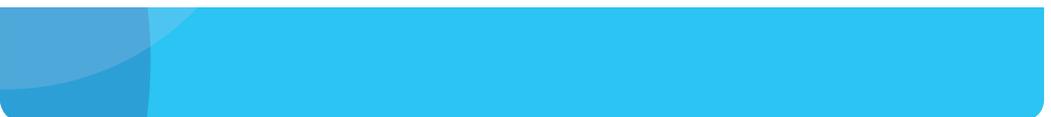


Suomen talvimerenkulku

Finlands vintersjöfart
Finland's Winter Navigation

Ohjeita talvimerenkulun toimijoille

Insruktioner för aktörerna inom vintersjöfarten
Instructions for winter navigation operators



Arctia Icebreaking Ltd

Icebreaker

Urho
Sisu
Otso
Kontio
Voima
Fennica
Nordica
Polaris

Call Sign

OHMS
OHMW
OIRT
OIRV
OHLW
OJAD
OJAE
OJQT

Direct

+358 (0) 30 620 7500
+358 (0) 30 620 7400
+358 (0) 30 620 7300
+358 (0) 30 620 7200
+358 (0) 30 620 7650
+358 (0) 30 620 7700
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E-mail

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voima.bridge@arctia.fi
fennica.bridge@arctia.fi
nordica.bridge@arctia.fi
polaris.bridge@arctia.fi

All icebreakers listen to VHF Channel 16 and MF 2332 kHz



Urho 1975 . Sisu 1976



Otso 1986 . Kontio 1986



Fennica 1993 . Nordica 1994



Voima 1954/1979



Polaris 2016

Alfons Håkans AS Finnish Branch

Icebreaker

Zeus

Call Sign

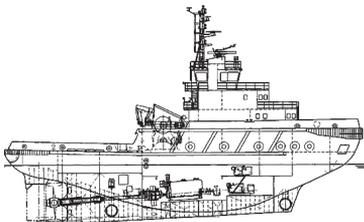
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Zeus

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This is an unofficial translation, FTA takes no responsibility to its correctness.
The official texts are in Finnish and Swedish only

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1. General information

The Winter Navigation Unit at the Finnish Transport Agency has compiled these general instructions for winter navigation.

1.1 The instructions and their objective

The Finnish Transport Agency has laid down the following instructions for winter navigation in collaboration with the industry, shipping companies and charterers. All parties are aware of their responsibility for the Finnish winter navigation and strive to engage modern vessels with sufficient propulsion power and good ice-going characteristics and which are manned by competent crews for their import and export shipments. The Finnish Transport Agency is responsible for the availability of icebreaking services according to item 1.2.

The objective of these instructions is, according to Finland's maritime strategy 2014–2022 that Finnish foreign trade and domestic waterborne transport are smoothly functioning and socio-economically viable and international competitiveness is ensured also in winter, with short waiting times.

1.2 Assistance of winter navigation

According to the Act on the ice classes of ships and icebreaker assistance (1121/2005) the Finnish Transport Agency is responsible for the availability of icebreaker assistance in Finnish waters when the ice conditions so require. Assistance is provided in all class 1 approach channels with a minimum depth of 8 metres leading to a port. Assistance to other ports along and beyond these approach channels is only given in class 1, at least 8 metres deep channel sections or to destinations specified by the Finnish Transport Agency. Assistance in port areas is the responsibility of the ports in question. The Finnish Transport Agency is also responsible for the availability of icebreaker assistance outside Finnish waters, if assistance is necessary to safeguard Finnish foreign trade or is based on a cooperative agreement concluded with another state.

Winter navigation assistance is free of charge.

The Finnish Transport Agency has entered agreements with Arctia Icebreaking Ltd, Alfons Håkans AS Finnish Branch and other private towing companies. The Finnish Transport Agency's Winter Navigation Unit leads and monitors the implementation of the icebreaking services and follows up client satisfaction in cooperation with the vessel traffic services, Baltic Sea icebreaking organisations and the masters of the coordinating icebreakers.

Icebreaking services include the assistance of vessels in ice and the related towing. Charges for towage in connection with salvage operations and other related assistance are based on separate agreements.

1.3 Vessels entitled to icebreaker assistance

Provisions on icebreaker assistance are included in the Act on ice classes of ships and icebreaker assistance (1121/2005). Icebreaker assistance is given to vessels which meet the traffic restrictions that the Finnish Transport Agency has imposed on vessels calling at the relevant port. In addition, vessels shall comply with the requirements on construction and engine output for winter navigation.

The vessel must also meet the following requirements when navigating in an area where icebreaker assistance is provided:

- **when navigating in ice, the vessel is always to be loaded to the draught required for its ice class (between the upper and lower ice waterlines);**
- **the propeller is to be completely submerged and if possible entirely below the ice;**
- **the cooling-water system is to be designed and used so that the supply of cooling-water is ensured when navigating in ice;**
- **the vessel has to use the maximum engine power specified for its ice class, if the ice conditions or the icebreaker so require.**

The master of an icebreaker may for justified reasons refuse to assist a merchant vessel. A justified reason is for example a vessel whose equipment is not operational before the assistance starts, or whose hull, engine output, equipment or manning is such that there is cause to believe that navigation in ice will endanger the safety of the vessel, or that the vessel does not meet the ice class requirements for example in terms of its draught.

In individual cases the Head of the Winter Navigation Unit can postpone the assistance of a vessel, even though the vessel meets all requirements regarding traffic restrictions. **The reason for a postponement can for example be that the vessel has not committed to comply with these instructions, the vessel causes unacceptable delays for other traffic, the prevailing ice conditions are exceptionally severe or repeated written reports from icebreaker masters about a vessel being unsuitable for winter navigation.**

Tugs towing barges are considered to belong to ice class III, and are thus not included in the icebreaking service.

1.3.1 The publication Finland's Winter Navigation, compliance with instructions

The Finnish Transport Agency posts these instructions on its website every year and informs about the publication in a press release.

During the icebreaking season 2016–2017 all vessels arriving for the first time of the winter season to a Finnish or Swedish assistance area will be asked the following question:

Will you commit to compliance with the general instructions on icebreaker assistance published by the national maritime authorities?

The answer to the question is “yes” or “no”.

The answer “yes” does not incur any expenses for the vessel.

The answer “no” will affect the provision of future icebreaker assistance to Finnish ports.

The answers can be sent in advance from the vessel or by the shipping company by e-mail to Turku Radio: turku.radio@fta.fi, which forwards the information to the authorities. Shipping companies can send a combined answer for all their vessels operating in the area.

The vessels which have not submitted their answer in advance will be asked the question by e-mail, AIS text message or by VHF phone. Vessels bound for the Gulf of Bothnia or the Archipelago Sea will be asked the question by Turku Radio and vessels bound for Finnish ports in the Gulf of Finland and the Lake Saimaa area will be asked the question by Helsinki Traffic.

A negative answer will be noted and the Vessel Traffic Services will alert the Head of the Winter Navigation Unit. The master of the vessel shall contact the agent at the port of arrival regarding the negative answer. The agent shall then contact the Head of the Winter Navigation Unit for possible further measures.

A negative answer will affect the provision of assistance in the future.

This question is asked to ensure that vessels' crews have read the publication “Finland’s Winter Navigation 2016–2017” in advance, and that they accept and comply with the instructions in the publication.

1.4 Order of assistance

The general rule is that vessels are not prioritized, with the exception of vessels in danger, which are always assisted first. The master of the icebreaker may also change the assistance order due to traffic or for technical reasons by for example forming effective assistance convoys or by approving a proposal by the port to change the order of assistance.

1.4.1 Securing transports critical for the emergency supply

If delays become critical for Finland’s emergency energy or food supply or the essential industry, the instances in question have to request permission from the National Emergency Supply Agency to prioritize these transports.

1.5 Reporting obligations by ports and shipping companies

1.5.1 Ports

Ports or ship agents submit preliminary notifications on their vessel traffic to the icebreakers once a week and always when there are changes in the traffic situation. The reporting obligations start when the first winter traffic restrictions are imposed for the port in question, and continue until the last traffic restrictions have been lifted.

1.5.2 Shipping companies and agents

The shipping companies or their agents are requested to enter data about vessel timetables into PortNet and to update changes in the data as often as possible. This is in order to ensure timely icebreaking services and smooth traffic.

The shipping companies or agents must also ensure that the publication Finland's Winter Navigation is forwarded to all of their vessels in good time before the vessels enter ice-covered waters. Inquiries from foreign countries concerning ice conditions and traffic should be directed to the vessel's Finnish agent.

2. Traffic restrictions and exemptions

2.1 Traffic restrictions

When the ice situation becomes more difficult, the Winter Navigation Unit at the Finnish Transport Agency imposes traffic restrictions for the winter ports. For safety reasons and for reasons arising from concentrating the traffic in certain areas, the Finnish Transport Agency may restrict the provision of icebreaker assistance in specific areas and to specific ports. The Finnish Transport Agency decides on the restrictions concerning assistance on the basis of weather and ice conditions, and the ship's ice class and deadweight. The traffic restrictions are based on the Helcom recommendations. The Finnish Transport Agency may also take into account the ship's engine output and the amount of cargo on board if extremely difficult ice conditions so require. In that case the restrictions have usually been supplemented by an additional restriction on cargo for the port in question: For example, vessels must have a load of at least 2,000 tonnes of cargo to be loaded or unloaded or both.

2.2 Imposing of traffic restrictions

The restrictions on assistance enter into force five (5) days after their date of issue, except for the relaxations, which enter into force immediately. The traffic restrictions in force can be found on the website: www.baltice.org

Bay of Bothnia: The first restrictions – ice class I and II, deadweight 2,000 dwt – for the ports in the northern part of the Bay of Bothnia are normally imposed in December. The maximum restriction IA 4,000 dwt has been applied in combination with the cargo restriction of 2,000 tonnes.

Sea of Bothnia: The first restrictions - ice class I and II and deadweight 2,000 dwt - are normally imposed in January-February. During an average winter the maximum restriction is IA, IB 2,000 dwt.

In the Archipelago Sea: The first restrictions I,II 2,000 dwt have been imposed somewhat later than in the Sea of Bothnia although the restrictions are about the same. The strictest restriction during a normal winter is IA, IB 2,000 dwt.

Gulf of Finland: The first restrictions - I, II 2,000 dwt - have normally been imposed at the end of January. The maximum restriction during an average winter is IA 2,000 dwt.

Lake Saimaa area: The minimum restriction applied has been I, II 1,300 dwt and the maximum restriction IA 2,000 dwt.

Referential statistics on the dates when restrictions have been imposed/lifted in 2003/2004 - 2015/2016 can be found in the table at the back of this publication and on the [Winter-navigation](#)

2.3 Equivalence between ice classes

Information on the equivalence of Finnish ice classes to the ice classes of recognized classification societies, and on the data and documents needed to confirm the ice class of a vessel can be found on the website:

http://www.finlex.fi/data/normit/36442-Vastluettmaar_TRAFI_31299_03_04_01_00_2010_EN_corr_20_Dec_2010.pdf

2.4 Exemptions

In accordance with section 10, subsection 3, of the Act on the Ice Classes of Ships and Icebreaker Assistance (1121/2005), the Finnish Transport Agency may in individual cases, on application, grant a ship that is sailing to a port or an area to which assistance has been restricted, the right to icebreaker assistance if:

- ice conditions have temporarily eased;
- it is a question of a special transport, urgent energy supplies or the threat of a production shutdown in a factory; or
- the ship would otherwise be entitled to assistance but its deadweight is not more than five (5) per cent below the required deadweight;
- the vessel has started its voyage, which under normal conditions would last no more than a week, already on the day when the assistance restrictions were raised and the arrival of the vessel is not considerably delayed from the point of time when the former assistance restrictions were valid.

Applications for exemptions shall be sent by e-mail to the address: winternavigation@fta.fi. The application shall include;

- reason for application for exemption,
- ETA,
- ship's name,
- IMO number,
- ice class,
- deadweight,
- engine output, and
- year of build.

For a decision made upon an application for exemption a charge is collected as provided in the Act on Criteria for Charges Payable to the State (150/1992).

Exemptions are not, as a rule, granted to vessels 20 years of age or more, nor to vessels carrying transit goods. Exemptions are always granted for one voyage only.

Applications for exemption shall be submitted to the Finnish Transport agency at least three working days before the vessel arrives to the assistance area.

3. Master's checklist

Before entering ice-covered waters

- Make sure that the vessel's ISM manual includes instructions for safe navigation in ice
- Ensure that the vessel's ice classification certificate is available.
- Make sure that there is sufficient supply of fresh water and bunker in case of possible delays caused by ice.
- Start listening to the daily ice reports well in advance.
- Check that your VHF radio is operative, and find out in advance which channel is used by the icebreaker operating in the area.
- Check that the pipes on deck are drained of water.
- Check that the sounding and air pipes of the ballast tanks are emptied of water.
- Check that anchor, mooring and other equipment which may be used in ice conditions are covered by adequate tarpaulins to prevent icing.
- Keep the pilot ladder in a sheltered place and, before use, make sure that it is ice-free.
- Test the searchlights in advance.
- Move the anchors astern or lift them onto deck, if there is even a slight possibility that they may come into contact with the icebreaker's towing notch. Any neglect in this respect will cause assistance to be delayed.
- Ensure that ballast has been loaded to minimum ice class draught and that the propeller is completely submerged.
- Check that cooling water is available when navigating in ice.
- Avoid colliding with loose ice floes at high speed and check your open-water speed.
- Check the waypoints* provided by the icebreaker/VTS/GOFREP when navigating in ice.

*Waypoints

In ice-covered areas the coordinating icebreaker provides waypoints, which indicate the assistance route. The waypoints are set in order to help vessels navigate more easily and safely in ice conditions and in order to enable vessels to navigate unassisted for as long as possible. Vessels obtain the waypoints for ice navigation via ICE INFO, VTS/GOFREP or from the icebreakers. Failure to follow the waypoints may lead to delayed icebreaker assistance. Vessels are, however, at all times responsible for their own safe navigation.

4. Navigation in ice

4.1 Risks when navigating in ice

During winter navigation ships are exposed to greater risks than when sailing in ice-free waters. When navigating in broken ice fields, sailing in convoy or preparing for towage, ships cannot always keep an adequate distance to each other. This entails an increased risk of collision between the ships involved.

The Finnish Transport Agency will not assume any liability for delay, damage or other loss or cost caused to a ship, its crew, its passengers, its cargo, its charterer or carrier within the scope of, in connection with or resulting from icebreaker assistance. Nor can the responsibility be laid on the subcontractors or contracting parties used by the Finnish Transport Agency to produce the icebreaking services in connection with or based on the icebreaking services provided by these.

Assistance and advice are offered to a ship at its own risk and the ship being assisted is solely responsible for its navigation. Under the Finnish Maritime Act, Chapter 7 Section 1(2), a valid insurance cover is mandatory for ships navigating in Finnish territorial waters or inland waterways, when arriving to or leaving Finnish ports or anchorage and waiting areas, or if the ship is used for some other purpose than transport in Finnish territorial waters.

4.2 Reporting

4.2.1 Vessels bound for the Bay of Bothnia or Sea of Bothnia

Vessels bound for Finnish or Swedish ports in the Bay of Bothnia or Sea of Bothnia in which traffic restrictions apply, shall report as follows:

Reporting position:	when passing latitude 60° 00' N*
Call sign:	ICE INFO
Call channel:	VHF channel 78 (or phone +46(0)31 69 91 00)
Report:	- name of vessel - nationality - destination and ETA - speed
Language:	Swedish or English
E-mail:	iceinfo@sjofartsverket.se

* If required due to the ice conditions, the position for reporting can be transferred farther to the south.

ICE INFO provides vessels with the advance instructions of the coordinating icebreaker.

Vessels bound for a Finnish or Swedish port in the Quark or the Bay of Bothnia shall give an advance report to Bothnia VTS 20 nautical miles before Nordvalen Lighthouse (63° 32,15' N 20° 46,60' E) on VHF channel 67. Bothnia VTS forwards the information it has received from the coordinating icebreaker to the vessels, i.e. navigational instructions, waypoints, as well as the position, name and VHF working channel of the icebreaker.

4.2.2 Vessels bound for the Gulf of Finland

Vessels of 300 GT or more sailing in the Gulf of Finland are required to report to the GOFREP Traffic Centre in question. Instructions for reporting are also found on the [GOFREP](#).

GOFREP Traffic Centres, contact information:

Helsinki traffic:

phone: +358 (0)204 485387 or +358 (0)204 485388

e-mail: gofrep@fta.fi

fax: +358(0)204 485394

VHF: 60 (80)

Tallinn traffic:

phone: +372 6 205 764 or +372 6 205 777

e-mail: gofrep@vta.ee

fax: +372 620 5766

VHF: 61 (81)

St.Petersburg traffic:

phone: +7 812 380 70 21 or +7 812 380 70 81

e-mail: gofrep@rsbm.ru

fax: +7 812 380 70 20

VHF: 74 (10)

The GOFREP Traffic Centre forwards the information it has received from the coordinating icebreaker to the vessels, i.e. navigational instructions, waypoints as well as the position, name and VHF working channel of the icebreaker (see item 6: VESSEL TRAFFIC SERVICE VTS, GOFREP AND TURKU RADIO).

4.2.3 Vessels bound for the Lake Saimaa area

The ship agents must send the advance information of the vessels and the vessels' reply concerning compliance with these instructions by e-mail to Saimaa VTS: saimaa.vts@fta.fi

4.3 Proceeding in ice

- A ship navigating in ice without assistance must follow the instructions given via **ICE INFO, VTS, GOFREP and by the icebreakers** and should strive to proceed in the ice without assistance for as long as possible. The vessel is also expected to be able to navigate in thin ice in a broken ice channel without icebreaker assistance. For this reason the vessel must always have sufficient engine output.
- The vessel traffic services (VTS/GOFREP) are responsible for the vessel traffic management and information in their respective area. The icebreaker is responsible for the icebreaker assistance provided to vessels and for coordinating the traffic in an ice field. Because of this, vessels are required to simultaneously monitor both the local VTS traffic channel and the icebreaker channel.
- A vessel stuck in ice must notify the icebreaker of its position without delay.
- VTS/GOFREP informs and manages the traffic in accordance with the instructions given by the coordinating icebreaker.

4.4. Instructions to assisted vessels

- During hours of darkness, icebreakers display a fixed blue all-around light at the top of the mast.
- A careful watch shall be kept for signals from the icebreaker or any other assisted vessel in the convoy and a continuous listening watch shall be maintained on the agreed VHF working channel, as well as on channels 16 and MF 2332 kHz.
- The vessel's propulsion machinery shall be ready for rapid manoeuvres at all times. Any problems arising in the assisted vessel relating to engine power or manoeuvring capabilities must be reported to the icebreaker without delay.
- In order to avoid collisions, a vessel in convoy shall inform the icebreaker without delay on the dedicated assistance channel if it stops or significantly reduces its speed.
- Finnish icebreakers are equipped with two rotating red warning lights, installed one upon the other, which are lit when the icebreaker stops unexpectedly or when it significantly reduces its speed. In such cases, the master of the assisted vessel shall take all possible measures to stop his vessel as quickly as possible.
- If the vessel stops due to the ice conditions, the searchlight must be switched off for as long as the vessel remains stationary.
- If the vessel sustains or is suspected to have sustained damage, the icebreaker must be informed about this immediately. The incident shall be recorded in the icebreaker's log book along with the prevailing ice and weather conditions and other matters of relevance. Any damage sustained must be reported to the Operational Management of the current icebreaking company.
- Having reported to the icebreaker does not exempt the vessel from reporting to the authorities or the shipping company.

A vessel that does not follow the instructions given by the icebreaker cannot expect to be assisted.

4.5. Instructions for towage

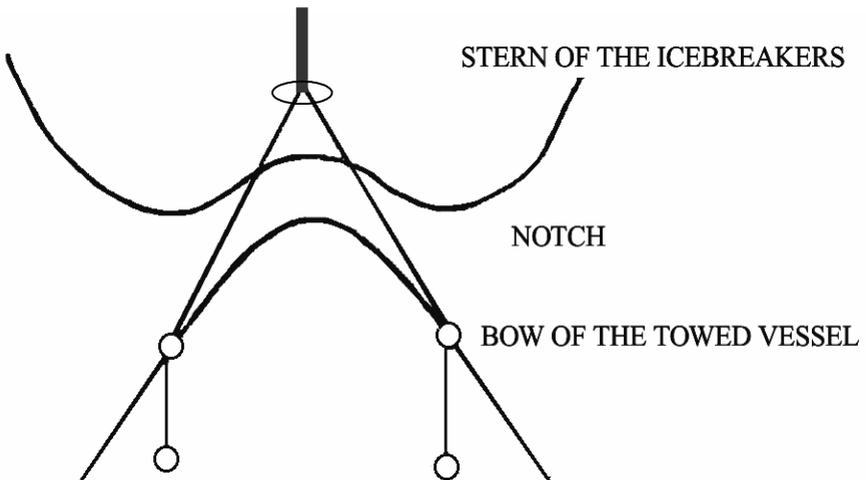
1. In difficult ice conditions, towing may be the only means of ensuring safe and effective assistance.
2. The vessel shall be prepared to make fast or cast off the towing wire at any time. The icebreaker decides when a vessel is taken into tow.
3. A vessel towed by an icebreaker may use its propulsion machinery only according to instructions from the icebreaker. The vessel's propulsion machinery shall be ready for rapid manoeuvres at all times.
4. During towage, the vessel in tow must use manual steering. By steering manually the vessel should try to stay in line with the icebreaker.

Towage

The method normally used is notch towing. This means that the merchant vessel's bow is brought into the towing notch of the icebreaker. The icebreaker will also hand over two wires which are to be fastened to the merchant vessel's bits which have been designed to withstand the stresses of towing.

Notch towing

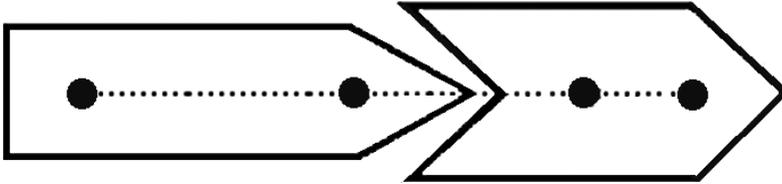
Notch towing is applied when the icebreaker and the towed vessel are connected as below:



The hull of the towed vessel is always acting as an active rudder of the icebreaker

If the towed vessel has sufficient engine power and follows the instructions of the icebreaker, it acts as an active rudder steering in the right direction. Proper use of the rudder ensures safe towage, helps avoid accidents and increases towage speed.

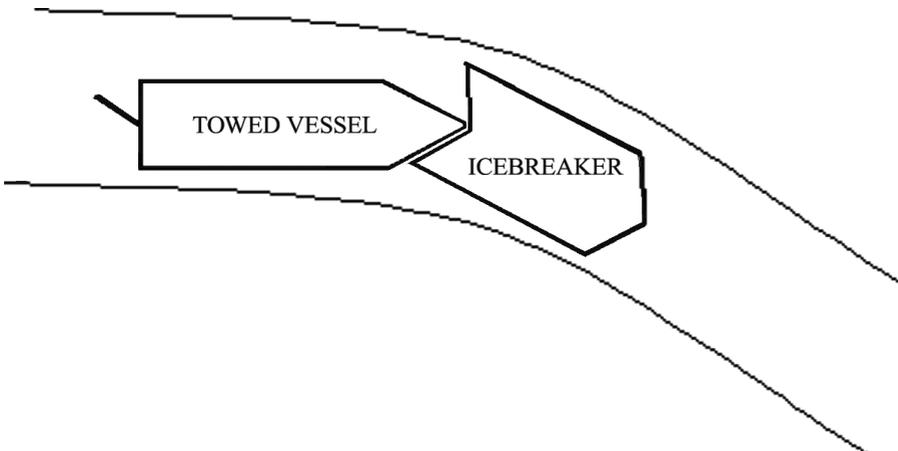
When proceeding straight ahead the vessel should keep its masts in line with the masts of the icebreaker.



If the vessel cannot keep the engine output as high as required or it is affected by rudder problems, the icebreaker should be notified immediately, so that it can reduce its speed.

Altering course

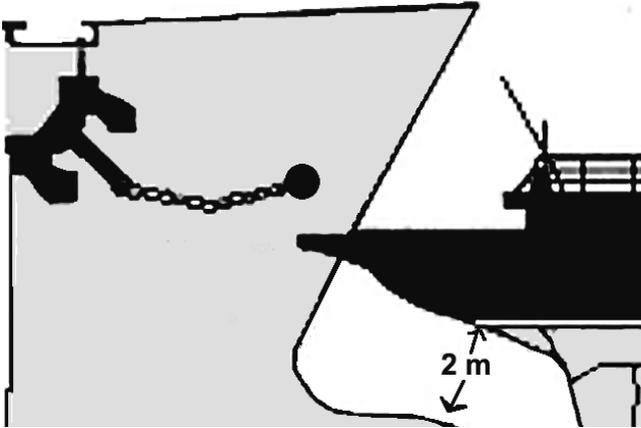
If the icebreaker asks the vessel to help with altering the course, the helm has to be turned enough in the opposite direction of the one normally used, as the vessel's hull is acting as the rudder of the whole combination.



Special measures for safe towing:

Vessels with a bulbous bow should be trimmed so that the distance between the top of the bulb and the hull of the icebreaker is at least two (2) meters.

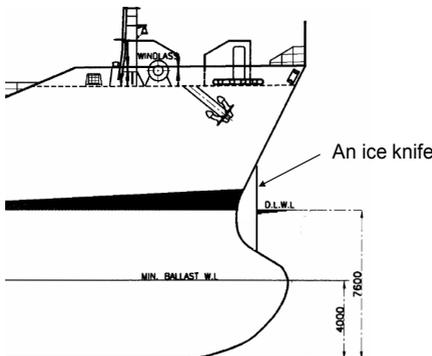
If the ship's anchors are located on the outside of the hull and could thus come into contact with the towing notch, they must be pulled back or lifted onto the deck well in advance before the assistance.



Factors complicating towage:

The shape of the vessel's bow greatly influences the towage. The principle is that in cases where an unsuitable bow complicates the towage or makes it virtually impossible, the vessel is only assisted when this can be carried out without towage. **The master of the icebreaker makes the final decision on the towage.**

Some merchant ships have an ice knife fitted above the bulb. This ice knife is a vertical plate which presents a sharp edge against the notch at certain draughts. Circumstances permitting, the assistance of vessels equipped with ice knives will be carried out without towage, in order to avoid damage to the fendering at the icebreaker notch.



5. Pilot boarding in ice conditions

- Pilots are ordered through Finnpiilot's Pilot Order Service (<https://www.pilotorder.fi>)
- The pilot boarding position may deviate from its actual position during the open water season. If required, the local VTS centre provides information about the pilot boarding position and on which side of the vessel the pilot is boarding.
- Keep pilot ladders in a sheltered place and on deck as long as possible to avoid icing. Place pilot ladder (normally) 1.5 m above sea level.
- The pilot may arrive by pilot boat or hydrocopter in icy conditions.
- Vessel must obey orders of the icebreaker when approaching pilot boarding position.
- A complete stop may be required.
- Vessel must follow the pilot's instructions when he is embarking or disembarking the vessel.
- Searchlights are required at night-time to ensure safe navigation.

6. Vessel traffic services VTS, GOFREP and TURKU RADIO

6.1 VTS

According to the Vessel Traffic Service Act (623/2005) it is the objective of the VTS centres to increase the safety and efficiency of vessel traffic and to prevent damage caused to the environment by vessel traffic. VTS supervises and manages the vessel traffic with a capability to interact with traffic and to respond to changing traffic situations. When necessary, the VTS authority may temporarily, on account of for example exceptional ice conditions, impose speed limits in a water area or fairway when the coastal fairway in the Gulf of Finland is used during winter. The operational hours of the VTS centres are 24 h/day all year round. The VTS centres forward information about for example other traffic, ice conditions, waypoints as well as the positions, names and VHF working channels of the icebreakers.

6.2 GOFREP

GOFREP is a mandatory ship reporting system in the Gulf of Finland. Its objectives are to increase navigational safety, improve the protection of the marine environment and monitor the compliance with the rules of the road at sea. The traffic centres TALLINN TRAFFIC, HELSINKI TRAFFIC and ST. PETERSBURG TRAFFIC monitor the vessel traffic and provide advice and information about navigational hazards and weather conditions in the Gulf of Finland. The operational hours of GOFREP are 24h/day all year round.

6.3 Maritime safety radio communications, Turku Radio

During the icebreaking season Turku Radio reports the positions of the icebreakers once a day at 0803 UTC. Turku Radio also informs about the valid waypoints as part of the report Position of icebreakers. Turku Radio reads the ice report of the Meteorological Institute twice a day at 1033 and 1833 UTC and informs vessels of any exceptional situations in winter navigation at least once a day at 1033 UTC, as part of the report Navigational warning. Turku Radio also provides information on its VHF working channel.

6.4 Temporary withdrawal of the traffic separation scheme

The traffic separation schemes in the Gulf of Finland, Sea of Åland and the Quark can temporarily be withdrawn if traffic, due to the ice conditions, cannot be managed properly using these. Vessels are informed about this through the GOFREP System and Turku Radio. Furthermore, information about this is given in connection with the daily ice reports of the Meteorological Institute.

6.5 Coastal fairway taken into use in the Gulf of Finland

The icebreaker assistance in the Gulf of Finland is transferred either partly or wholly to the coastal fairway, if the ice condition at open sea so requires. VTS reports the speed limits and the meeting and overtaking prohibitions applied in the coastal fairway to the vessels. Vessels must comply with the speed limit, so that the channel through the ice stays intact and safety hazards are avoided. Practically all vessels using the coastal fairway shall have a pilot on board.

7. The Ice Service Of The Finnish Meteorological Institute

The Ice Service of the Finnish Meteorological Institute monitors ice conditions and developments on a daily basis, and issues ice charts, ice reports and ice forecasts based on the data it collects and analyses.

The daily ice chart and ice report include a description of current ice conditions and information about the operational areas of the icebreakers. Announcements are also given about traffic restrictions, ship routes and advance notification obligations.

The ice report is read daily at 12:45 in [Finnish on Radio Finland](#) and in [Swedish on Radio Vega](#).

Ice charts, ice reports and ice forecasts can be ordered from the Meteorological Institute. The orders are subject to a charge and can be delivered by mail, fax or e-mail. Ice charts and ice reports are available free of charge at BIM Web on the website: www.baltice.org.

In addition, the Ice Service of the Meteorological Institute answers questions about the ice situation, ice winter forecasts and any other expert questions related to ice.

Useful information about ice in the Baltic Sea can also be found on the Finnish Meteorological Institute's website: <http://en.ilmatieteenlaitos.fi/sea-ice>

Contact information:

The Ice Service of the Meteorological Institute
P.O. Box 503 (Erik Palménin aukio 1)
00101 HELSINKI
FINLAND

phone: +358 29 539 3464 (Eriksson, Marnela, Niskanen, Tollman, Vainio,)
fax: +358 29 539 3413
e-mail: ice@fmi.fi
Internet: <http://en.ilmatieteenlaitos.fi/ice-conditions>

8. Icebreaking in the Lake Saimaa area

The Finnish Transport Agency's office in Lappeenranta manages icebreaker assistance in the Saimaa Canal and Lake Saimaa area. The same traffic restrictions apply in the area as in the approach channels to Kotka and Hamina and the traffic restrictions are also based on the Helcom recommendations. Restrictions differing from these may be given at the beginning and end of the traffic season. The Saimaa Canal is normally closed to traffic from the end of January to the beginning of April depending on the ice conditions in the area.

Joint information about ice conditions and traffic restrictions are given daily in the ice reports of the Finnish Meteorological Institute. Information about the dates when the Saimaa canal will be opened and closed can be found in the Finnish version of Notices to Mariners, on FTA's website and in the newspapers. The traffic restrictions in force can also be found on the website: www.baltice.org. The Lappeenranta office also informs operators in the Lake Saimaa area by e-mail. If you want to receive notices by e-mail, please send your contact information to the address: winternavigation@fta.fi

Icebreaker assistance in the Bay of Vyborg and the approach channel to the Saimaa Canal (up to Juustila) is the responsibility of Russian icebreakers.

Contact information for matters in connection with icebreaking in the Lake Saimaa area:

The Finnish Transport Agency
Winter Navigation Unit
Raatimiehenkatu 23
53100 LAPPEENRANTA
FINLAND

phone: +358 29 534 3326 or +358 400 650 824 (Senior Officer)
e-mail: jukka.vaisanen@fta.fi

Saimaa VTS

Sulkuvartijankatu 15
53300 LAPPEENRANTA, Finland

phone: +358 206 37 3745
e-mail: saimaa.vts@fta.fi

9. Contact and further information

9.1 Finnish Transport Agency's Winter Navigation Unit

Inquiries directly concerning traffic restrictions, exemptions, ice conditions and other related matters can be directed to the Finnish Transport Agency's Winter Navigation Unit.

The Winter Navigation Unit informs about exceptional situations and current matters. All press releases can be found on the website: [Livi news](#). The Winter Navigation Unit also sends information by e-mail. If you want to receive notices by e-mail, please send your contact information to the e-mail address: winternavigation@fta.fi. Useful information on winter navigation is also available on the website [Winter-navigation](#).

Winter Navigation Management

Finnish Transport Agency
Winter Navigation Unit
P.O. Box 33
00521 HELSINKI
FINLAND

phone: +358 295 34 3000 exchange (08:00–16:15)
+358 295 34 3322 Head of Winter Navigation Unit
+358 295 34 3328 Senior Maritime Officer (traffic restrictions)

e-mail: winternavigation@fta.fi
internet: www.fta.fi/winternavigation

9.2 Arctia Icebreaking Ltd

Arctia Icebreaking Ltd responds to inquiries concerning icebreaker operations.

Arctia Icebreaking Ltd

Laivastokatu 10
00160 HELSINKI
FINLAND

Service number to the operational management (24 h): +358 46 876 7050

e-mail: icebreakers@arctia.fi
Internet: www.arctia.fi
(information about icebreakers, crew changing dates, assistance areas etc.)

9.3 Swedish Maritime Administration

Swedish Maritime Administration

Ice-breaking Division
SE-601 78 Norrköping
SWEDEN

phone: +46 771 63 25 25, operating centre (24h)
+46 771 63 00 00, exchange (08:00-16:40)
+46 10 478 47 57, director
+46 10 478 62 58 manager

e-mail: opc@sjofartsverket.se

Internet: www.sjofartsverket.se

9.4 Alfons Håkans AS Finnish Branch

Alfons Håkans AS Finnish Branch

Linnankatu 36 C 18
20100 TURKU
FINLAND

phone: +358 2 515 500
service number (24 h): +358 50 63304
e-mail: office.turku@alfonshakans.fi
Internet: www.alfonshakans.fi

9.5 Baltic Sea Icebreaking Web (BIM Web)

Mariners are well advised to seek information about winter navigation on the website: www.baltice.org. The website includes a daily ice chart covering the whole Baltic Sea area, an ice report, the positions and assistance plans of icebreakers, traffic restrictions in force and other useful information concerning winter navigation.

10. Legislation and regulations

Act on the Ice Classes of Ships and Icebreaker Assistance ([1121/2005](#))

Act on the Amendment of the Act on the Ice Classes of Ships and Icebreaker Assistance ([1308/2009](#))

Act on Criteria for Charges Payable to the State ([150/1992](#))

Regulations on the structural design and engine output required of ships for navigation in ice (ice class regulations and the application thereof):

http://www.finlex.fi/data/normit/36441-36441-Jaaluokkamaaraykset_TRAFI_31298_03_04_01_00_2010_EN_corr_20_Dec_2010.pdf

Finnish ice classes equivalent to the class notations of recognized classification societies and on documents and information required for the determination of the ice classes of ships:

http://www.finlex.fi/data/normit/36442-Vastluettmaar_TRAFI_31299_03_04_01_00_2010_EN_corr_20_Dec_2010.pdf

Icebreaker assistance in the Russian Ports of the eastern part of Gulf of Finland.

This is an unofficial translation, FTA takes no responsibility to its correctness. The official texts are in Russian only

Instructions to merchant vessels for winter 2016 – 2017.

BYLAWS of the sea port “Bolshoy port St.-Petersburg”, validated By order of Ministry of Transport of Russia, December 12, 2011 No.311

Bylaws of the sea port “Bolshoy port St.-Petersburg” (hereafter, Bylaws) were developed according to the Federal law of November 8, 2007 No. 261-ФЗ «On sea ports of the Russian Federation and on changing particular legal acts of the Russian Federation», Federal law of April 30, 1999 No. 81-ФЗ «Merchant shipping code of the Russian Federation», General rules for ships navigation and anchorage at sea ports of the Russian Federation and approaches to them (hereafter, General rules).

Information on ice navigation in the sea port

1. The ice navigation in the sea port is announced when the ice formation starts in Nevskaya bay and ends when the ice drifting from the Neva river is over. The start and completion of ice-breaking service to ships are announced by the Harbour Master.
2. When an ice cover is formed within Kronstadt Fairway and Saint Petersburg Sea Channel for all ships the one-way traffic is established on the channel.
3. The Ice Operations Headquarters (IOH) is set up by the order of the Harbour Master in order to co-ordinate the ice-breaking service to the ships in the Eastern Part of the Gulf of Finland.
4. Information of ship's Expected Time of Arrival (ETA) to the ice convoy formation meeting point (CMP) is to be sent 72 hours prior and then confirmed 24 hours prior arrival at CMP to the Harbour Master at www.portcall.marinet.ru The time and order of ships proceeding through the ice as well as the number of convoyed ships are determined by the Harbour Master by 10:00 LT on daily basis. These data are published at web portal www.pasp.ru. When the ice situation is deteriorated and there are the changes in time and ice convoys order then these data are published in web by 20:00 LT on daily basis.
5. Depending on the forecast of ice situation development in the sea port and adjacent waters, the Harbour Master is to publish the Ice Restriction Announcement applicable for the vessel ice class notation according to Appendix No 1 to these Guide and establishes the CMP location. A notice for the ice navigation restrictions and the CMP location is published in the web portal www.pasp.ru not later than 14 days before the expected date the ice navigation restrictions and CMP announcement enter into force.

The Ice Restrictions referred to in Appendix No 5 of the present Guide are not to be applied to ship's with gross tonnage more than 30000 and not older than 15 years of age, with have an Ice Safety Certificate, issued by the Russian Maritime Register of Shipping.

6. The ships bound to the sea port are to proceed to CMP by their own power consulting with regional Vessel Traffic Service (VTS). The ships which are not capable to proceed to CMP by their own power are provided with ice-breaking service by the request of the ship owners (the ship's Captain). All ships proceeding in ice conditions to and out of the sea port when in ice convoy with ice-breaker shall ensure manual mode of the main engine control whenever necessary.
7. The ships are guided through the ice by port and liner ice-breakers in ice convoys. The vessel which is not capable to proceed in ice convoy may ask an individual ice-breaking assistance, which is arranged upon availability of the ice-breakers not engaged in ice-breaking service.
8. The formation of ice convoys is set up by the Harbour Master in accordance with section 4 of present Guide based upon the following criterion:
The time of vessel's arrival at CMP
 - The submission time of the request for the ship to enter or leave the sea port
 - The priority order established by The General Rules
 - The ice restrictions

Upon arrival at CMP the ship is to contact by VHF with ice-breaker and act according to direction of ice-breaker's Captain. Whenever necessary the VTS is to assist the ships to communicate with the ice breaker.

9. The ships which arrived by their own power or in the ice convoy to Saint Petersburg entrance buoy from the West are to wait for the ice convoy formation to enter the port in the area south off the axis Fairway No 1 according to VTS directions.
10. The vessels leaving the port are to wait for the formation of ice convoy to proceed to the West in the area North off the axis of Fairway No 1 according to VTS directions.
11. With reference to the actual ice conditions in the port waters and the vessels technical characteristics the ships may proceed by their own power according to VTS directions⁶. The vessels proceeding by their own power shall inform the VTS of passing the control way point of the recommended route and to report of the ice condition upon their way.
12. The vessels which are included into the ice convoy are to change the VHF channel directed by the ice-breaker engaged in ice-breaking service.
13. The ice-breaking operation around the vessel got stuck in the ice is allowed to be made by the ice-breaker only.
14. The vessel is to be stuffed with sufficient stock of fresh water, provision and fuel for the period of not less than 14 days from the time of arrival at CMP. Should any vessel be waiting for the ice breaking service more than 14 days from the date of arrival at CMP, the Harbor Master is to exercise prompt actions to procure such vessel to enter the port.

Limitations of ice navigation regime in the Eastern part of the Gulf of Finland

The list of ships' Ice Class is given in the classification of the Russian Maritime Register of Shipping. (Appendix 1)

Ice situation	Ships allowed to navigate in ice with icebreakers assistance or without assistance	Ships allowed to navigate in ice with icebreakers assistance only	Ships not allowed to navigate in ice
Solid ice cover thickness 10-15 cm	Ships of Ice Class 1 and higher	Not Ice Class Ships	Tows
Solid ice cover thickness 15-30 cm	Ships of Ice Class 2 and higher	Ships of Ice Class 1	Not Ice Class ships, Tows
Solid ice cover thickness 30-50 cm	Ships of Ice Class 3 and higher	Ships of Ice Class 1 and Ice Class 2	Not Ice Class ships, Tows
Solid ice cover thickness more than 50 cm	Ships of Ice Class Arc4 and higher	Ships of Ice Class 2 and Ice Class 3	Not Ice Class ships, Ice Class 1, Tows

Captain's checklist

Before entering ice-covered waters:

- Comply with Safety Management System's procedures and check lists.
- Request the most updated ice chart available, convoy formation point (CFP) location and names of the icebreakers from your Agents in advance.
- Check that your VHF radio is operative, find out in advance the channel used by the icebreakers operating in the area.
- Check that the pipes on deck are drained of water.
- Check that the sounding and air pipes of the ballast tanks are emptied of water.
- Check that anchor wheels and other equipment, which may be used in ice conditions, are covered by adequate tarpaulins (to prevent icing).
- Keep the pilot ladder in a sheltered place and, before use, make sure it is not ice covered.
- Test the searchlights in advance.
- Move the anchors astern or place them onto deck if there is even a slight possibility that they may come into contact with the ice-breaker's towing notch. Any neglect in this respect will cause assistance to be delayed.
- Check that the propeller is completely below the water surface.
- Check that cooling water is available when navigating in ice.
- Avoid colliding with loose ice floes in high speed, check your open-water speed.
- Test water pumps and emergency equipments.
- Test emergency alarms.
- Be sure that ship's supplies of fuel, fresh water and provisions are enough for 20 days as minimum.

Ensure that your Officers also study the instructions and the training DVD issued by BIM (Baltic Icebreaking Management). It also may be found at the address:

www.pasp.ru or www.baltice.org

Information on ice operations

The information about CMP, Icebreaker assistance, ice operations and areas of icebreaker assistance as well as information about vessels positions currently under icebreaker assistance and waiting icebreaker obtainable on:

Harbour Master Office, Sea Port “Bolshoy port of St. Petersburg” –

Tel. +7 812 245 16 75
fax: +7 812 327 40 21
e-mail: capsec@pasp.ru web-site www.pasp.ru

The Ice Operations Headquarters – 24 h (All Russian ports)

Tel. +7 812 680 19 30 emergency only
+ 7 812 680 19 77
+ 7 921 444 07 47
e-mail: shlo@pasp.ru

More information regarding the ports of St. Petersburg, Ust-Luga, Primorsk, Vysots and Vyborg can be found from the links below:

St. Petersburg:

http://www.pasp.ru/xii_svedeniya_ob_organizacii_plava, http://www.pasp.ru/bylaws_of_the_seaport_of_the_sea_po

Ust-Luga:

http://www.pasp.ru/bylaws_of_the_seaport_of_ust-luga

Primorsk:

http://www.pasp.ru/xii_svedeniya_ob_organizacii_plava2, http://www.pasp.ru/bylaws_of_the_sea_port_of_primorsk

Vysotsk:

http://www.pasp.ru/d/26909/d/law180367_o_20150503_141326_53955.pdf, http://www.pasp.ru/bylaws_of_the_seaport_of_vysotsk

Vyborg:

http://www.pasp.ru/xii_svedeniya_ob_organizacii_plava1, http://www.pasp.ru/bylaws_of_the_sea_port_of_vyborg

Supplement

The estonian icebreaking service

Procedure for icebreaking

Regulation No. 265 of the Minister of Economic Affairs and Communications of 23 December 2003 This Regulation is established on the basis of § 50 (1) of the Maritime Safety Act (RT I 2002, 1, 1; 61, 375; 63,387).

1. Scope

1. The Regulation provides for the procedure for icebreaking and communication between port authorities, masters, ship agents and the Maritime Administration during the organisation of icebreaking.
2. The purpose of the Regulation is, in the event waterways become ice covered, to ensure that vessel traffic bound to and from the ports referred to in clause 3(1) of the Regulation is organised in a way that is as safe and effective as possible during icebreaking period.

2. Period of icebreaking

The beginning and the end of icebreaking works are established by the Director General of the Maritime Administration proceeding from the ice conditions.

3. Ports serviced by icebreakers

1. Ports that are serviced by state icebreakers are Muuga Harbour, harbours of Tallinn and Kopli Bay, Paldiski North Harbour, Paldiski South Harbour, Kunda Harbour and Sillamäe Harbour. The service area of these ports excludes the port water area. Pärnu Harbour is serviced from the open sea up to a point with coordinates 58°21',4N and 24°27',0 E.
2. The port authority may, in concordance with the Maritime Administration, perform ice-breaking independently using port's technical and financial resources for that purpose.
3. When organising icebreaking, the port authority shall be guided by the requirements established in legislation to ensure safe vessel traffic and inform the Winter Navigation Section of the Maritime Administration (hereinafter Winter Navigation Section) of the process of icebreaking.

4. Organisation of icebreaking

1. Icebreaking shall be organised by the Maritime Administration.
2. The Director General of the Maritime Administration may by his directive convene the Ice Information Centre as an advisory body.
3. The directives of the Director General of the Maritime Administration concerning the organisation of icebreaking shall be published in “Notices to Mariners”, via NAVTEX and on the homepage of the Maritime Administration.

Assistance of winter navigation

5. Restrictions

Taking into account the real situation of the existing ice conditions, the Director General of the Estonian Maritime Administration may, during the period of winter navigation, establish restrictions upon the ships which are assisted by icebreaker service, taking into account their ice class, the power of their main engines, or other details if necessary. Likewise, the Director General has the right to stop icebreaker operations in any port, informing about it the owner of the port concerned, the master of the ship concerned, and the ship agent concerned, and ensuring the departure of ships which have finished their operations in port, the real situation of the existing ice conditions permitting.

6. Ordering the service of icebreaker

1. The Winter Navigation Section is operationally responsible for icebreaking service:
phone: +372 620 5707
fax: +372 620 5766
e-mail: winternavigation@vta.ee
2. In order to request for icebreaker services through ship's agent or, in the absence of an agent, through the shipowner, the master of a ship in need of icebreaker shall submit the following information to the Winter Navigation Section at least 12 hours before a planned departure from a port or 24 hours before the arrival at a defined assembly point:
 1. date of sending the order;
 2. name of the ship;
 3. call sign;
 4. flag state;
 5. length overall (m);
 6. breadth of ship (m);
 7. maximum draught and draught when navigating in ship convoy (m);
 8. depth moulded (m);

9. gross tonnage (GT);
 10. main propulsion power (kW) and the number of main engines;
 11. speed in normal conditions (ice conditions excluded) (knots);
 12. displacement when navigating in convoy;
 13. classification society;
 14. ice class;
 15. dangerous cargo;
 16. port of departure;
 17. port of destination;
 18. date of the arrival at assembly point or departure from port;
 19. time of the arrival at assembly point or departure from port;
 20. name and signature of ship's agent of shipowner;
 21. contact information on ship's agent or shipowner.
3. The masters of passenger ships performing regular service in ports serviced by an icebreaker shall submit the order through ship's agent or, in the absence of the agent, through the shipowner to the Winter Navigation Section at least 12 hours before the need for icebreaking service.
 4. Ship's agent or, in the absence of the agent, the shipowner shall confirm or specify the request for icebreaker assistance at least 4 hours before the time of arrival specified in the order, confirming also the preparedness of tugs and pilots if necessary.
 5. In the event the ship is not ready to go to sea by the specified date or a necessary tug or pilot is absent, the Winter Navigation Section may cancel the order. A new order shall be placed in accordance with the requirements set forth in this section.
 6. In the event the term of icebreaking assistance is delayed, the Winter Navigation Section shall inform the ship's agent or, in the absence of the agent, the shipowner at least 3 hours before the term specified in the order about the reasons for delay and a new term if possible.
 7. The following order of priority shall be applied to service ships with icebreakers:
 - 1) liners;
 - 2) other ships on the basis of the time of arrival or departure specified in the order and the written confirmation by the harbour master of the port of destination that is serviced by icebreakers.

Formation of ship convoy and navigation in convoy

1. Ship convoy (hereinafter convoy) shall be formed at a specified assembly point on the edge of ice or in an anchorage area of a port on the basis of received orders. If necessary, the master of the icebreaker may require the master of a ship to provide additional information on ship or cargo. The order of ships in convoy, as well as the need for towing, shall be specified by the master of the icebreaker.
2. Ships that are recognised as seaworthy by a classification society or the flag administration and have an ice class and propulsion power within the established limits shall be included in a convoy.
3. Ships that need icebreaker assistance to navigate in ice shall wait for the icebreaker at a point specified by the master of the icebreaker and shall not start navigating in ice without the permission from the master of the icebreaker.
4. The coordinates of assembly points shall be broadcast in TALLINN RADIO, via traffic channel TALLINN TRAFFIC and via NAVTEX.
5. The Winter Navigation Section shall provide ship's agent or, in the absence of the agent, the shipowner with the following information at their request:
 - 1) point of formation of convoy;
 - 2) time of formation of convoy;
 - 3) other relevant information and specifications;
 - 4) additional information in the event the icebreaker is delayed.
6. Instructions and orders for navigation and communication in convoy shall be given by the master of the icebreaker.
7. The masters of ships navigating in convoy shall fulfil the orders from the master of the icebreaker and be ready to work astern without any delay or perform any other manoeuvre.
8. Ships navigating in convoy shall not pass each other without permission from the master of the icebreaker, except in order to avoid direct collision.
9. A ship that is assisted in close-coupled towing or is towed by the icebreaker shall not manoeuvre without permission from the master of the icebreaker. A ship towed by the icebreaker shall be ready to let go of the towing line and work full astern without delay.
10. In the event of a leakage or other damage, the master of a ship navigating in convoy shall immediately inform the master of the icebreaker thereabout.
11. The master of the icebreaker may refuse to assist a ship whose master ignores his orders, and shall inform the master of the ship thereabout. After such an incident, the master of the icebreaker has the right to leave such a ship in a safe place.

8. Ice-bound ships

1. Ships that have become ice-bound when trying to navigate in ice without permission from the master of the icebreaker shall be assisted when possible.
2. In the event of an emergency situation on board such ships, all possible assistance to save lives shall be rendered. Rescuing the ships and cargo shall be treated as property rescue operation.

9. Icebreaking assistance outside icebreakers service area

Icebreaker assistance outside the service area of icebreakers (water area between the established assembly points and the port of destination serviced by icebreakers) shall be provided for an additional fee according to the agreement between the Maritime Administration and the shipowner.

Average dates for setting Restrictions to navigation 2003/04 - 2015/16

Port/Restriction	I, II 2000	IA, IB 2000 IC, II 3000	IA, IB 2000	IA 2000	IA 4000	IA 4000 2000 (€)	IA 2000	IA, IB 2000	IA, IB 2000 IC, II 3000	I, II 2000	No restrictions
Tornio, Kemi, Oulu	21.12.	2.1.	7.1.	19.1.	12.2.	14.2.	26.4.	4.5.	4.5.	11.5.	16.5.
Raahе	2.1.	15.1.	17.1.	28.1.	17.2.	18.2.	22.4.	30.4.	14.4.	6.5.	13.5.
Kokkola	10.1.	17.1.	24.1.	8.2.	20.2.	25.2.	16.4.	18.4.	20.3.	21.4.	29.4.
Pietarsaari	10.1.	17.1.	24.1.	8.2.	20.2.	25.2.	15.4.	18.4.	20.3.	20.4.	28.4.
Vaasa	11.1.	18.1.	27.1.	14.2.	-	-	-	11.4.	10.3.	7.4.	22.4.
Kaskinen	21.1.	30.1.	12.2.	23.2.	-	-	-	2.4.	24.3.*	16.4.	8.4.
Pori	20.1.	19.2.	2.3.	1.3.	-	-	-	25.4.	4.4.*	3.4.	8.4.
Rauma	20.1.	19.2.	2.3.	1.3.	-	-	-	18.4.	4.4.*	3.4.	8.4.
Uusikaupunki	23.1.	28.2.	2.3.	1.3.	-	-	-	24.3.	4.4.*	3.4.	8.4.
Naantali	26.1.	20.2.	1.3.	-	-	-	-	-	7.4.	2.4.	6.4.
Turku	26.1.	20.2.	1.3.	-	-	-	-	-	7.4.	2.4.	6.4.
Hanko	26.1.	20.2.	1.3.	-	-	-	-	-	3.4.*	15.3.	1.4.
Koverhar	26.1.	6.2.	1.3.	-	-	-	-	-	3.4.*	15.3.	1.4.
Inkoo, Kantvik	26.1.	18.2.	24.2.	25.2.	-	-	-	21.3.	29.3.	23.3.	3.4.
Helsinki	26.1.	14.2.	24.2.	3.3.	-	-	-	27.3.	3.4.	23.3.	4.4.
Sköldvik	30.1.	13.2.	17.2.	28.2.	-	-	-	31.3.	12.3.	25.3.	6.4.
Loviisa	16.1.	22.1.	12.2.	24.2.	-	-	-	31.3.	30.3.	17.3.	11.4.
Kotka	16.1.	22.1.	12.2.	24.2.	-	-	-	31.3.	30.3.	17.3.	11.4.
Hamina	16.1.	22.1.	12.2.	24.2.	-	-	-	31.3.	30.3.	17.3.	11.4.

* IA, IB 1300 / IC, II 2000

In this table Kalajoki is following Raahе's or Kokkola's restrictions

Swedish Maritime Administration

Icebreaker

Ale
Atle
Frej
Ymer
Oden
Baltica
Scandica
Thetis

Callsign

SBPQ
SBPR
SBPT
SDIA
SMLQ
SJOY
SKFZ
5BMW4

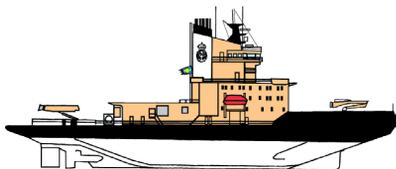
Telephone

+46 (0) 10 478 6393
+46 (0) 10 478 6373
+46 (0) 10 478 6363
+46 (0) 10 478 6383
+46 (0) 10 478 6353
+46(0) 10 478 57 00
+46(0) 10 478 57 71
+358 400 158 279

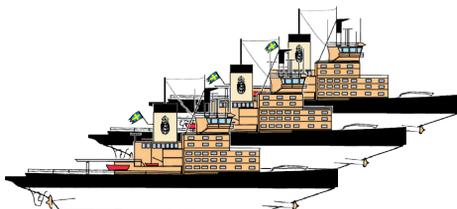
E-mail

bridge@ale.sjofartsverket.se
bridge@atle.sjofartsverket.se
bridge@frej.sjofartsverket.se
bridge@ymer.sjofartsverket.se
bridge@ib-oden.se
baltica@sjofartsverket.se
scandica@sjofartsverket.se
tug.thetis@alfonshakans.com

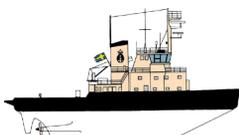
All icebreakers listen to VHF Channel 16 and MF 2332 kHz



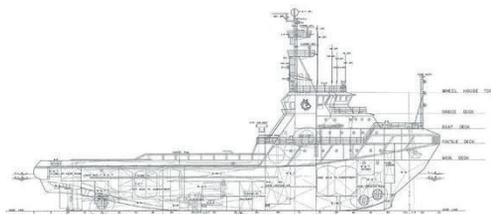
Oden 1988



Atle, Frej & Ymer 1974-1977



Ale 1973



Thetis 1983

Other partners in icebreaking cooperation: www.baltice.org



suomeksi



på svenska



in english

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