channel design. The minimum value of net underkeel clearance in coastal merchant shipping lanes is 0.5 m, and in the merchant shipping lanes in inland waters and in shallow channels, it is 0.3 m.

10 Fairway area

The fairway area is an area intended for the use of waterborne traffic delimited by the channel's edge lines.

The fairway area also includes any special seafaring areas that are designed to exist in connection with the channel, such as encounter and swinging areas.

The water depth of the fairway area is assessed to the safe clearance depth, which in turn is based on the design draught and the corresponding gross underkeel clearance. Seafarers will be informed separately, if any spots are detected in which the water depth is lower than the safe clearance depth.

The fairway area is unambiguously defined by means of coordinates in the waterway design documents (waterway design chart) and on the waterway chart submitted to the Regional State Administrative Agency in connection with an application to establish a public channel pursuant to the Water Act. In older decisions, the fairway area is not always indicated. In such cases, the area determined by buoyage, secured water depths and the general design criteria for fairway areas is considered as the fairway area.

In some channels, the fairway area is displayed on nautical charts. Position data on fairway areas is stored and maintained in the Fairway Register of the Finnish Transport Infrastructure Agency.

The edges of a fairway area are marked by spar buoys, buoys and edge marks. All break points of the fairway area are not necessarily marked.

The Channel Authority shall ensure that no points shallower than the indicated safe clearance depth exist in the fairway area. In practice, this is interpreted to mean that the depth shall be secured by surveys carried out in a correct and comprehensive manner when the channel is being established. The Channel Authority also has the duty to verify the safe clearance depth at any later date, if there is justified cause for this, and to take necessary steps in case any reduction of the depth is detected.

11 Fairway space

The fairway space is a space intended for waterborne traffic delimited by the channel edge lines, the safe clearance depth and the available headroom.

As regards the fairway area and the safe clearance depth, reference is made to the relevant descriptions. Any limitations of open space and headroom are indicated by waterway signs. Height restrictions are also shown on nautical charts.

Restrictions of height and open space that obstruct waterborne traffic in public channels require a permit pursuant to the Water Act. The applicant is responsible for the posting of signs to mark the restrictions and for ensuring that the fairway space is not restricted more than indicated in the terms and conditions of the permit.

12 Headroom

Headroom refers to the maximum allowed vessel height (airdraft), in general the height of the mast, with which an obstacle restricting the fairway space vertically (bridge or overhead cable) can safely be cleared. The headroom is determined from the reference level.

In sea areas, the reference level is the Mean Sea Level of a certain year (MW/MSL) or the level 0 of the new N2000 system. In inland waterways, the reference level is the high water level of the navigation season (HWnav), reported in either the old NN system or the new N2000-system.

For terminology associated with the determination of the headroom of bridges and overhead cables, reference is made to Figures 4 and 5.

13 Anchorage area

The anchorage area is a dedicated area for anchoring with defined limits, indicated on the nautical chart and also marked at sea if necessary.

The anchorage area can be an area adjacent to the fairway area or one separate from the actual channel, for example in off-shore areas beyond the outer reaches of the channel. Not all wider areas associated with the fairway area used by ships for encounter and swinging or for temporary anchorage are anchorage areas.

The provisions of the Water Act on anchorage areas apply to these areas. Nautical charts include so-called recommended anchorages with no defined limits. These are neither official anchorage areas nor do the areas have the status of an anchorage area pursuant to the Water Act.

14 Secured supplementary area

A secured supplementary area is a water area adjacent to the channel, having the same safe clearance depth and located outside the actual fairway area.

Secured supplementary areas may be indicated in the Decision to establish the channel.

The purpose is to inform channel users of all areas with secured water depths, in case it should be necessary to deflect from the fairway area, e.g. for icebreakers assisting ships in winter.

In the secured supplementary area, the water depth is measured and secured in the same way as that of the actual fairway area. In general, the secured supplementary area is only determined to the level corresponding to the design draught in the channel. By way of exception, the area can also be determined to another depth.

In areas featuring shoals marked with aids to navigation that are located further from the fairway area but still adjacent to the channel, the secured supplementary area reaches at least from the channel to the aids to navigation.

As a rule, secured supplementary areas are not shown on nautical charts. They may however be shown on special charts and in special publications.

No special permit is required for a secured supplementary area in connection with the application to establish a public channel. In secured supplementary areas seafaring has no priority over other uses of the area.

The position data of secured supplementary areas is stored and maintained in the Fairway Register of the Finnish Transport Infrastructure Agency.

15 Special seafaring area

A special seafaring area is an area that has been surveyed and secured for seafaring, although no officially established and marked channel exists in that area.

Special seafaring areas are, for instance, waters surveyed and determined at open sea, outside the channel.

Special seafaring areas are usually not shown on nautical charts. They may, however, be shown on special charts and in special publications.

16 Boating route

A boating route is a shallow channel of lower category, mainly used for boating /yachting.

Boating routes are likewise public channels to which the fairway terminology, definitions and regulations described above apply.

As the water depth in boating routes is not necessarily comprehensively secured, the indicated draught for boating routes is to be interpreted as a guideline only.

Boating routes and their buoyage are shown on small craft chart folios, charts of inland water ways and on track and yachting charts. As a rule they are not shown on coastal charts. As distinct from other channels, the boating route alignment is marked with a broken line.

17 Canal

A canal is a narrow stretch of water joining two parts of a watercourse, often wholly or partly constructed on land.

Canals can either be open canals or lock canals, depending on the difference in water level between the waterways.

A canal area is the administrative area belonging to the authority providing channel maintenance, comprising the canal and the surrounding land areas.

18 Routeing system

A routeing system refers to any system, such as a traffic separation scheme, which serves navigation in off-shore areas beyond approach channels. The purpose of routeing systems is to direct traffic into designated corridors and if necessary to separate opposing streams of traffic by the establishment of

traffic lanes and to direct any intersecting traffic through indicated crossings.

Routeing systems are adopted by the International Maritime Organisation (IMO). The design, use and marking of such areas are based on guidelines and recommendations issued by the IMO (IMO/Ships' Routeing).

Routeing systems are not part of the Finnish network of channels. The provisions of the Water Act on the establishment of channels do not apply to such areas. Routeing systems in Finnish territorial waters are, however, subject to the provisions of the Finnish water and environmental legislation on waterways.

The water depth of areas with a routeing system is secured by the same methods as that of actual channels.

19 Route

Route is a general term for a waterway connecting two points.

A route may consist of several channels or several sections belonging to different channels, or it can also be an off-shore route located wholly or partly beyond any channel.

Routes do not have any specific administrative or legal status.

20 Reserve channel

Reserve channels are channels for merchant shipping and other civilian navigation designated for use in case of a state of emergency or a crisis situation.

Reserve channels form an alternative to routes used in normal circumstances and are capable of being taken in use on short notice in case of need, should traffic in the channels normally used be disrupted. A reserve channel may coincide partly with an existing channel, partly make use of other routes.

21 Aid to navigation

Aids to navigation are physical structures and devices located in the water or on shore to mark channels or otherwise guide and safeguard waterborne traffic. Aids to navigation can also be virtual presentations of such device, or a combination of physical and virtual.

Physical aids to navigation can be fixed or floating. They consist of a physical structure and associated technical equipment. An aid to navigation can be identified by its daymark, light character, radar signal, colour or by its virtual presentation.

The Water act (587/2011), the Water Traffic Act (782/2019) and the Traffic and Communications Agency regulation (3.7.2021, TRAFICOM/85503/03.04.01.00/2021) regulates use and installation of navigational aids.

Traffic and Communications Agency 16.11.2021

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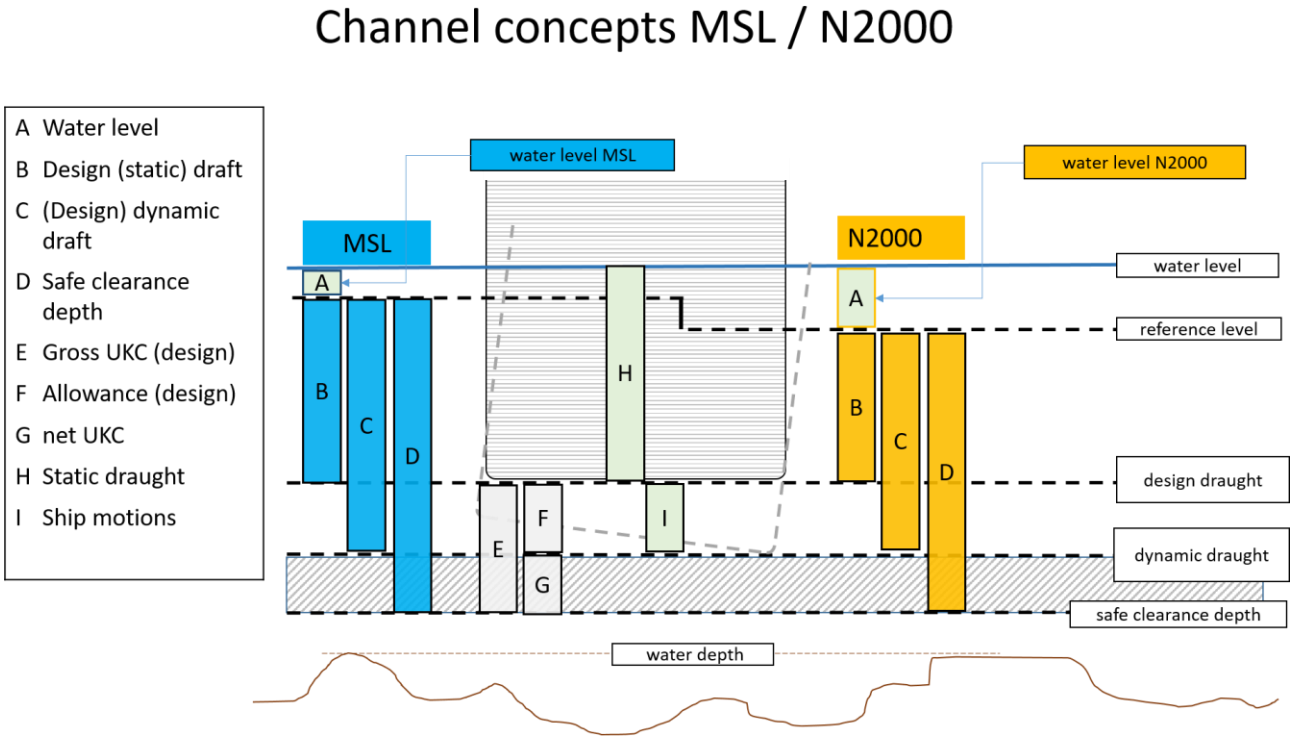
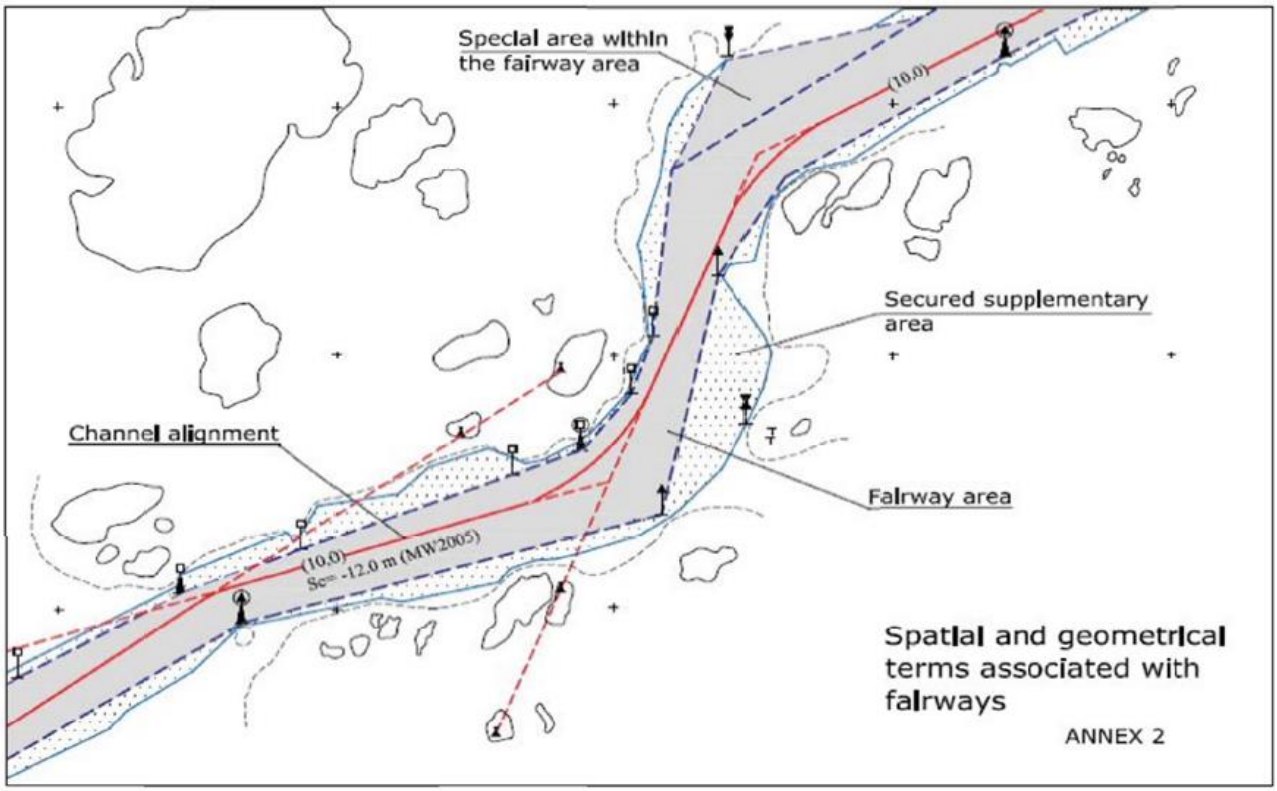
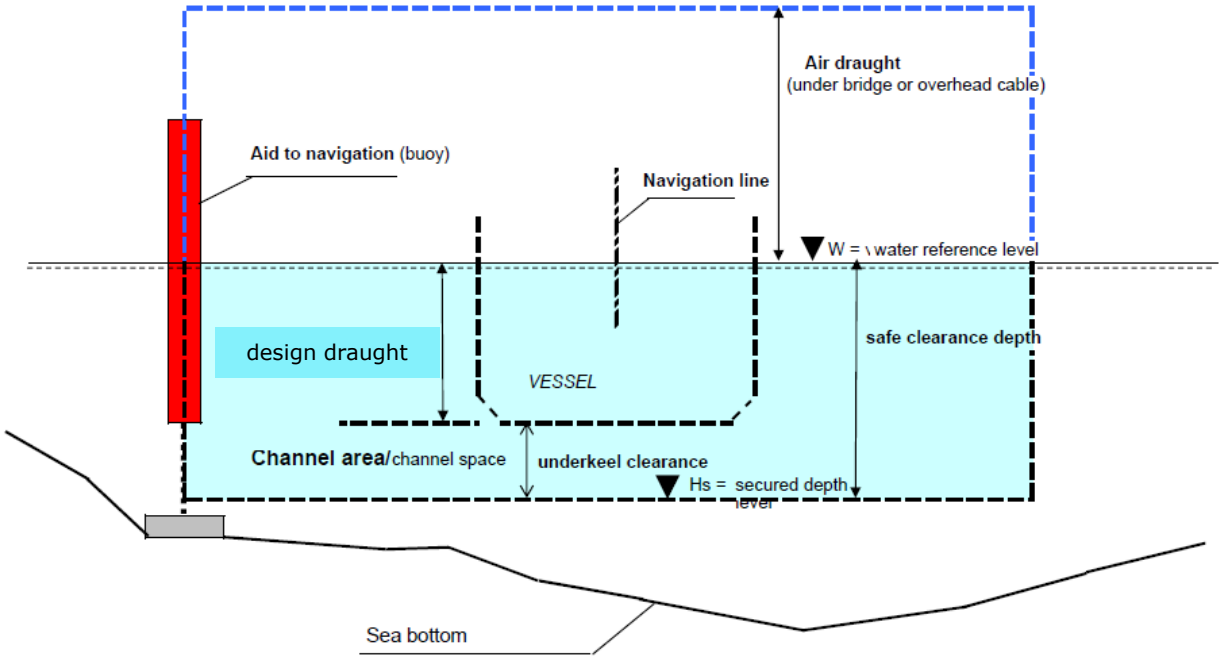
Annex 1 Draught concepts related to channels



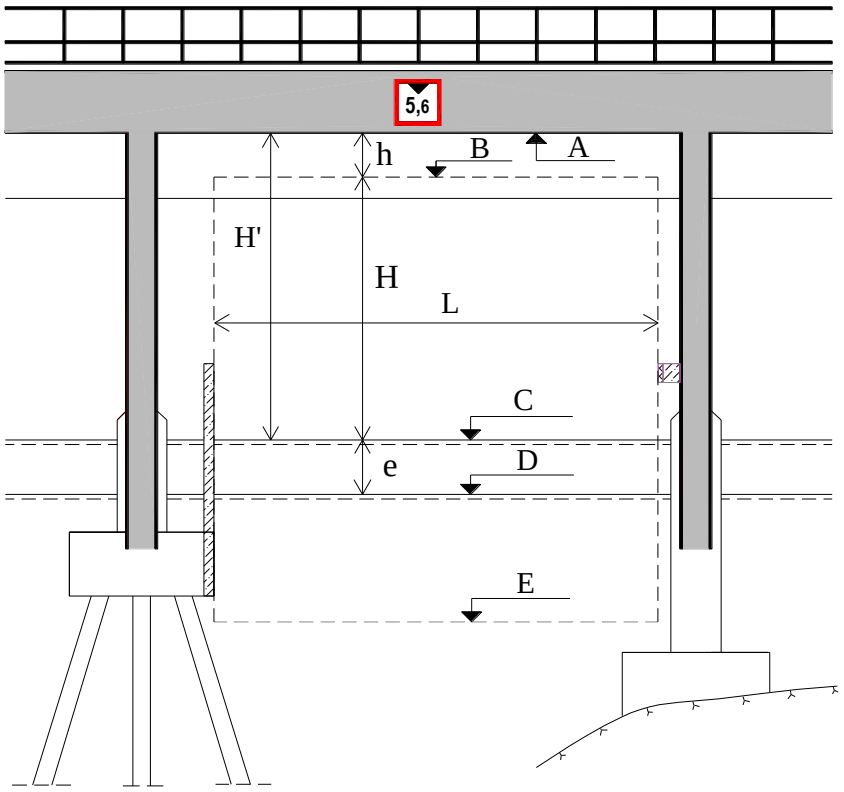
Annex 2 Secured supplementary area



Annex 3 Cross section of channel

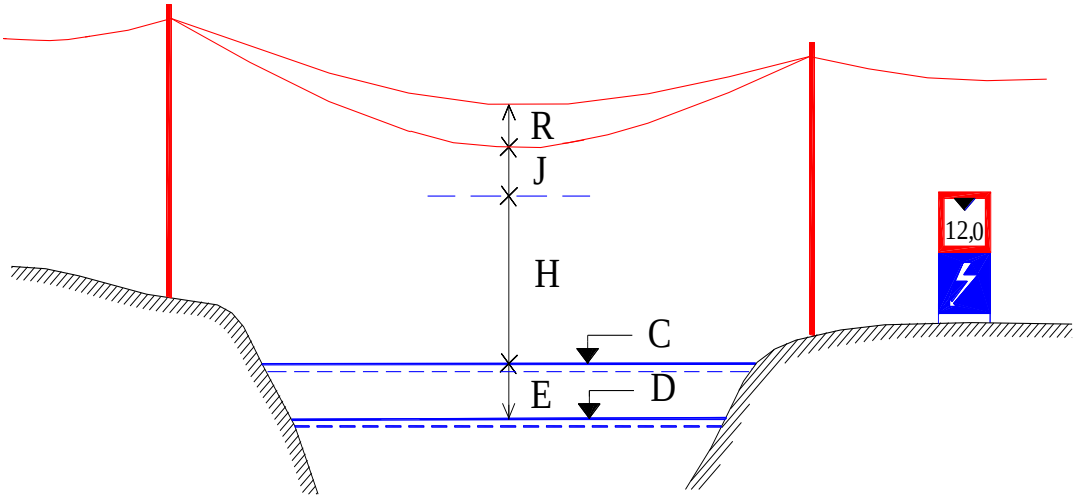


Annex 4 Headroom under bridge



H =	HEADROOM (maximum authorised height of mast) • Indicated on charts and on the bridge; here 5.6 m
h =	SAFETY MARGIN TO COVER WAVE ACTION AND THE ROLLING OF THE SHIP • On inland waters usually 0.5 m; in sea areas 0.5 – 1.0 m
H’ =	VERTICAL CLEARANCE (H + h)
L =	HORISONTAL CLEARANCE
A =	LEVEL OF LOWER EDGE OF BRIDGE
B =	LEVEL OF MAXIMUM VERTICAL CLEARANCE FOR SAFE TRANSIT
C =	REFERENCE LEVEL • Mean Sea Level (MW/MSL) or N2000- level 0 • High Water of navigation season (HWnav) on inland waterways
D =	LOW WATER LEVEL OF NAVIGATION SEASON
E =	SAFE CLEARANCE DEPTH (swept depth)
e =	VARIATION CAUSED BY LOWER WATER LEVEL (neither included in the headroom indicated on charts nor on the bridge)

Annex 5 Headroom under overhead cable



H =	HEADROOM (maximum authorised height of mast) Indicated on charts and by means of waterway signs close to the overhead cable; here 12.0 m
R =	MAXIMUM SAG ALLOWANCE DUE TO HEAT OR ICE LOAD
J =	SAFETY DISTANCE Safety margin between the lowest position of the cable and the maximum authorised height of mast (necessary to avoid electric discharge), distance dependent on cable voltage.
C =	REFERENCE LEVEL • Mean Sea Level (MW/MSL) or N2000- level 0 • High Water of navigation season (HWnav) on inland waterways
D =	LOW WATER LEVEL OF NAVIGATION SEASON
E =	VARIATION CAUSED BY LOWER WATER LEVEL Neither included in the headroom indicated on charts nor on the waterway sign marking the headroom under the overhead cable