# Eisbericht Nr. 107 Amtsblatt des BSH 

## Übersicht

In der Bottenwiek befindet sich in den nördlichen Schären bis 80 cm dickes, in den südlichen bis 50 cm dickes, morsches Festeis. Auf See treibt im zentralen und westlichen Teil $20-70 \mathrm{~cm}$ dickes, sehr dichtes, örtlich aufgepresstes Eis. Im Südwesten treibt sehr lockeres bis dichtes, 10-40 cm dickes Eis. Entlang der finnischen Küste verläuft eine breite Rinne mit offenem Wasser und vereinzelten, dickeren Treibeisschollen. An den Küsten von Norra Kvarken liegt morsches Festeis und auf See kommt offenes Wasser vor. An den Küsten der Bottensee kommt örtlich morsches Festeis vor. Der Finnische Meerbusen ist eisfrei.

## Overview

In the Bay of Bothnia there is fast ice in the archipelagos, up to 80 cm thick in the north and up to 50 cm thick and rotting in the south. At sea in the central and western part there is $20-70 \mathrm{~cm}$ thick, very close, ridged ice. In the southwestern part is very open to close, $10-40 \mathrm{~cm}$ thick drift ice. Along the Finnish coast is a wide lead with open water and thicker drifting floes at places. In the Quark there is rotten fast ice at the coasts and at sea there is mainly open water. At the coasts of the Sea of Bothnia there is rotten ice in places. The Gulf of Finland is ice-free.

## Bay of Bothnia

In the archipelagos of the Bay of Bothnia there is fast or consolidated ice; $50-80 \mathrm{~cm}$ thick in the north and $40-50 \mathrm{~cm}$ thick and rotting in the south. In the northeast the fast ice stretches out to Malören, Kemi-3, Oulu-3 and Raahe lighthouse. At sea in the central part west of about $23^{\circ} 35^{\prime} \mathrm{E}$ there is very close, $40-70 \mathrm{~cm}$ thick, ridged ice stretching to Farstugrunden in the north. Further west, reaching the Swedish coast, and south to about $64^{\circ} 10^{\prime} \mathrm{N}$ there is $20-60 \mathrm{~cm}$ thick, ridged, very close ice.

There are cracks and leads in the ice fields. Further south at sea there is $10-40 \mathrm{~cm}$ thick, very open to close ice. From Malören via Nahkiainen and Ulkokalla to the Quark runs a $5-20$ NM wide lead with drifting thick floes at places and else open water.
With mainly light, but in places also moderate frost, some ice formation is expected over the weekend. The ice will drift to the southwest.

## The Quark

There is rotten ice in the Vaasa archipelago out to Storhästen and along the Swedish coast. At sea there is mostly open water.

With light frost some new ice formation is possible over the weekend. The ice will drift to the southwest.

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## Sea of Bothnia

In the middle and southern archipelagos there is rotten ice in places with open water further out. In the northern part, including Ångermanälven, there

## Gulf of Finland

The Gulf of Finland is ice-free. In Lake Saimaa is
is rotten fast ice.
With some night frost no larger change is expected over the weekend.
$25-50 \mathrm{~cm}$ thick, rotting ice with open areas.

Dr. W. Aldenhoff

## Restrictions to Navigation

|  | Harbour/District | At least dwt/hp/kW | Ice Class | Begin |
| :---: | :---: | :---: | :---: | :---: |
| Finland | Tornio, Kemi and Oulu | 4000 dwt | IA | 02.04 . |
|  | Raahe, Kalajoki, Kokkola and Pietarsaari | 4000 dwt | IA | 13.01. |
|  | Vaasa | 2000 dwt | 1 | 15.04. |
|  | Lake Saimaa | 2000 dwt | I | 19.04. |
|  | Saimaa Canal | 2000 dwt | IA | 08.01. |
| Russia | Vyborg | - | Ice 1 | 28.03. |
|  | Vysotsk | - | Ice 1 | 28.03. |
|  | Primorsk | - | Ice 1 | 25.03. |
| Sweden | Karlsborg | 4000 dwt | IA (2000 t) | 14.01. |
|  | Lulea, Haraholmen and Skelleftehamn | 4000 dwt | IA | 14.01. |
|  | Rundvik, Husum and Örnsköldsvik | 2000 dwt | IC | 15.04. |
|  | Holmsund | 2000 dwt | IB | 12.04. |
|  | Angermanälven | 2000 dwt | IB | 27.03. |
|  | Härnösand | 2000 dwt | IC | 15.04. |
|  | Söråker and Sundsvall | 2000 dwt | II | 09.04. |

## Finland/Sweden

The traffic separation schemes in the Quark are temporarily out of use from 20 December due to ice conditions.
Vessels bound for Gulf of Bothnia ports in which assistance restrictions apply, shall when passing latitude $60^{\circ} 00^{\prime} \mathrm{N}$ report their nationality, name, destination, ETA and speed to ICE INFO on VHF channel 82. This report can also be given directly by telephone to +46 104927600 .
Vessels bound for Finnish or Swedish ports with assistance restrictions in the Quark or the Bay of Bothnia shall, 20 nautical miles before Nordvalen Lighthouse ( $63^{\circ} 32.15^{\prime} \mathrm{N} 20^{\circ} 46.60^{\prime} \mathrm{E}$ ), report in accordance with the instructions for winter navigation to Bothnia VTS on VHF channel 67.

Icebreakers: YMER, FREJ, ATLE, POLARIS, SISU and URHO assist in the Bay of Bothnia. OTSO assists in the southern Bay of Bothnia. ZEUS and ALE assist in the Quark. TYRSKY assists in the Lake Saimaa.

## Russia

There are restrictions for small crafts going to St. Petersburg, Vyborg, Vysotsk and Primorsk. Barge towed by tug not allowed to navigate in ice. Vessels without ice class to Vyborg, Vysotsk and Primorsk are only allowed with icebreaker assistance, with ice class Ice 1 or higher according to instructions.

Icebreakers: Several icebreakers assist vessels to the port of St. Petersburg, Vyborg, Vysotsk and Primorsk.

## Baltic Sea Ice Code



## $A_{B}$ Amount and arrangements of sea ice

0 Ice free
1 Open water - concentration less than $1 / 10$
3 Open ice - concentration $4 / 10$ to $6 / 10$
4 Close ice - concentration $7 / 10$ to $8 / 10$
5 Very close ice - concentration 9/10 to 9+/10
concentration 10/10
7 Fast ice with drift ice outside
8 Fast ice
Lead in very close or compact drift ice or along the fast ce edge

Third number:
TB Topography or form of ice
0 Pancake ice, ice cakes, brash ice - less than 20 m
Small ice floes - 20 to 100 m across
2 Medium ice floes - 100 to 500 m
3 Big ice foes - 500 to 2000 m across
4 Vast or giant ice floes -
Rafted ice
6 Compact slush or shuga, or compacted brash ice
8 Thaw holes or many puddles on the ice
9 Rotten ice
/ No information or unable to report

Röyttä - Etukari
8546
Etukari - Ristinmatala 8546
Ajos - Ristinmatala 8546
Ristinmatala - Kemi 27476
Kemi 2 - Kemi $1 \quad 5676$
Sea area SW of Kemi $1 \quad 5676$
Kemi 2 - Ulkokrunni - Virpiniemi 8546
Oulu harbours - Kattilankalla 8546
Kattilankalla - Oulu $1 \quad 6576$
Sea area SW of Oulu $1 \quad 5676$
High Sea $N$ of the latitude of Marjaniemi 5576
Raahe harbour - Heikinkari 8546
Heikinkari - Raahe lighthouse 6476
Raahe lighthouse - Nahkiainen 9806
Latitude Marjaniemi - Ulkokalla, Sea 5476
Rahja harbour - Välimatala 5476
Vaelimatala to line Ulkokalla - Ykskivi 9806
Sea betw. lat. of Ulkokalla -Pietarsaari 5476
Ykspihlaja - Repskär 8446
Repskär - Kokkola lighthouse 9806
Sea area off Kokkola lighthouse 9806
Pietarsaari - Kallan 9806
Sea area off Kallan 9806
Sea lat. Pietarsaari - NE Nordvalen 1806
Sea area ENE of Nordvalen 1806
Sea area Nordvalen to W of Norrskär 1706
Vaskiluoto - Ensten 3416

Second number:
$\mathrm{S}_{\mathrm{B}}$ Stage of ice development
0 New ice or dark nilas (less than 5 cm thick)
1 Light nilas ( $5-10 \mathrm{~cm}$ thick) or ice rind
2 Grey ice ( $10-15 \mathrm{~cm}$ thick)
3 Grey-white ice (15-30 cm thick)
4 White ice, first stage ( $30-50 \mathrm{~cm}$ thick)
5 White ice, second stage ( $50-70 \mathrm{~cm}$ thick)
6 Medium first year ice ( $70-120 \mathrm{~cm}$ thick)
7 Ice predominantly thinner than 15 cm with some thicker ice
8 Ice predominantly grey-white ice ( $15-30 \mathrm{~cm}$ ) with some thicker ice
9 Ice predominantly thicker than 30 cm with some thinner ice
/ No information or unable to report
Fourth number:
$\mathrm{K}_{\mathrm{B}}$ Navigation conditions in ice
0 Navigation unobscured
1 Navigation difficult or dangerous for wooden vessels without ice sheathing
2 Navigation difficult for unstrengthened or low-powered vessels built of iron or steel. Navigation for wooden vessels even with ice sheathing not advisable
3 Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice
4 Navigation proceeds in lead or broken ice-channel without the assistance of an icebreaker
5 Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size
6 Icebreaker assistance can only be given to vessels of special ice class and of special size
7 Icebreaker assistance can only be given to vessels after after special permission
8 Navigation temporarily closed
9 Navigation has ceased
/ Unknown
Sea area E of Ulvöarna ..... 1406
Ångermanälven north Sandö Bridge ..... 8494
Ångermanälven south Sandö Bridge ..... 8494
Härnösand - Härnön ..... 1404
Sea area off Härnö ..... 1404
Sundsvall - Draghällan ..... 1406
Hudiksvallfjärden ..... 8392
Iggesund - Agö ..... 8392
Sandarne - Hällgrund ..... 1302
Ljusnefjärden - Storjungfrun ..... 1302


[^0]:    Eisauskünfte / Ice Information
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