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SECTOR 4 — CHART INFORMATION

SECTOR 4

THE ALAND ISLANDS TO THE FINNISH COAST

Plan.—This sector describes the Aland Islands and those dangers lying along the seaward edges of the archipelago extending from the Finnish coast. The descriptive sequence is W from the cape of Hanko (Hangoudd) (59°49'N., 22°54'E.) to Sodra Kvarken (60°15'N., 19°00'E.) and then E to Isokari (60°43'N., 21°01'E.). The ports of Turku and Naantali, situated at the SW corner of Finland, are described at the end of this sector.

General Remarks

4.1 Winds—Weather.—Among the islands, SW winds prevail. Winds from SE are usually accompanied by rain and N winds are accompanied by squalls.

Fog occurs in the spring and autumn. The fog is usually thick and dry in the spring, and damp with fine rain in the autumn.

Ice.—During an average winter ice forms within the inlets of the Ahvenanmaa Islands in the middle of January, and quickly extends around these islands and over the sea to the E of them. By the beginning of February the whole sea area between the Ahvenanmaa Islands and the Finnish coast is ice-encumbered. In the middle of February, the N part of the Aland Sea and Sodra Kvarken are ice-covered. After the middle of March the ice begins to decrease, and by the beginning of April, the Aland Sea and Sodra Kvarken are open. At the end of April the sea between the Ahvenanmaa Islands and the Finnish coast is clear.

A passage is usually kept open all winter through Rodhamnsfjarden and Foglofjard as far as Turku. If the winter anticyclone to the SE extends W and N, giving a period of E winds and cold weather over the Baltic, a great deal of ice is heaped up on the S coast off the Ahvenanmaa Islands. On the S side of the Aland Sea, traffic is unhindered in very mild winters.

Tides—Currents.—Currents are generally dependent on the direction of the wind, but strongly divided by the islands and shoals. The water level is a good indication of expected winds. A rise precedes winds from the SE or SW, and a fall precedes those from the N.

Aspect.—The peninsula of Hankoinemi and the dangers adjacent to it are described in [paragraph 2.2](#).

The Aland Islands, located in the entrance of the Gulf of Bothnia, are separated from the coast of Sweden by the Aland Sea and Sodra Kvarken.

Saaristomeri, the waters lying between the Aland Islands and the mainland of Finland, are encumbered by islands, islets, and innumerable rocks and shoals.

Aland Island (Ahvenanmaa), the largest of the group, is partially wooded and intersected by numerous inlets. It is reported that about two-thirds of the inhabitants of the group reside on this island and are of Swedish extraction.

Pilotage.—Pilotage is compulsory for all merchant vessels and foreign warships; all tankers over 15,000 dwt when loaded must carry two pilots.

Vessels requiring deep-sea pilotage should direct their request to any coastal pilot station in Finland, at least 24 hours in advance.

Generally, requests for coastal pilots should be sent at least 24 hours and 6 hours in advance.

Vessels approaching the Archipelago Sea and the Province of Aland should establish VHF contact with Turku pilot station 3 hours in advance.

Pilots board in the following positions:

1. For vessels approaching from S—about 3 miles SSW of Uto.

2. For vessels approaching from W bound for Farjsundet, Degerby, and all other destinations in the E part of the archipelago—in position 59° 56.6'N, 19° 57.6'E. This boarding position is also used by vessels transiting the Archipelago Sea bound for Hanko during ice conditions.

3. For vessels approaching from N—in position 60° 44.47'N, 20° 55.03'E (Isokari).

4. For vessels approaching from SE—about 1.5 miles ENE of Russaro.

5. For the port of Mariehamn (Maarianhamina)—in position 60° 01.3'N, 19° 50.3'E.

Regulations.—The Finnish authorities have instituted a system of restricted areas and semi-restricted areas throughout the whole of Finland's coastal waters. The limits of the areas lying within the waters described in this sector may best be seen on the chart.

Vessels are permitted to transit these restricted areas only through an approved channel, with a pilot aboard.

Vessels are permitted to anchor within a restricted area only at specially designated anchorages, for a duration of 48 hours or less.

Areas dangerous due to mines laid during World War II exist within the waters described in this sector. There is still a risk of danger in these areas and anchoring or carrying out any seabed activities are prohibited without special permission.

See Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean, Baltic Sea, North Sea, and the Mediterranean Sea for regulations pertaining to vessels within the waters of Finland. Vessels should also consult the pilot as well as the local authorities for details on local regulations.

Vessel Traffic Service.—An Archipelago Vessel Traffic Service (VTS) operates in the Saaristomeri area. The VTS is mandatory and authorized to issue instructions when necessary for the safe navigation of vessels within the area. The seaward limits of the VTS area are Uto Island (59° 47'N., 21° 22'E.) and Isokari Island (60° 43'N., 21° 01'E.).

All vessels within the VTS area and those operating nearby must maintain a continuous listening watch on VHF channel 71. The VTS Marine Traffic Center is situated at Parnaisten (60° 10'N., 21° 42'E.).

The VTS area consists of two sectors. Sector 1 extends from the limit at Uto Island to Turku (60° 27'N., 22° 15'E.) and Naantali (60° 28'N., 22° 01'E.) along the 10m and 13m fairways.

Sector 2 extends from the limit at the island of to the intersection point at Lovskar (60° 13.2'N., 21° 43.6'E.) along the 9m and 10m fairways; and from Isokari to Uusikaupunki (60° 13.2'N., 21° 43.6'E.) along the 4.5m, 7m, 9m, and 10m fairways.

All vessels must provide an Advance Report at least 2 hours before entering the VTS area by fax, telephone, or VHF. This report must include the following designators and details:

Designator	Details
A	Name, call sign, and nationality (flag).
B	Date and time (6 digits GMT/UT).
C	Position (4 digits Lat and 5 digits Long).
E	True course (3 digits).
F	Speed in knots and tenths (3 digits).
I	Destination and ETA.
L	Route information (intended track).
O	Draft (4 digits meters and centimeters).
P	Cargo (brief details of any dangerous cargo).
Q	Brief details of defects or limitations.
U	Vessel size and type.

All vessels entering the area must report, on VHF channel 71, 12 miles before passing Uto or Isokari. When within the area, vessels should consult the pilot for details of movement reports and reporting points along the various fairways. Navigation assistance is available from the VTS and is recommended during inclement weather conditions.

Directions.—The main shipping routes leading to ports in the Gulf of Bothnia pass W of the Aland Islands and through Sodra Kvarken. The routes described within this sector require extensive local knowledge.

Channels lead between the islands and dangers, and connect the Aland Islands with the mainland. The main approaches to these channels from seaward are, as follows:

1. From the SW—through Rodhamnsfjarden (via Nyhamn).
2. From the S—by a channel passing W of Uto (59° 47'N., 21° 22'E.).
3. From the E—using the NW approaches to Hanko.
4. From the N—via Isokari.

Caution.—Strong S to SW winds cause treacherous seas among the islands off the S and SW coasts of Finland, between Uto (59° 47'N., 21° 22'E.) and Bengtskar (59° 43'N., 22° 30'E.). Wave heights can increase suddenly from 4 to 6m in this area.

Local magnetic anomalies are reported to exist within several areas covered by this sector, including areas between the SW side of the Aland Islands and the Swedish coast, as well as about 10 miles SW and SE of Uto.

During the summer, heavy traffic, including numerous small craft and ferries, may be encountered in the waters lying between the Swedish coast and the E side of the Aland Islands.

Hanko to Uto

4.2 The Skerries between Hanko and Uto, about 46 miles W, form an extension of the S coast of Finland and bound the Gulf of Finland on the NW side. They form a chain of predominantly barren islets, rocks, and shoals lying in close proximity to one another. Channels lead to the larger islands and to the mainland.

The bottom consists of coarse and fine sand in places, more frequently of mud, and yet more often of stones.

A number of dangerous shoals and areas with irregular depths lie seaward of the Skerries and extend S as far as the parallel of 59° 35'N. Therefore, vessels entering the Gulf of Finland on the N side are advised to remain S of the above parallel and to pass the outer skerries at a distance of 8 to 10 miles.

Entry between the cape of Hanko and Uto should not be attempted without local knowledge. Therefore only the most conspicuous islands and off-lying dangers will be described.

Morgonlandet (59° 46'N., 22° 42'E.) is 6m high and its summit is barren. The E part of this island is lower than the W. The island is readily identified from seaward by its isolated position.

Dommaskar (59° 45'N., 22° 30'E.) is a barren islet about 6m high. It may easily be identified from seaward by its dark color.

Bengtskar (59° 43'N., 22° 30'E.) is one of the southernmost islets in the approaches to the Gulf of Finland. A main light is shown from a conspicuous tower with a building and wind generator, 46m high, standing on this islet.

Oro (59° 49'N., 22° 20'E.) is partially wooded and although lying some distance N of the outer dangers, it may easily be identified from seaward.

Vano Kalkskar (59° 47'N., 22° 05'E.) is a barren, rocky islet about 15m high.

Oleg (59° 35'N., 21° 58'E.), a shoal on which a wreck with a depth of 12.7m lies, is the southernmost danger located between Hanko and Uto.

Jurmo (59° 50'N., 21° 36'E.) rises to a height of 22m on the N side. A red wooden church, with a weather vane on the E angle of the roof, stands on the N side of this island and is visible from the channel leading between Uto and Lom (Lohm), 21 miles NNE.

4.3 Uto (59° 47'N., 21° 22'E.) is a barren, hilly island lying on the SW side of a group. It is located at the entrance of the channel which leads through Vidskars Fjord to Turku, 48 miles NE.

A main light is shown from a tower, 24m high, standing on the summit of the island.

Range lights are shown from structures situated at the W side of the island and indicate the main entrance route leading in a NNE direction from seaward. Another lighted range, situated about 4 miles NNW of Uto, indicates the main fairway leading past this island.

Uto Harbor lies between the N side of the island and Enskar, the N peninsula. The N side of the harbor is protected by Ormskar, a bare and hilly island lying close NE of Enskar. The harbor has depths of 3 to 9m, but can only accommodate small vessels with drafts up to 3m. A channel, authorized for drafts



Uto Light



Bogskar Light

up to 4m and marked by a lighted range, leads to the anchorage of the harbor. Local knowledge is required.

Lillharun (59°44'N., 21°24'E.), an islet, 7m high, is fronted by foul ground. It lies at the E side of the main channel and about 3.2 miles SSE of Uto. A main light is shown from a tower, surmounted by a wind generator, standing on this islet. A racon is situated at the light.

GrimSORAR, marked by a beacon, is a group of rocks, 4 to 7m high, lying centered 4.2 miles SSE of Lillharun.

Uto Langan (59°41'N., 21°30'E.), an islet, 3.4m high, lies about 1 mile N of GrimSORAR beacon.

A shoal, with a least depth of 6.7m, lies about 2.3 miles S of GrimSORAR beacon and is marked by a buoy.

Formansbadan, with a least depth of 0.9m, lies on the W side of the main channel, about 3.2 miles WNW of Lillharun.

Bokullankivi Light (59°51'N., 21°25'E.) is shown from a tower, surmounted by a wind generator, standing on an islet, 4 miles NNE of Uto. A racon is situated at the light.

Caution.—Local magnetic anomalies are reported to exist in the area surrounding Lillharun and in another area centered about 7 miles ESE. Other anomalies are also reported to exist in areas lying about 10 miles SSE and WSW of Lillharun.

Uto to Mariehamn

4.4 Many islands and rocks, along with numerous shoals, extend up to about 13 miles W from Uto. They are separated from another group of dangers lying farther W by Kokarsfjarden (Kokarin Selka).

Vastra Morskas (59°47'N., 21°09'E.) is the largest of the numerous islands lying up to 13 miles W of Uto. The surrounding area is encumbered with rocks and shoals. The island is 17m high in the S part, about 13m high in the NE part, and is covered with bushes.

Bogskar (59°30'N., 20°21'E.), a group of rocks fronted by shoals, is the southernmost danger in the Aland archipelago. A

main light is shown from a tower with a building and wind generator, 46m high, standing on the westernmost rock. A racon is situated at the light. On the easternmost and highest rock, lying about 2.5 miles ENE of the light, there is a beacon.

Suomen Leijiona (59°28'N., 20°49'E.), a shoal, has a least depth of 10.4m and lies about 14.5 miles ESE of Bogskar. A main light is shown from a tower, with a helicopter platform and a wind generator, standing on the S part of this shoal. A racon is situated at the light.

Svenska Bjorn Light (59°33'N., 20°01'E.) is shown from a tower, with a helicopter platform, 32m high, standing on Sodra Klatten, a shoal. A racon is situated at the light. Sodra Klatten, along with Norra Klatten, another shoal lying 1 mile NW, has a least depth of 10m. These shoals lie at the E edge of the dangers extending up to over 30 miles from the Swedish mainland.

Armbagen (59°38'N., 19°58'E.), a shoal, has a least depth of 6.7m and lies about 5 miles NNW of Svenska Bjorn Light. A light is shown from a mast with a helicopter platform, 20m high, standing on this shoal. A racon is situated at the light.

4.5 Troskeln (59°39'N., 19°50'E.), an extensive shoal, lies about 9 miles NNW of Svenska Bjorn Light and has a least depth of 7.6m.

Troskeln Vastra Light (59°40'N., 19°52'E.) is shown from a mast with a helicopter platform, 20m high, standing about 1.2 miles E of the shallowest part of the shoal, 4.6 miles NW of Armbagen. A racon is situated at the light.

Troskeln Ostra Light (59°40'N., 19°55'E.) is shown from a mast with a helicopter platform, 20m high, standing 3 miles N of Armbagen.

Flotjan (59°49'N., 19°47'E.), a large rocky shoal, lies about 9 miles NW of Troskeln Ostra Light and is the outermost danger in the SW approach to Foglofjard. A light is shown from a tower standing on the S part of the shoal. A racon is situated at the light.



Flotjan Light



Lagskar Light

Lagskar (59°50'N., 19°55'E.), an islet fronted by an extensive area of foul ground and rocks, lies 4.5 miles ENE of Flotjan. A light is shown from a tower, 33m high, standing on the N side of this islet.

Nyhamn Light (59°58'N., 19°57'E.) is shown from a tower, 34m high with a wide top, standing on the S side of Lilla Batskar, a small island lying 7.3 miles N of Lagskar. A small harbor, used by pilot vessels, is situated at the Ne side of this island.

Rodhamnsfjarden (59°56'N., 19°58'E.) is entered between Lilla Batskar and Oxbadar, a group of dangerous rocks lying 3.2 miles SSE. A main route, authorized for drafts up to 9m, leads from seaward through this passage. The fairway is



Nyhamn Light

indicated by a lighted range, but is reported to be dangerously narrow in places for large vessels.

4.6 Offshore route.—The offshore route leading from the S to the Gulf of Bothnia passes through the Ahvenanmeren Deep-Draft Channel and the Aland Sea. The channel is swept to a depth of 18.2m and is authorized for drafts up to 15.3m. It can be used by all vessels.

The channel can be entered W of Bogskar Light (59°30'N., 20°21'E.) and E of Svenska Bjorn Light (59°33'N., 20°01'E.). It then leads 4 miles N and turns NW, passing, with a minimum width of 1 mile, N of Armbagen Light (59°38'N., 19°58'E.), N of Troskeln Vastra Light (59°40'N., 19°52'E.), and S of Troskeln Ostra Light (59°40'N., 19°55'E.). The route then continues in a NW direction, passing SW of Flotjan Light (59°49'N., 19°47'E.).

Vessels proceeding W out of the Gulf of Finland into the Aland Sea can pass N of Suomen Leijona Light (59°28'N., 20°49'E.) and join the main route in the vicinity of Bogskar Light.

See Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part) for dangers lying S and W of this route.

4.7 Between Nyhamn Light (59°58'N., 19°57'E.) and Hammarudda, the SW extremity of Aland Island, 10 miles NW, there are many off-lying dangers. The entrance fairways leading to Mariehamn lie between these dangers and require local knowledge.

Marhallan (60°02'N., 19°52'E.), a rock, lies about 3.5 miles SW of the harbor entrance and 5 miles NNW of Nyhamn Light. A light is shown from a floodlit tower standing on this rock.

Kobbaklinter, a group of islets lying on an area of foul ground, is located about 0.3 mile E of Marhallan.

Korso is the westernmost islet of this group. Two sets of lighted ranges are shown from structures standing in this vicinity and indicate channels leading N and S of Marhallan. A racon is situated at the front range light.

A light is shown from Tvibenan Islet, which lies on the W side of the main channel, 0.5 mile W of Korso. Hetronklubb

Islet lies on the E side of the channel and is marked by a beacon. The islet of Skogo, 0.7 mile of Korso, has foul ground extending up to about 0.3 mile NE and SE from it.

A shoal, with a depth of 4.9m, lies between Skogo and Vitfagelskar, another islet located 0.7 mile NE. Vitfagelskar is marked by a cairn beacon. Another beacon, fitted with a radar reflector, stand on the W side of the channel, about 0.3 mile E of Skogo.

Druvan Beacon stands on the N extremity of an islet of the same name, about 0.3 mile N of Skogo.

Grano, with its adjacent dangers, fronts the entrance of the harbor and lies about 0.8 mile NE of Korso. Granoklubb and Granskar, fronted by foul ground, lie close NW and 0.3 mile W of Grano, respectively. A beacon stands on the N end of Granoklubb.

Foul ground extends about 0.3 mile S of Grano; a 5.8m shoal lies 0.3 mile N of Grano. A 5.5m shoal lies in the fairway close W of Granskar. A light is shown from the NE extremity of Grano; buoys mark the surrounding dangers.

Mariehamn (Maarianhamina) (60°06'N., 19°55'E.)

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4.8 The port of Mariehamn, a major ferry terminal, is situated on the S side of Aland Island, about 89 miles WNW of the cape of Hanko. The town is the largest in this island group. The small natural E and W harbors are well sheltered, but the E harbor is now used only for small craft. An airport is situated close N of the town.

Winds—Weather.—See the General Remarks in [paragraph 4.1](#).

Ice.—The port is free of ice, except when the harbor is affected by the coldest winters, and then the harbor is kept open by icebreaker assistance.

Depths—Limitations.—The E harbor has depths of 1 to 4.5m and is used only by small craft.

The W harbor provides a total of 795m of quayage, with depths of 5 to 7.8m alongside the berths. The oil berth at the power station has a depth of 5m alongside; the Oil Harbor Terminal berth has a depth of 6m alongside. There are facilities for ro-ro, timber, general cargo, passenger, automobile ferry, and tanker vessels.

Vessels up to 160m in length and 7m draft can be accommodated, but require twin screw propellers and a bow thruster for safe maneuvering. Tankers up to 44,700 dwt and 6m draft have been handled.

Aspect.—Mariehamn is difficult to view from seaward due to the heavily-wooded hills in the vicinity.

An aeronautical light is shown from a tower standing at an elevation of 81m in the vicinity of the airport, 2 miles N of the town. A prominent television tower, 196m high, stands about 9 miles NE of the town and is visible from all directions from seaward. A conspicuous water tower is situated in the town.

The fairway channels leading to the port are indicated by lighted ranges. Dangers lying adjacent to the fairways are marked by lights, beacons, and buoys.

Pilotage.—Pilotage is compulsory for foreign vessels. See [paragraph 4.1](#) for further details.

Anchorage.—Anchorage is available about 0.5 mile NE of Skogo, in depths of 17 to 29m, mud and stones. The port provides well-sheltered anchorage because of the numerous off-lying islands.

Directions.—Vessels can reach the port by using a main channel authorized for drafts up to 8.2m. This channel can be entered from seaward by steering in a NE direction, on a lighted range, and passing close SE of Marhallan Light. It can also be approached from S by steering in a NNE direction for 1.5 miles and passing between Masskar and Kvasten, 0.5 mile W. This fairway then leads about 0.7 mile NNW to join the main channel, passing between Kobbaklintar and Artskar.

A channel, authorized for drafts up to 7.3m, leads from the W between Stora Skovgrund and Osengrund. Another channel, also authorized for drafts up to 7.3m, leads from the SE.

A channel from Ledskar, authorized for drafts up to 3.3m, leads close NE of Lango and then NNW to Slemmern, lying on the E side of Mariehamn.

Caution.—Two submarine cables extend in a SW direction from Mockelo to the W side of the port.

The Aland Islands

4.9 Between **Hammarudda** (60°05'N., 19°46'E.), the SW extremity of Aland Island, and the islet of **Sodra Salskar** (Salskar) (60°25'N., 19°36'E.), 20 miles NNW, the Aland Islands extend W about 12 miles to **Yttre Borgen** (Ytre Borgen) (60°16'N., 19°16'E.), their outermost rock.

Eckero, the largest island of the group, is separated from Aland Island by Marsund, a narrow strait, authorized for drafts up to 2.1m. Numerous islets, rocks, and reefs lie within this area and many navigable channels lead between them.

The dangers situated at the E side of Sodra Kvarken are described beginning in [paragraph 5.8](#).

A channel, with a least depth of 6.1m, leads between the islets and reefs fringing the W and N side of Eckero and into the Gulf of Bothnia. It is marked by beacons and buoys, but local knowledge is necessary.

Eckero Fjord, indenting the S side of Eckero, affords anchorage for vessels with local knowledge, in depths of 12 to 14m. The anchorage lies about 0.5 mile N of the N extremity of the island of **Torpo** (60°10'N., 19°37'E.), which is located on the W side of the entrance to the fjord.

The fairway leading to this anchorage runs ENE between Rodskar and Vittingen and then leads E of Torpo in a NNW direction.

The bay lying between Hammarudda and the S extremity of Eckero, about 6 miles NW, is encumbered with a number of dangerous shoals.

Utbadan, an above-water rock fronted by dangers, lies about 1.5 miles WSW of Hammarudda. A lighted beacon, 6m high, stands on this rock.

Caution.—Numerous submarine cables have been laid across Alands Hav, between the large island of Aland and the Swedish coast. These cables may best be seen on the chart.

4.10 Off-lying islands and dangers.—The southwest-ernmost danger is **Gisslan** (60°10'N., 19°18'E.), an islet lying about 14 miles WNW of Hammarudda. This islet, which is

marked by a light, is fronted by foul ground extending up to about 0.4 mile seaward.

Signilskar (60°12'N., 19°20'E.) ([World Port Index No. 27870](#)), a large island, lies about 2.5 miles NE of Gisslan. It is separated from Eckero by a channel 4.5 miles wide, in which lie several islets and numerous dangers. Close to the NNW side of Signilskar, the island of Enskar provides anchorage for vessels with local knowledge within the entrance of a bay indenting its S side.

Glasskar and Tollingarna lie 1.5 miles ESE and 2.5 miles E, respectively, of the S extremity of Signilskar, with Tollingbadarna, marked by a light, 0.5 mile farther E.

Batgrund, with a depth of 5.2m and marked by a buoy on its W side, lies midway between Tollingarna and the W side of Eckero.

Yttre Borgen (60°16'N., 19°16'E.), the westernmost danger in this area, is a rock closely surrounded by shallow water and located 6.5 miles NNW of Gisslan. Lagbadan, Masskar, and Flyttorna lie between Enskar and this rock. Sydbrotten, with a depth of 0.6m, lies about 6 miles NNE of the Yttre Borgen.

Markallarna, formed by two rocks, lies 4.7 miles NNE of Sydbrotten. Sydbrotten and Markallarna are the outermost dangers on the NW side of the Aland Islands.

Caution.—Submarine cables laid between Enskar and Signilskar extend ESE and then ENE to the W side of Eckero.

4.11 The N side of the Aland Islands is moderately high and the elevated land standing on the E side of Eckero can be seen from a considerable distance seaward. A radio mast, 40m high, stands at an elevation of 138m on **Getaberget** (60°23'N., 19°51'E.) and is a prominent landmark.

The area SE of a line drawn between Sodra Salskar and **Isokari** (60°43'N., 21°01'E.), about 46 miles ENE, is encumbered by a myriad of islets, rocks, and reefs between which are several hazardous, but navigable channels. In this area several isolated dangers lie almost 5 miles NW of a line of bearing previously mentioned, but since their positions have not been determined accurately, mariners are cautioned to stay clear of these dangers.

Isokari, situated 10 miles off the mainland coast of Finland, is profusely indented and fronted by hundreds of islets, rocks, and reefs.

4.12 Off-lying islets and dangers.—**Hogsten** (60°21'N., 19°27'E.), an islet, lies about 10 miles ENE of Market Light (60°18'N., 19°08'E.) and is marked by a beacon, 16m high. The islet of Rodakon lies on foul ground, about 2.5 miles SSE of Hogsten. Several above-water rocks and shallow shoals lie up to 7 miles from Hogsten at the seaward side.

Sodra Salskar (60°25'N., 19°35'E.), a large rocky islet, lies 5.5 miles NE of Hogsten. A main light is shown from a tower, 32m high, standing on this islet.

Tartarusa, a rocky shoal with a depth of 4m, lies about 4.2 miles NNW of Salskar Light.

Ostra Malen and Vastra Malen, above-water rocks, lie about 4.5 miles W of Salskar Light and a group of shoals, with a least depth of 1.2m, lies about 3.2 miles farther W.

Below-water rocks and shoals compound the dangers lying within 3 miles NW and SW of Vastra Malen.

Dano Gamlan, an island, lies 4.7 miles E of Sodra Salskar Light. A beacon stands on the W side of Mellanskar and another on Halvman, two islets, located about 0.5 mile N and 0.5 mile NNW, respectively, of the NW extremity of Dano Gamlan.

Iarnbodan is the southernmost of two above-water rocks lying about 3.7 miles NNW of Halvman Beacon. Yttre Margrund and Inre Margrund, each with a depth of 0.6m, lie about 1.2 miles ESE and 1.7 miles SE, respectively, of Iarnbodan.

Brunkan, an above-water rock, lies on the N side of the coastal track about 0.5 mile NE of Mellanskar; shoals, with depths of 0.6 to 6.1m, lie within 1 mile NE and NW of this rock. Shoal water fringes the S side of Brunkan and is marked by a buoy.

Kallan (60°27'N., 19°45'E.), an islet from which a light is shown, lies 1 mile WNW of Brunkan.

Jarngrynnorna (60°34'N., 19°53'E.), a shoal, lies about 8 miles NNE of Mellanskar Beacon. It has a depth of 2.7m and is marked by buoys. Isolated shoal patches, with depths of less than 10m, lie up to about 5 miles N of this shoal.

4.13 Koxnan (Koksnan) (60°28'N., 19°57'E.), from which a light is shown, lies about 5.5 miles ENE of Mellanskar Beacon. Shoal water extending about 0.5 mile S from Koxnan is marked by a buoy.

Ranno (60°32'N., 20°12'E.), along with Norrskar close N, is one of the outermost islets in this vicinity. A light is shown from a building standing on this islet. A racon is situated at the light.

Ytterstberg (60°34'N., 20°32'E.), an above-water rock, lies about 16 miles SW of Isokari Light; it is fringed by shoals which extend up to about 1 mile S. A rocky shoal, with a depth of 2.4m, and another shoal, with a depth of 4m, lie about 1.5 miles SW and 1.2 miles WNW, respectively, of Ytterstberg.

Lights are occasionally shown from Inre Bredan, an islet lying 5.8 miles E of Ytterstberg, and from Langor, another islet lying 4.5 miles SSE of Inre Bredan.

Ytterstbergsbrott (60°37'N., 20°33'E.) lies about 2.2 miles N of Ytterstberg and has a depth of 0.9m. It is one of the outermost dangers lying NW of Saaristomeri. Numerous rocks, shoals, and islets encumber the seaward approaches to this area and to the SSW.

Petterssonsgrund (60°41'N., 20°44'E.), an isolated shoal patch, has a least depth of 8.1m, and lies about 8.5 miles WSW of Isokari Light (60°43'N., 21°01'E.). A shoal, with a depth of 1.8m, lies about 1.2 miles SE of this patch at the NE edge of an area of foul ground.

An extensive area encumbered with numerous islets, rocks, and shoals lies E and SE of Petterssonsgrund.

Matinmatala, a shoal with a least depth of 2.7m, lies 2 miles S of Isokari and is marked by a buoy.

The main approach channel from seaward in this vicinity, which is authorized for drafts up to 10m, leads SE and passes SW of Isokari.

Fairways from Seaward to Turku and Naantali

4.14 The following are the five main fairways leading to the ports of Turku and Naantali:



Courtesy of Port of Turku

Turku

1. From the Baltic Sea by way of Uto—a 61-mile long fairway authorized for drafts up to 13m.
2. From the Baltic Sea by way of Uto—a 53-mile long fairway authorized for drafts up to 10m.
3. From the Aland Sea via Nyhamn—an 83-mile long fairway authorized for drafts up to 9m
4. From the Gulf of Bothnia via Isokari—a 58-mile long fairway authorized for drafts up to 10m.
5. From the Gulf of Finland via Hanko—a 61-mile long fairway authorized for drafts up to 7.5m.

The authorized drafts for the above routes are sometimes slightly reduced for temporary periods and the authorities should be contacted for the latest information.

See [paragraph 4.1](#) for details concerning pilotage. The harbors are kept open all year with icebreaker assistance. Although the fairways are well marked, they are extremely long, narrow, and intricate. Local knowledge is necessary. Pilots should be consulted for information concerning anchorages along the fairways.

Turku (60°27'N., 22°15'E.)

World Port Index No. 27820

4.15 The port of Turku, formerly known as Abo, is situated at the mouth of the Aurajoki River. The port is a major automobile ferry terminal and is connected by railways and roadways to towns in Finland, Sweden, Germany, and Russia. There are also facilities for shipbuilding and repairs.

Tides—Currents.—The harbor has virtually no tide and the current is negligible.

Depths—Limitations.—The main berthing facilities are spread along the mainland, which is fronted by several islands. The largest of these islands are Hirvensalo (60°25'N., 22°10'E.), Ruissalo (60°26'N., 22°10'E.), and Luonnonmaa

(60°28'N., 22°00'E.). The channels leading to the main port complexes lead between these islands. The facilities lie at the mouth of the Aurajoki River, along the river channel, and along the fairway lying between the mainland and the fronting islands on either side of the river mouth.

The entrance channel leading to the main harbor is authorized for drafts up to 10m. The entrance channel leading to the oil terminal is authorized for drafts up to 9m.

The main harbor has a total of 5,090m of quayage and provides 39 berths, with depths of 6 to 11m alongside. There are facilities for passenger, cruise, bulk, general cargo, container, ro-ro, timber, ferry, oil, and LPG vessels. Generally, vessels up to 250m in length and 10m draft can be accommodated in the main harbor. Tankers up to 170m in length and 9m draft can be handled at the oil terminal.

The largest drydock, generally used for building, is 365m long and 80m wide. The largest repair drydock is 183m long and 25.6m wide, with a depth of 8.2m on the sill.

Pilotage.—Pilotage from seaward is compulsory, although, harbor pilotage is not. See [paragraph 4.1](#) for further details. The sea pilot will be able to advise vessels on pilot exchange points and recommendations with regard to harbor pilotage.

Harbor pilots generally board regular vessels in the vicinity of Kalkkiniemi Lighted Buoy T12 (60°25'.3N., 22°10.6'E.) and deep-draft vessels in the vicinity of Kuuva Light (60°24.5'N., 22°07.5'E.).

Regulations.—See [paragraph 4.1](#) for details concerning the Archipelago Vessel Traffic Service (VTS).

When passing Rajakari Light (60°22.7'N., 22°06.0'E.), all vessels bound for the port must report to Turku Port Control on VHF channel 12.

Tankers are prohibited from passing in the Pansio Channel and must report to Turku Port Control.

Generally, vessels are prohibited from passing in the Rajakari-Port of Turku Channel (10m) between Kuuva Light



Courtesy of Port of Turku

Turku

(60°24.5'N., 22°07.5'E.) and the port. However, minor vessels may pass each other between Kuuva Light and Janissaari Light (60°25.3'N., 22°10.9'E.).

Between Janissaari Light and the port, minor vessels and cargo vessels of such size that they can pass each other safely may do so. It is assumed that both vessels have agreed between themselves on this matter in advance and both vessels accept such an encounter. In addition, Turku Port Control must be informed of this situation.

All vessels must report to Archipelago VTS Center when entering and exiting the Turku Port Control area.

Caution.—Several submarine cables and pipelines cross the approach channels at numerous points along the route.

Naantali (60°28'N., 22°02'E.)

World Port Index No. 27805

4.16 Naantali, a ferry terminal and commercial bulk port, is situated close W of Turku. There are also facilities for shipbuilding and repairs.

Tides—Currents.—The harbor has virtually no tide and the current is negligible.

Depths—Limitations.—The main entrance channel is authorized for drafts up to 13m.

The oil terminal (Tupavuori) has three berths. No. 1 Berth is 50m long and has a depth of 7m alongside; No. 2 Berth is 80m long and has a depth of 10m alongside; and No. 3 Berth is 70m long and has a depth of 13m alongside.

Bulk Cargo Quay is 370m long and has a depth of 13m alongside; Timber Quay is 110m long and has a depth of 8m alongside; and Sugar Quay is 32m long and has a depth of 4.5m alongside.

There are three ro-ro ferry berths, up to 165m long, with depths of 6.9m alongside.

The port provides facilities for ro-ro ferry, bulk, general cargo, timber, and tanker vessels. Vessels up to 70,000 dwt, 250m in length, and 13m draft can be accommodated.

A fairway, authorized for drafts up to 7.7m, leads to the shipyard. The drydock, generally used for building, is 255m long and 70m wide, with a depth of 8.2m on the sill.

Pilotage.—Pilotage is compulsory. See [paragraph 4.1](#) for further details. The sea pilot will be able to advise vessels on pilot exchange points. Harbor pilots are stationed in the vicinity of Tupalahti Light (60°27'.4N., 22°03.6'E.).



Naantali

Regulations.—See [paragraph 4.1](#) for details concerning the Vessel Traffic Service (VTS). In addition, see Regulations under Turku in [paragraph 4.13](#).

Caution.—Several submarine cables and pipelines cross the approach channels at numerous points along the route.