ISSN 0013-2705

BUNDESAMT FÜR SEESCHIFFFAHRT UND HYDROGRAPHIE

Eisbericht Nr. 66

Amtsblatt des BSH

Jahrgang 96	Nr. 66	Tuesday, 28.02.2023	1

Übersicht

In den Schären der Bottenwiek befindet sich im Norden bis 60 cm dickes Festeis und im Süden bis 35 cm dickes Festeis. Auf das Festeis folgt im Norden bis zu 40 cm dickes zusammenhängendes oder sehr dichtes, örtlich aufgepresstes oder aufgeschobenes Eis. Auf See treibt ansonsten ebenes Eis oder bis 25 cm dickes, sehr dichtes Eis. In Kvarken liegt bis 35 cm dickes Festeis in den Schären und Buchten und auf See treibt lockeres bis sehr dichtes, bis 15 cm dickes Eis. In der Bottensee und dem Schärenmeer kommt dünnes, ebenes Eis oder Festeis entlang der Küsten vor. Im Mälarsee liegt dünnes, ebenes Eis oder Neueis. Im Finnischen Meerbusen liegt in den östlichsten Buchten bis 40 cm dickes Festeis. Auf See treibt im Osten dichtes bis sehr dichtes Eis und im Norden befindet sich eine breite Meereisrinne mit Neueis. In den Schären und Buchten entlang der nördlichen Küste kommt Festeis vor. Im Nordosten des Rigaischen Meerbusen befindet sich 10–20 cm dickes Festeis oder sehr dichtes Eis in geschützten Gebieten und Neueis etwas weiter außerhalb.

Overview

In the archipelagos of the Bay of Bothnia, there is up to 60 cm thick fast ice in the north and up to 35 cm thick fast ice in the south. In the north, there is up to 40 cm thick, partly ridged and rafted consolidated or very close ice further out. Else at sea, there is level ice or up to 25 cm thick, very close ice. In the Quark, there is up to 35 cm thick fast ice in the archipelagos and bays and at sea, there is up to 15 cm thick, open to very close ice. In the Sea of Bothnia and the Archipelago Sea, fast ice or thin level ice is present along the coasts. In Lake Mälaren, there is thin level ice and new ice. In the Gulf of Finland, up to 40 cm thick fast ice is present in the easternmost bays. At sea in the east, there is close to very close ice in the south and a lead with new ice in the north. In the archipelagos and bays along the northern coast, there is fast ice. In the northeastern Gulf of Riga, there is 10–20 cm thick fast ice or very close ice in sheltered bays and new ice somewhat further out.

Bay of Bothnia

In the archipelagos of the northern Bay of Bothnia, there is 30–60 cm thick fast ice and compact, up to 45 cm thick ice towards Malören and off the eastern fast ice. Further out in the northeast, there is 20–40 cm thick, in places ridged very close ice to about Kemi-1 – Oulu-3 – Raahe. In the southern Bay of Bothnia, there is 20–35 cm thick fast ice in the archipelagos with a narrow band of very close ice further out in the east. At sea in the north, there is 15–40 cm thick, ridged and rafted very close ice to about 65°10'N. Else at sea, there is very close, 5–25 cm thick ice that is ridged and rafted in the eastern part. Off the eastern fast ice, there is a band of rafted level ice, 5–20 cm thick to about Ulkokalla and Nahkiainen. In the west off the fast ice, there is a lead running from Nygrån to the

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Quark.
Some ice growth is expected the coming day. The ice will drift to the southeast/east.

The Quark
There is 10–35 cm thick fast ice in the Vaasa archipelago out to Storhästen. Further out to Ensten, there is very close, 5–20 cm thick. On the Swedish side, there is mostly fast ice up to 35 cm thick in inner bays. Further out, there is a lead with open water. At sea, there is mostly open, 2–15 cm thick drift ice north of about Norrskär and very close ice off the northern fast ice in the east.
Some ice growth is expected the coming day. The ice will drift to the east/southeast.

Sea of Bothnia
In the archipelagos along the eastern coast, there is 10–20 cm thick fast ice. Further out in the north, there is new ice and ice formation. Along the western coast, there is thin level ice or new ice in sheltered bays in the south and up to 40 cm thick fast ice in inner bays in the north. On Ångermanälven, there is 20–40 cm thick fast or level ice.
No major changes are expected the coming day, but some melting is possible.

Archipelago Sea and Åland Sea
At the eastern coast, there is 5–15 cm fast or level ice in the inner bays and new ice somewhat further out. In the western and central part new ice is present along the coasts.
No major changes are expected the coming day.

Northern Baltic
In Lake Mälaren, there is 5–15 cm thick fast ice or thin level ice in the western part, with areas of open water. In the eastern part, there is thin ice in sheltered bays and open water. New ice occurs in sheltered places along the outer coast.
No larger changes are expected the coming, but some night frost is possible with melting during daytime.

Gulf of Finland
From St. Petersburg out to Kotlin and in the bay north of Kotlin, there is 20–40 cm thick fast ice or compact ice. In the Bay of Vyborg, there is 15–25 cm thick fast ice and in the Bjerkesund, there is 10–20 cm thick fast ice. In both entrances there is 10–20 cm thick, very close ice. At sea, there is mostly close to very close, 5–25 cm thick ice in the southern part from Kotlin to abou 27°20'. In the northern part, there is a large lead with new ice to about Nerva in the south. Further west to aline Tiiekeri – Rodser is new ice and open water somewhat further west. Along the northern coast, there is 10–25 cm thick fast ice in the eastern archipelagos. Further out, there is thin level ice or very close ice off Kotka and Hamina. In the western archipelagos, there is 5–15 cm thick fast ice and ice formation.
Some ice formation and ice growth is expected the coming day especially in the east. The ice will drift to the southeast.

Gulf of Riga
In Väinameri, there is 10–20 cm thick very close ice or fast ice near the coasts. On the fairway is new ice. In the eastern part of the Bay of Pärnu, there is 5–15 cm thick, very close drift along the coast and I the eastern part to Häädemeeste. In the western part is open ice to the northern point of isand Sorgu. Further out to the line northern point of Kihnu to Ainazi is new ice.
No Larger changes are expected the coming day, and the ice will drift to the southeast.

Skagerrak and Kattegat
Up to 15 cm thick ice or new ice is present in some inner Norwegian Fjords. At a few places thicker ice occurs.
No major changes are expected the coming day.

Swedish Lakes
Thin level ice or new ice is present in some sheltered bays in the northeast of Lake Vänern.
No larger changes are expected the coming day.

Dr. W. Aldenhoff

Restrictions to Navigation

	Harbour/District	At least dwt/hp/kW	Ice Class	Begin
Estonia	Pärnu	1600 kW	1 C	23.12.
Finland	Tornio, Kemi and Oulu	4000 dwt	IA	22.02.
	Raahe	2000 dwt	IB	22.02.
	Raahe	**2000 dwt**	**IA**	**02.03.**
	Kalajoki, Kokkola, Pietarsaari and Vaasa	2000 dwt	I	07.01.
	Kalajoki, Kokkola	**2000 dwt**	**IB**	**02.03.**
	Kaskinen, Inkoo, Kantvik, Helsinki, Sköldvik and Mussalo	2000 dwt	II	07.01.
	Loviisa, Kotka and Hamina	2000 dwt	II	24.12.
Russia	Vyborg and Vysotsk	-	Ice 1	08.02.
Sweden	**Karlsborg**	**4000 dwt (2000 t)**	**IA**	**28.02.**
	Lulea	**4000 dwt**	**IA**	**28.02.**
	Haraholmen and Skelleftehamn	**2000 dwt**	**IB**	**28.02.**
	Haraholmen and Skelleftehamn	**2000 dwt**	**IA**	**04.03.**
	Holmsund	2000 dwt	IC	07.02.
	Rundvik and Husum	2000 dwt	II	21.12.
	Rundvik and Husum	**2000 dwt**	**IC**	**04.03.**
	Örnsköldsvik	2000 dwt	IC	13.02.
	Angermanälven	2000 dwt	IB	07.01.
	Söraker, Sundsvall and Söderhamn	2000 dwt	IC	13.02.
	Köping and Västeras	1300/2000 dwt	IC/II	25.01.
	Balsta	1300/2000 dwt	IC/II	22.12.

Estonia

Icebreakers:
EVA-316 assists in the port of Pärnu.

Finland/Sweden

The Saimaa Canal is closed for traffic since 4th January.

Vessels bound for Gulf of Bothnia ports in which assistance restrictions apply, shall when passing latitude 60° 00' 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 10 492 7600.

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° 32.15' N 20° 46.60' E), report in accordance with the instructions for winter navigation to Bothnia VTS on VHF channel 67.

The traffic separation schemes in the Quark are temporarily out of use from 7 February due to ice conditions.

Icebreakers:
KONTIO, OTSO, SISU, ATLE, YMER and FREJ assist in the Bay of Bothnia. ZEUS assists in the southern Bay of Bothnia and in the Quark. ALE assists in the Quark. CALYPSO assists in the region of Kotka and Hamina.

Norway

Husøysund and Vestfjorden (Tønsberg): Icebreaker assistance can only be given to vessels suitable for navigation in ice and of special size. 31.01.23
Tønsberg indre havn (Tønsberg): Navigation without icebreaker assistance possible only for high-powered vessels of strong construction and suitable for navigation in ice. 31.01.23

Russia

There are restrictions for small crafts going to Vysotsk, Vyborg, St. Petersburg, Ust-Luga and Primorsk. No sailing of barge by tug to Vyborg and Vysotsk.

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

Baltic Sea Ice Code

First number:
A_B Amount and arrangements of sea ice
0 Ice free
1 Open water – concentration less than 1/10
2 Very open ice - concentration 1/10 to 3/10
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
6 Compact ice, including consolidated ice – concentration 10/10
7 Fast ice with drift ice outside
8 Fast ice
9 Lead in very close or compact drift ice or along the fast Ice edge
/ Unable to report

Second number:
S_B Stage of ice development
0 New ice or dark nilas (less than 5 cm thick)
1 Light nilas (5 - 10 cm thick) or ice rind
2 Grey ice (10 - 15 cm thick)
3 Grey-white ice (15 - 30 cm thick)
4 White ice, first stage (30 - 50 cm thick)
5 White ice, second stage (50 - 70 cm thick)
6 Medium first year ice (70 - 120 cm thick)
7 Ice predominantly thinner than 15 cm with some thicker ice
8 Ice predominantly grey-white ice (15 – 30 cm) with some thicker ice
9 Ice predominantly thicker than 30 cm with some thinner ice
/ No information or unable to report

Third number:
T_B Topography or form of ice
0 Pancake ice, ice cakes, brash ice – less than 20 m across
1 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 – more than 2000 m across – or level ice
5 Rafted ice
6 Compact slush or shuga, or compacted brash ice
7 Hummocked or ridged ice
8 Thaw holes or many puddles on the ice
9 Rotten ice
/ No information or unable to report

Fourth number:
K_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

Estonia, 28.02.2023

Shipping route from Narva-Jõssuu	3101
Kunda, port and bay	3001
Paernu, port and bay	42/5
Moonsund	2002

Finland, 28.02.2023

Röyttä – Etukari	8446
Etukari – Ristinmatala	6456
Ajos – Ristinmatala	6456
Ristinmatala – Kemi 2	5876
Kemi 2 – Kemi 1	5876
Sea area SW of Kemi 1	5876
Kemi 2 – Ulkokrunni – Virpiniemi	6456
Oulu harbours – Kattilankalla	8456
Kattilankalla – Oulu 1	6456
Sea area SW of Oulu 1	5356
High Sea N of the latitude of Marjaniemi	5856
Raahe harbour – Heikinkari	8346
Heikinkari – Raahe lighthouse	7756
Raahe lighthouse – Nahkiainen	5756
Latitude Marjaniemi – Ulkokalla, Sea	5756
Rahja harbour – Välimatala	5756
Vaelimatala to line Ulkokalla – Ykskivi	5756
Sea betw. lat. of Ulkokalla –Pietarsaari	5756
Ykspihlaja – Repskär	7756
Repskär – Kokkola lighthouse	5756
Sea area off Kokkola lighthouse	5756
Pietarsaari – Kallan	7756
Sea area off Kallan	5246
Sea lat. Pietarsaari – NE Nordvalen	5246
Sea area ENE of Nordvalen	5246
Sea area Nordvalen to W of Norrskär	3136
Vaskiluoto – Ensten	7756
Ensten – Vaasa lighthouse	5756
Vaasa lighthouse – Norrskär	3136
Sea area SW of Norrskär	3136
Kaskinen – Sälgrund	7715
Sea area off Sälgrund	0//5

Pori harb. to line Pori lighth. – Säppi	8742
Rauma, Harbour – Kylmäpihlaja	4041
Uusikaupunki harbour – Kirsta	8142
Naantali and Turku – Rajakari	5142
Lövskär – Korra	2000
Inkoo a. Kantvik – sea area Porkkala	8145
Helsinki harbours – Harmaja	2005
Vuosaari harbour – Eestiluoto	0//5
Porvoo harbours – Varlax	0//5
Valko Harbour – Täktarn	5245
Archipelago fairway Boistö – Glosholm	3015
Archipelago fairway Glosholm–Helsinki	1005
Kotka – Viikari	8345
Viikari – Orrengrund	5145
Orrengrund – Tiiskeri	3015
Tiiskeri – Kalbådagrund	2005
Hamina – Suurmusta	5245
Suurmusta – Merikari	5245
Merikari – Kaunissaari	5245

Latvia, 28.02.2023

Port of Riga	1000
Riga to the Cape of Mersrags, fairway	1000

Norway, 27.02.2023

Svinesund – Halden	31//
Drammensfjord	1101
Husøysund – Tønsberg channel	8345
Tønsberg, inner harbour	8353
Vestfjord (Tønsberg)	8555
Langårsund (Kragerø)	8144

Russian Federation, 28.02.2023

Port of St. Petersburg	84/3
St. Petersburg – E-point island Kotlin	54/3
E-point Kotlin – long. lighth. Tolbuhkin	4303
Lighth. Tolbuhkin – lighth. –Šepelevskij	51/2
Lighthouse Šepelevskij – island Sescar	42/2
Island Sescar – Island Sommers	42/2
Island Sommers– S-point island Gogland	30/1
S-point isl. Gogland – long. p. Kunda	20/1
Vyborg, port and bay	83/3
Island Vichrevoj – Island Sommers	42/3
Strait Bjerkesund	83/3
E-point Bol'šoj Ber'ozovyj – Šepelevskij	32/2
Luga bay	51/2
Appr. Luga bay – line Moš.-Šepel.	51/1

Sweden, 28.02.2023

Karlsborg – Malören	6456
Sea area off Malören	5456
Luleå – Björnklack	8546
Björnklack – Farstugrunden	2226
E and SE of Farstugrunden	5356
Sandgrönn fairway	8546
Rödkallen – Norströmsgrund	5336
Haraholmen – Nygrån	8346
Sea area off Nygrån	1106
Skelleftehamn – Gåsören	5236
Sea area off Gåsören	5146
Sea area off Bjuröklubb	5146
NE of Nordvalen	3226
SW of Nordvalen	3226
Western Quark (W of Holmöarna)	5246
Umeå – Väktaren	5146
SE of Väktaren	3226
NE and SE of Sydostbrotten	3226
Örnsköldsvik – Hörnskaten	8446
Hörnskaten – Skagsudde	5146
Ångermanälven north Sandö Bridge	8444
Ångermanälven south Sandö Bridge	8444
Härnösand – Härnön	5144
Sundsvall – Draghällan	5146
Draghällan – Åstholmsudde	1006
Hudiksvallfjärden	8346
Iggesund – Agö	8346
Sandarne – Hällgrund	8346
Ljusnefjärden – Storjungfrun	8346
Gävle – Eggegrund	1101
Hallstavik – Svartklubben	5142
Köping – Kvicksund	8244
Västerås – Grönsö	8244
Grönsö – Södertälje	4044
Stockholm – Södertälje	4044
Södertälje – Fifong	2024
Fairway to Karlstad	4041
Fairway to Kristinehamn	5142