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Sailing Directions for South and East Coasts of Honshu

Supplement No.4

17 February 2023



Japan Coast Guard

Explanatory Notes

Sailing Directions for South and East Coasts of Honshu - Supplement No.4 is issued to correct the outdated information in Publication No.301 Sailing Directions for South and East Coasts of Honshu which was published in March 2021.

This supplement contains the information which has been gathered through the work of Hydrographic and Oceanographic Department, Japan Coast Guard by 25 November 2022.

The instructions for amending, deleting or adding of the previous issues are indicated in this supplement. This supplement also contains an index to be referred to the pages on which they are mentioned. The index is listed in numerical order, along with the titles of the ports or articles. Amendments are indicated in red letter on grey background while deletions are marked with strikethrough, in red letter on grey background. Chart images, tables or pictures to be delated, replaced or added are instructed in [square brackets].

Each sheet of the supplements is excerpted from the relevant issue of the Sailing Directions so that the page number printed in the supplement is corresponding to the original page number. In case that a sheet had spanned multiple pages by adding large volume of text or image, sub-number is given to the page number.

17 February 2023

Hydrographic and Oceanographic Department,
Japan Coast Guard

Caution

This supplement is for use in conjunction with Notices to Mariners, List of Aids to Navigation, and related charts and publications, because no corrections are given thereto except through supplements.

Especially for updated information concerning the safety of navigation instructed by Japan Coast Guard, please refer to Notices to Mariners and related publications.

In the interest of ensuring the safety of navigation and protecting the marine environment, the Japan Coast Guard (JCG) publicises information that could affect the safety of navigation and environmental protection by issuing Notices to Mariners (NTMs) and Navigational Warnings (NWs), and publishing such information on the JCG charts and in other nautical publications, based on laws, regulations, proclamations, charts, NTMs, NWs issued by countries concerned as well as reports made by ships.

Sailing Directions published by JCG are intended solely for the purpose of providing information for safe navigation. The contents included in the Sailing Directions do not reflect the Japanese Government's official stance regarding the laws, regulations, and proclamations of other countries.

Tsunami Forecast.

After an earthquake occurs, if no damage is expected, Japan Meteorological Agency issues Tsunami Forecasts.

Forecasted sea level changes	Message
No tsunami is expected.	“No tsunami is expected.” (To be included in Earthquake Information.)
Tsunami height less than 0.2 meters is expected.	No damage is expected because sea level changes will be less than 0.2 m, and no special action is needed.
Slight sea level changes are expected to continue after Tsunami Warnings/advisories are cleared.	Particular attention is needed when fishing, swimming or engaging in other marine activities because tsunami-related sea level changes have been observed and may continue for a while.

Chapter 4 MAGNETISM

5

Geomagnetism

Compass variation. The magnetic variation is westerly throughout the area covered by this volume ranging Ashizuri Misaki 7.3°, Nojima Saki 7.3°, Kinkasan 8.2°, Shiriya Saki 9.2°. Among volcanic islands in the Nanpo Shoto region, Io To area sees 3.7°, Ogasawara Gunto 4.1° ~ 4.6°, Tori Shima 5.8°, Hachijo Shima 6.8° and O Shima 7.4° (Refer to World Magnetic Model 2015.).

Annual changes in compass variation. Magnetic yearly variation. The yearly variation indicates the yearly change, and it has the W declination as well as Magnetic Variation. The value is 4.5' at Ashizuri Misaki, 3.8' at Nojima Saki 3.5' at Shiriya Saki, 4.0' at Io To and 3.9' at O Shima (Refer to World Magnetic Model 2015.).

15

Local Magnetism

Magnetic variation in the Nanpo Shoto area is irregular due to local magnetic anomaly. Mariners are reminded of the existence of this local magnetism on and around O Shima, Miyake Shima, and Hachijo Shima. In addition, such anomaly is reported in the offshore area extending between Shiriya Saki and Sanriku off.

20

Chapter 5 PASSAGES, SIGNALS AND OTHERS**Passages**

General Information. The passages covered by this volume are standard routes that were generally used regularly conventionally. Mariners have to choose an appropriate route and a course in consideration of laws, season, weather, sea area, tidal streams, the distinction of the night and daytime and vessels' capability in reference to these routes. And caution is required to the tidal currents, fishing nets and aquaculture facilities when mariners go in and out of ports and harbours.

Traffic routes and designated routes prescribed by Maritime Traffic Safety Law. 3 traffic routes (Uraga Suido Traffic Route, Naka-no-Se Traffic Route, and Irago Suido Traffic Route) are regulated by Article 2 of Maritime Traffic Safety Law and 5 designated routes (the sea area in the vicinity of Tokyo Offing Light Buoy and others) are regulated by paragraph 2 of Article 25.

Specific charts. The charts that designated by Maritime Traffic Safety Law describing traffic routes and regulations, are published on the base of Article 44 of the Maritime Traffic Safety Law. Specific charts are

AIS Signal Station Ship-ridden receivers of AIS (Automatic Identification System) or radars Capable of displaying on AIS multiple display or ECDIS (Electronic Chart Display and Information System) indicating the facilities for emitting radio waves on their display screens in order to show symbol marks and such to be the Aid to Navigation to navigating vessels. The classification can be divided into Real and Virtual. A Real in which AIS Signal Station are juxtaposed to a Aid to Navigation, and a Virtual in which a Aid to Navigation that does not actually exist is displayed on a radar etc.

In the vicinity of area depicted this Sailing Directions, there are 21 AIS signal stations.

AIS Signal Station Name	Position	Classification	Remarks
Kuji Ko Offing Oceanographic Observatory Facilities	40° 13.5' N, 142° 00.8' E	Real	Fitted with the Kuji Ko Offing Oceanographic Observatory Facility Light
Tokyo Wan Entrance Virtual AIS aid to navigation No 1	35° 05.8' N, 139° 44.5' E	Virtual	Controlled by Tokyo Wan Vessel Traffic Service Center.
Tokyo Wan Entrance Virtual AIS aid to navigation No 2	35° 08.1' N, 139° 45.2' E	Virtual	Controlled by Tokyo Wan Vessel Traffic Service Center.
Tokyo Wan Entrance Virtual AIS aid to navigation No 3	35° 10.4' N, 139° 45.9' E	Virtual	Controlled by Tokyo Wan Vessel Traffic Service Center.
Tokyo W Passage No.6	35° 34.8' N, 139° 48.1' E	Virtual	Controlled by Tokyo Wan Vessel Traffic Service Center.
Keihin Kawasaki Sea-Berth	35° 28.0' N, 139° 46.1' E	Real	
Uraga Suido Traffic Route Center No.1	35° 12.7' N, 139° 46.6' E	Real	Fitted with Uraga Suido Traffic Route Center No.1 Light Buoy
N end of recommended route off the W coast of Izu O Shima N virtual AIS Signal Station	34° 48.0' N, 139° 17.0' E	Virtual	Controlled by Tokyo Wan Vessel Traffic Service Center.
S end of recommended route off the W coast of Izu O Shima S virtual AIS Signal Station	34° 42.2' N, 139° 10.0' E	Virtual	Controlled by Tokyo Wan Vessel Traffic Service Center.
E end of N entrance of Irago Suido Traffic Route	34° 34.8' N, 136° 59.4' E	Virtual	Controlled by Ise Wan Vessel Traffic Service Center.
SE of Irago Suido Traffic Route	34° 32.4' N, 137° 01.8' E	Real	Fitted with Ise Wan No.2 light buoy
Nakayama Suido Development and Conservation Route No.1	34° 37.7' N, 136° 58.6' E	Real	Fitted with Nakayama Suido Development and Conservation Route No.1 Light Beacon
Yokkaichi Ko Showayokkaichi Oil Sea-Berth	34° 55.8' N, 136° 42.2' E	Real	
Kantorisaki SE Floating Fish Haven facilities	33° 30.7' N, 136° 05.7' E	Real	Fitted with the Kantorisaki SE Floating Fish Haven Facility Light
Kashinosaki E Floating Fish Haven facilities	33° 27.9' N, 135° 57.6' E	Real	Fitted with the Kashinosaki E Floating Fish Haven Facility Light

Wabukasaki SW Floating Fish Haven Facilities	33°25.5'N, 135°27.3'E	Real	Fitted with the Wabukasaki SW Floating Fish Haven Facility Light
Ichiesaki SW Floating Fish Haven Facilities	33°26.3'N, 135°18.3'E	Real	Fitted with the Ichiesaki SW Floating Fish Haven Facility Light
Migusasaki SW Floating Fish Haven Facilities	33°27.5'N, 135°07.7'E	Real	Fitted with the Migusasaki SW Floating Fish Haven Facility Light
Setosaki SW Floating Fish Haven Facilities	33°30.3'N, 135°05.3'E	Real	Fitted with the Setosaki SW Floating Fish Haven Facility Light
Tosa-kuroshio Marine Farm No.20 Facilities	33°01.0'N, 133°35.0'E	Real	Fitted with the Tosa-kuroshio Marine Farm No.20 Facility Light
Tosa-kuroshio Marine Farm No.21 Facilities	32°23.2'N, 132°28.9'E	Real	Fitted with the Tosa-kuroshio Marine Farm No.21 Facility Light

Pilot Associations

Pilot associations and pilotage areas are summarized as below.

Name of association and contact information	Boarding point	Remarks
Hachinohe Pilot Association TEL: +81-178-28-9421 FAX: +81-178-28-4975	1. General cargo vessel. (40° 34.9' N, 141° 33.1' E) 2. Large LNG carrier (40° 35.5' N, 141° 33.8' E)	1. In the case that small vessels anchor near a quarantine anchorage, that for quarantine purposes etc, pilot may board the vessel at that location. 2. The pilot ladder should be provided on the side that the swells can be blocked. The lowest step should be adjusted at height of 3 m above the water. 3. In the case of a combination ladder, the height of the gangway steps should be adjusted at height of 6 to 7 m above the water. 4. When taking a pilot, the vessel should reduce her speed to 5 kn or less.
Kamaishi Pilot Association TEL: +81-193-55-4810 FAX: +81-193-55-4811	1. Near a position about 1 M NNE of Rikuchu-Osaki Light 2. For vessels at anchor, near the quarantine anchorage.	
Sendaiwan Pilot Association TEL +81-22-781-7246 FAX +81-22-362-5519	1. Shiogama Ku in Sendai-Shiogama Ko: Near a position 38° 17.7' N, 141° 10.3' E. 2. Sendai-Ku in Shiogama Ko: Anchorage in the SE sector enclosed by lines drawn from Sendai Oki Light Buoy (38° 13.4' N, 141° 08.0' E) to the near a position 090° and near a position 170° for 3 M. 3. Ishinomaki Ko: Near a position 38° 21.7' N, 141° 15.8' E.	1. The pilot ladder should be taken down to the opposite side of swells and be adjusted at height of 2 m above the water. In the case of a combination ladder, it should be adjusted at height of 5 m above the water. 2. Shiogama Ku: When swells from the S are high and the pilot boat is difficult to go outside the port, there is a case where the pilot boat stands by in the vicinity of Takashimane Light Buoy after making communications with the vessel and the pilot boards the vessel approaching there. 3. Caution is required for a large number of fishery nets such as sea weed nets and gill nets often established in the vicinities of all boarding points for Shiogama Ku, Sendai Ku, and Ishinomaki Ko.
Onahama Pilot Association TEL +81-246-54-6653 FAX +81-246-53-3273	1. For general vessel: Near a position 160°, 1 M from Oki Breakwater W Light. (36° 53.7' N, 140° 53.4' E) 2. For large tankers: Near a position 160°, 2 M from the same Light. (36° 52.6' N, 140° 53.9' E)	1. Vessels will embark a pilot, use the pilot ladder without using the gangway ladder throughout the year. 2. The pilot ladder should be provided on the opposite side of swells so that the swells can be blocked. However, if the wind waves are higher than the swells, vessels should provide the pilot ladder on the side of the swells. The lowest step should be adjusted at height of 1 m above the water. 3. When taking a pilot, the vessel should reduce her speed to 3 kn or less. 4. If southerly winds are strong, and waves and swells are high, there is a risk of the vessel being drifted towards the breakwater. In such a case, the vessel should avoid approaching the port entrance unnecessarily and stay S of the normal boarding point.
Kashima Pilot Association TEL +81-299-82-5515 FAX +81-299-82-6205	The surface within the circle with 1.5 M radius centered on the 3.8 M point within 040° from the Kashima Ko S Breakwater Light.	1. Inbound vessels should keep watch on VHF ch16 1 hour before taking a pilot. The same is applicable when a vessel is going to shift after entering the port. 2. The pilot ladder should be provided on the leeward of the opposite side of swells and be adjusted at height of 2 m above the water, and then stanchions should be set on the bulwark.

Hachinohe Ko (40° 32' N, 141° 32' E) (Chart JP65) (Port Code: JP HHE)

(Photographed May, 2018)

Port classification. Specified port, Open port, Quarantine port, Immigration port, Domestic animal quarantine port, Plant protection port, Important port.

General information. This port is divided into three sections, (No.1 ~ No.3), and has two passages, the E and the W Passage.

The harbour area is sheltered from waves from the open sea by the completed offshore the Middle Breakwater and No.2 Middle Breakwater (under construction). However, a passage in the W Passage sometimes becomes difficult affected by the rebound waves in strong E winds; and moored vessels in Section 1 and Section 2 may experience difficulty to remain on the berths safely due to swells entering in strong N winds.

Safeguards against Typhoon and Tsunami. In order to prevent marine disasters caused by typhoon, tsunami and low atmospheric depression etc., Hachinohe Ko Tsunami and Typhoon etc. Vessels Safety Measures Council is established to issue information on typhoons, tsunamis etc. to vessels and concerned parties in the port, and gives countermeasures to be taken including warning arrangements, evacuation orders and instructions, restrictions on entry into the port, cancellation of them, etc. **When an evacuation advisory is issued by Captain of the Port, a self-controll area for anchoring is set in the waters in front of the Hachinohe LNG Terminal.** (Inquiries: Hachinohe Coast Guard Office).

Weather. WSW land breezes are most frequent throughout year. Strong easterly or northerly winds blow when a depression passes close S of Hachinohe Ko. Thick fog, which may restricts visibility for a whole day, sometimes set from June through August. There are a few days of snowstorms which extremely restrict visibility in winter.

Tides. In Hachinohe Ko, mean higher high water is 1.2 m, mean lower low water is 0.3 m, and mean sea level is 0.85 m.

Marine disasters. Stranding cases of drifting ashore have been reported during strong E winds due to the development of swells and ocean waves outside of the breakwater.

The largest vessel to enter the port. On April 24, 2014, a LNG tanker "TANGGUH HIRI" (101,957t, draught 12.2m) berthed at ENEOS LNG Service Hachinohe LNG terminal Private pier.

Port communications. Port communications by a VHF radiotelephone system between a vessel and Captain of the Port is available through the SHIOGAMA COAST GUARD RADIO.

Call name	Frequency	Hours of Operation	Contact	Remarks
SHIOGAMA COAST GUARD RADIO	16 / 12ch	24 hours	Hachinohe Coast Guard Office	

ENEOS LNG Service Hachinohe LNG Terminal	40° 32.7' N, 141° 31.6' E	There are 2 cylindrical LNG tanks with spherical tops (50m high, 80m diameter).
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Passages. The E Passage and the W Passage are located respectively in the E side and W side of Shirogane W Breakwater. In addition, the section No.2 in the port have two channels (Niida Kawa and Kyu-Mabechi Kawa) beyond the Hachinohe O hashi, and there are controlled the port traffic by signals (Refer to item “Signals”).

5 **Directions.** Approaching from N, steer for Same Kado, bearing 180° from a position NE about 6 M of Shiriya Saki, then enter the port passing W of Hachinohe Ko Outer Harbour Middle Breakwater N Light (40° 33.7' N, 141° 32.1' E). Approaching from S, alter course to 270° when Samekado Light (40° 32.4' N, 141° 34.6' E) abeam with a distance of 3 M. Proceed to enter the port between the Middle Breakwater and No. 2 Middle Breakwater. But large vessels are recommended to enter the port from the W of Middle breakwater due to the extension construction for No. 2 Middle
10 Breakwater.

Entry restricted. In order to prevent fire hazard, no vessel is allowed to enter within a radius of 30 m from tankers (including tank ships) carrying flammable dangerous substance at berthing or anchoring in the port except the vessels permitted by Captain of the Port.

15 It is required that such tankers show a sign "Loaded flammable dangerous substance" which is discernible by night while berthing or anchoring in the port.

Precaution for entering the port. Ko Ne (40° 32.6' N, 141° 33.2' E; a rocky reef, minimum 3.2m deep) of the port near a route and hardly no breakers. Near by shallows, and needs attention in anchor. Kabu Shima and No.2 Middle Breakwater between are small, and cultured institution is installation, should avoid navigation other than a boat.

20 Hachinohe Ko approach is a place with many marine disasters of the fishing boat. In particular, the dense fog period of the summer is fishing season of the cuttlefish and operates by night in an offing, many fishing boats returning to port early in the morning. At this time, the large-size vessel arrival in port avoids morning and evening with many arrival and departure of the fishing boat, also, nearly navigation vessel in night avoids the operation area of fishing boat and should navigation the outside.

Care is necessary against foul substances scattered in the port.

25 While large LNG tankers are entering or departing the port, entry is prohibited within the area connected following points by a line: Middle Breakwater, Hattaro North Breakwater and the berth of ENEOS LNG Service Hachinohe LNG Terminal.

30 **Bridge buildings.** There is Hachinohe Seagull Bridge (40° 32.0' N, 141° 31.5' E, height 4.5 ~ 5.5 m) between the S extremity of Kawaragi No.1 Pier and the petroleum base SW of it, and Hachinohe O Hashi (Refer to item “Landmarks”) at the entrance of Industrial Section 1 at the estuary of the Niida Kawa.

Anchorage. The S side of Shirogane N and W Breakwaters gives a good holding ground, but caution is required that the roadstead is narrow and swells sometimes enter over the breakwaters in strong northerly winds. Section 3 is recommended as an anchorage except in rough weather.

35 Quarantine anchorage (40° 33.9' N, 141° 33.1' E) is situated NE of Middle Breakwater. Anchorage for vessels carrying dangerous substance is provided in Section 3.

Medical facilities.

Name	Telephone	Remarks
Hachinohe City Hospital	+81-178-72-5111	
Aomori Rosai Hospital	+81-178-33-1551	

Maritime traffic. There are car ferry services (10,536 G/T etc.) to and from Tomakomai ~~and a car ferry service (7,005 t) to and from Murooran.~~

Same Kado ~ Todo-ga-Saki (Chart JP53)

General information. Besides some bays and inlets such as Kuji Wan, Noda Wan, Miyako Wan etc. the coast between Same Kado and Todo-ga-Saki is mostly regular in shape.

The water is generally deep and there are no dangerous reefs in areas more than 1 M offshore except inside bays and islets; in waters close to shores, however, numerous rocky reefs are scattered, on which waves break violently in summer even in gentle sea condition. In the area less than 1 M offshore between Hajikami Light (40° 27.1' N, 141° 40.9' E) and Yagi Ko (40° 21' N, 141° 46' E) in particular, numerous sunken reefs are interspersed and the depths are irregular.

The coast between Kuji Wan and Kesennuma Wan is designated as the Sanriku Fukko National Park.

The coast between Kabu Shima in Hachinohe Ko and Oshika Hanto has been dedicated as the Sanriku Fukko National Park (designated on March 31, 2015). Also, the Coast about 14 M between Myoujin Saki and Todo-ga-Saki (39° 33' N, 142° 04' E) having varied scenic changes without dangerous reefs of 0.5 M beyond along the Coast with ample depth.

It should be noted that in summer, particularly in June and July, fog is frequent and large number of fishing vessels may be encountered; such fishing vessels appear in autumn, too.

Landmarks.

Landmark	Position	Remarks
Benten Hana	40° 13' N, 141° 50' E	A point of brown surface and wooded cliffs. There is a lighthouse in Ushi Shima in the vicinity of the SE of this point.
Mi Saki	40° 09' N, 141° 53' E	A cape; the foot of its end consists of gray cliffs. Todo Iwa, a bare rock, 7 m high; lying E about 0.5 M of the cape is seen whitish due to guano covering it.
Toshima Yama	40° 01' N, 141° 39' E	A mountain, 1,263 m high; the peak of which is pointed.
Nanatsu Mori	39° 59' N, 141° 56' E	A summit, 429 m high; rising close W of a headland of steep cliffs lying between Kuro Saki and Benten Saki. It is thickly wooded, seen black and conspicuous; the peak is very rugged.
Benten Saki	39° 57' N, 141° 58' E	A cape surmounted by a lighthouse. A steep cliffs extend 4 M between this cape and Kuro Saki.
Ma Saki	39° 45' N, 142° 00' E	A thickly wooded cape of cliffs surmounted by a lighthouse. A good mark from N and S. It gives a good radar response.
Toge-no-Kami Yama	39° 44' N, 141° 47' E	1,230 m high, the highest peak in this area.
Hei Saki	39° 39' N, 142° 02' E	A roundish cape of cliffs surmounted by a lighthouse.
Gassan	39° 37' N, 142° 00' E	A mountain, 456 m high, showing a pointed peak to NE and SE. There are 3 TV towers on the top, which exhibit some red lights at night.
Todo-ga-Saki	39° 33' N, 142° 03' E	A low cape of cliffs surmounted by a lighthouse and a projector (It irradiate the O Ne of a position S about 4 km from Todo-ga-Saki Light.).
Todo Yama		465 m high. The peak is seen pointed from N and S.

Miyako Wan (39° 40' N, 142° 00' E) (Chart JP54)

General information. Miyako Wan is entered about 5 M between Ane-ga-Saki and Hei Saki; the entrance opens to the NE. The water is mostly deep; 74 m deep at the center of the entrance then becomes shallow gradually as it goes inwards. No shoals of 5 m deep or less exist in the area outside 400 m offshore except in the vicinity of the head.

There is a detached breakwater, about 200 m long, between Hide Shima on the W side of the entrance and the westward opposite shore, where navigation is not recommended.

Traffic of fishing vessels is heavy and the large vessels dose port the inward-bound and the outward-bound, too.

Inside the port, there is a fishing port and Desaki Wharf in Kuwa-ga-Saki Section, Fujiwara Wharf for importing and exporting timbers in Fujiwara Section, and a log pond in Sokei Section. But each section is now under construction for an earthquake disaster restoration.

5 **Safeguards against Typhoon and Tsunami.** In order to prevent marine disasters caused by typhoon and tsunami etc., Miyako Ko Tsunami and Typhoon etc., Abnormal Weather Vessels Safety Measures Council is established to issue information on typhoons, tsunamis etc. to vessels and concerned parties in the port, and gives countermeasures to be taken including warning arrangements, evacuation orders and instructions, restrictions on entry into the port, cancellation of them, etc. (Inquiries: Miyako Coast Guard Station).

10 **Weather.** NE to NNE winds prevail in summer while WSW winds are dominant in other seasons. Fog is most frequent in Jun. and Jul.; it occurs for about 10 days in each month.

The largest vessel to enter the port. On April 25, 2019, the passenger vessel “DIAMOND PRINCESS” (115,875 t, draught 8.5 m) berthed alongside with - 10 m Quay, Fujiwara No.2 Wharf.

15 **Pilotage.** There is not sea area of pilotage to establish in the Pilotage Law, but pilotage of private qualification is available.

Landmarks.

Landmark	Position	Remarks
Radio towers group	39° 38.8' N, 141° 58.0' E	2 radio towers (each 66 m, 67 m high), an observation tower (white, 59 m high) , and a chimney (59 m high).
A radio tower	39° 38.1' N, 141° 57.5' E	Red and white, 127 m high.
A conspicuous house	39° 37.7' N, 141° 57.8' E	City Culture Center (white, triangular).

20 **Directions.** Approaching from N, steer for Heisaki Light (39° 39.3' N, 142° 01.5' E), bearing 190° at a position ENE about 7 M from Rikuchubentensaki Light (39° 56.8' N, 141° 57.6' E); at a position E 2 M from Ane-ga-Saki (39° 41.3' N, 141° 59.3' E), steer 216° with Miyako Ko Fujiwara Breakwater Light (39° 37.7' N, 141° 58.6' E) ahead, and proceed to the entrance properly after passing Tate-ga-Saki (39° 38.8' N, 141° 59.0' E).

25 Approaching from S, course to 320° with Rikuchumasaki Light (39° 45.1' N, 142° 00.0' E) ahead; at a position NE about 2.7 M from Hei Saki Light, steer 250° for the S extremity of Hide Shima (39° 40.1' N, 141° 59.3' E) ahead; at a position N 1.4 M from same lighthouse, steer 216° with Miyako Ko Fujiwara Breakwater Light ahead, and proceed to the entrance after passing Tate-ga-Saki. Caution should be paid for the following in approaching the port.

Precaution for entering the port. The precautions below are necessary after the Great East Japan Earthquake.

1. Care is necessary against foul substances scattered in the port.
2. Construction of a sluice gate is underway at the mouth of the Hei Kawa river.

30 **Caution:** Many stationary nets are laid along both coasts of Miyako Wan throughout year. A caution with the stationary nets and aquaculture facilities laid within about 800 m offshore on the coast between SW about 1.2 M from Heisaki Light and W about 0.6 M from same lighthouse is particularly necessary.

The water S of Desaki Wharf around the estuary of Hei Kawa, depths between 1 m to 3 m, waves sometimes break over it in strong winds. The streams in this area become to be strong after heavy rain, with which caution should be also exercised.

35 **Wave meter.** A wave meter is installed in an undersea of a position E about 0.2 M from Ryujinzaki Breakwater.

Anchorage. Large vessels usually use the area near to the quarantine anchorage (39° 38.0' N, 141° 59.1' E) E of Fujiwara Breakwater. **The mouth of Miyako Wan other than near the quarantine anchorage area is deep, and there are stationary nets and other aquaculture facilities. Therefore care should be taken when anchoring.**

Kesenuma Ko (38° 54' N, 141° 35' E) (Chart W1099) (Port Code: JP KSN)

(Photographed Aug. 2018)

Port classification. Port designated by Port Regulations Law, Quarantine port.

5 **General information.** The port is located in the N end of Sei Wan.

The inner part is well sheltered and affords good anchorage with muddy bottom and depth of 5 ~ 9 m. The fairway becomes to be very narrow in the vicinity of Hachi-ga-Saki (See item "Landmarks") at the entrance of the inner harbour, so large vessels may encounter difficulties in passing.

There is a commercial port quay on the left bank at the estuary of O Kawa SSE of Hachi-ga-Saki.

10 **Safeguards against Typhoon and Tsunami.** In order to prevent marine disasters caused by typhoon and tsunami etc., Kesenuma City Earthquake and Tsunami Disaster Measures Conference is established to issue information on typhoons, tsunamis etc. to vessels and concerned parties in the port and give countermeasures to be taken including warning arrangements, evacuation orders and instructions, restrictions on entry into the port, cancellation of them, etc. (Inquiries: Kesenuma Coast Guard Station).

15 **Landmarks.**

Landmark	Position	Remarks
Hachi-ga-Saki	38° 53.7' N, 141° 35.3' E	It is surmounted by a steel tower, 64 m high. (There is a steel tower of 60m high on the opposite bank.)
A conspicuous building	38° 54.3' N, 141° 34.7' E	Hotel, on a cliff about 1.3 km northwest of Hachi-ga-Saki

Directions. From a position S about 1.5 M of the entrance, steer for Kesenuma Ko Leading lights (front light: 38° 53.7' N, 141° 35.7' E; rear light: 38° 54.0' N, 141° 35.7' E) in line, bearing 354.8°, then proceed to the anchorage properly from the estuary of O Kawa.

20 **Precaution for entering the port.** There were some quays that suffered ground settlement and were partially damaged after the Great East Japan Earthquake. These should be confirmed from the port authority before entering port.

Overhead bridge. An overhead Kesenumawan-Odankyo Bridge (38° 53.6' N 141° 35.6' E, with a vertical clearance of about 32m, a spans of 480m) which is a part of Sanriku Coastal Highway, crosses the passage between Asahi Wharf and Kogoshio in a SW-NE direction.

25 **Anchorage.** The quarantine anchorage is located near the entrance of To Wan (38° 51.4' N, 141° 38.8' E).

Paragraph 3 KINKASAN ~ SHIOYA SAKI

(Chart JP1098)

General information. In the N part of the coast between Kinkasan and Shioya Saki lie Ishinomaki Wan and Matsushima Wan and islands such as Aji Shima and Tashiro Shima. The coast between Matsushima Wan and Shioya Saki runs in a N-S direction with regular coastline and there are neither bays nor islands.

This coast contains Ishinomaki Ko and Sendai-Shiogama Ko each of which classified as a Specified port by the Port Regulations Law.

The 20 m depth contour lies 2 ~ 4 M offshore except in the vicinity of Aji Shima, Tashiro Shima and outside Sendai-Shiogama Ko.

The channel, which separates Aji Shima and Tashiro Shima from Oshika Hanto is a route for small vessels taking the nearest track for Ayukawa Ko, Ishinomaki Ko and Sendai-Shiogama Ko by Kinkasan Seto.

Weather. Dense fogs are frequent in the vicinity of Shioya Saki from May to August, especially in rainy season (Baiu).

Ishinomaki Wan (38° 20' N, 141° 20' E) (Chart JP79)

General information. This is a large bay, of which E coast is Oshika Hanto and the W coast is Miyato Shima. There are many ports and bays such as Ayukawa Ko, Kugunarihama Wan, Ohara Wan, Oginohama Wan of the Aji Shima on the E coast, Ishinomaki Ko on the N coast and Nobiru Wan on the W coast.

The E coast of Miyato Shima consists of steep cliffs and is fringed with rocky islets and reefs.

The 10 m depth contour lies close to the shore on the E coast; it lies about 0.5 ~ 1 M offshore on the N coast. There are many dangerous reefs in the surrounding of Aji Shima and Tashiro Shima.

It should be noted that there are many stationary nets and aquaculture facilities of seaweeds in the bay.

Landmarks.

Landmark	Position	Remarks
Aji Shima	38° 16' N, 141° 29' E	A flat island, 101 m high. There is a lighthouse at the SE end.
Tashiro Shima	38° 18' N, 141° 25' E	95 m high. A lighthouse stands on the N end.
Hitoishi Yama	38° 20' N, 141° 29' E	319 m high. A thickly wooded mountain.
Omuro Saki	38° 21' N, 141° 25' E	A black cape, prominent from a distance. Pine trees thinly grow on the top.
3 chimneys	38° 25' N, 141° 17' E	2 chimneys are red and white, 104 m and 93 m high respectively. Another one is gray, 89 m high. All of those are located in the yard of a paper factory and are prominent from a distance.

Directions.

To Ishinomaki Ko from the N.

1. Alter course to 259° at a position ESE about 10.5 M of Kinkasan Light (38° 16.6' N, 141° 35.0' E).
2. When Domiki Saki Light (38° 14.8' N, 141° 30.0' E) abeam about 4.8 M, steer 290° with Hanabuchi Light (38° 17.7' N, 141° 05.1' E) ahead.
3. At a position 132° about 7.4 M from Hashima Light (38° 18.9' N, 141° 11.1' E), steer 357° for 3 chimneys (38° 25.1' N, 141° 17.3' E; Refer to item "Landmarks" of the above.) of Nippon Paper Industries Co., Ltd., bearing 357°.
4. Alter course to 335° when Hashima Light abeam, which leads to the port entrance.

To Sendai-Shiogama Ko Shiogama Ku from the N.

1. From a position SSE about 4.8 M of Aji Shima, steer 290° with Hanabuchi Light ahead.
2. At a position 132° about 7.4 M from Hashima Light (38° 18.9' N, 141° 11.1' E), steer 298° for Sendai-Shiogama Ko Passage, which leads to the port entrance appropriately.

To Sendai-Shiogama Ko Sendai Ku from the N.

Take the same track as one to Shiogama Ku until a position SSE about 4.8 M of Aji Shima, then alter course to 282°, and proceed to the port entrance.

Landmark	Position	Remarks
A bridge building	38° 24.9' N, 141° 18.7' E	The Hiyori O hashi, about 17 m high.
Hiyori Yama	38° 25.5' N, 141° 18.5' E	A thickly wooded mountain, 54 m high, surmounted by a shrine and a tower.
3 chimneys	38° 25.2' N, 141° 17.3' E	2 chimneys are red and white, 104 m and 93 m high respectively. Another one is gray, 89 m high. All of those are located in the yard of a paper factory and are prominent from a distance.

Directions.

Industrial port.

5 On approaching the port entrance, it is recommended to proceed to the center of the fairway midway between Ishinomaki Ko Hibarino Breakwater Light (38° 23.9' N, 141° 15.9' E) and Ishinomaki Ko No.1 Light Buoy to the W about 400 m, parallel to the same breakwater. The breakwater may sometimes be difficult to identify from a distance.

Inner harbour.

10 Follow the mid-stream of Kyu-Kitakami Kawa paying attention to the depths at the entrance which are variable. In addition, a caution is necessary because the E Breakwater and W Breakwater on the estuary may be submerged under the sea by storm surges.

Fishing port.

Steer Ishinomaki Gyoko Leading lights (38° 24.9' N, 141° 20.8' E; both of the front light and the rear light) in line, bearing 000.6°, then proceed parallel to W Breakwater to get in the basin.

Precaution for entering the port.

- 15 1. Public quays (water depths of 4.5 m or greater) almost may be used; however, before entering port, detailed information related to port facilities, etc., must be acquired from the port authority, etc.
2. Care is necessary against foul substances scattered in the port.

Bridge building. Hiyori O Hashi spans across the mouth of Kyu-Kitakami Kawa (Refer to item "Landmarks").

Mooring buoy. A mooring buoy lies S of the Minamihama Wharf Large Pier.

20 **Anchorage.** The quarantine anchorage (38° 23.2' N, 141° 17.8' E) is settled near SE of Hibarino Breakwater Light.

Facilities.

Name	Position	Length (m)	Depth (approx. m)	Capacity (D/W × vessel)	Remark	
Minamihama Wharf	Large Pier	38° 24.8' N, 141° 16.4' E	165	11	15,000 × 1	
	10,000 t Quay	38° 24.9' N, 141° 16.5' E	165	9	10,000 × 1	
	5,000 t Quay	38° 24.9' N, 141° 16.6' E	130	7.5	5,000 × 1	
Shiomi Wharf, No.1 ~ 5 Quays	38° 25.1' N, 141° 17.1' E	290	4.5	1,000 × 5	Unsurveyed area at a part	
Hiyori Mikawa No.1 Quay	38° 25.1' N, 141° 17.0' E	110	4.5	1,800 × 1		
Hiyori Mikawa No.2 Quay	38° 25.1' N, 141° 17.0' E	110	4.5	1,800 × 1		
Hiyori Wharf	No.1 ~ 5 Quays	38° 25.1' N, 141° 16.6' E	380	2.5 ~ 3.5	1,000 × 5	
	No.6 Quay	38° 25.0' N, 141° 16.4' E	165	10	10,000 × 1	
	No.7 Quay	38° 25.1' N, 141° 16.4' E	185	9.5 ~ 10	15,000 × 1	
Oie Wharf	No.1, 2 Quays	38° 25.2' N, 141° 16.3' E	260	7.5	5,000 × 2	
	No.3 ~ 5 Quays	38° 25.2' N, 141° 16.1' E	320	5.5	2,000 × 3	
Nakajima Wharf	No.1 Quay	38° 25.1' N, 141° 16.0' E	130	5.5	2,000 × 1	
	No.2, 3 Quays	38° 25.0' N, 141° 16.0' E	370	10	15,000 × 2	
	1,000 t Quay	38° 24.9' N, 141° 16.0' E	60	7.5	1,000 × 1	
Hibarino Central Wharf	No.1 Quay	38° 24.3' N, 141° 17.2' E	260	13	40,000 × 1	
	No.2 Quay	38° 24.4' N, 141° 17.1' E	260	13	40,000 × 1	

Anchorage. The quarantine anchorage is designated in the vicinity of a position (36° 54.3' N, 140° 53.5' E) SE of Onahama Ko Offing Breakwater W Light.

Facilities.

Name		Position	Length (m)	Depth (approx. m)	Capacity (D/W×vessel)	Remarks
No.1 Wharf	No.1, 2 Quays	36° 56.7' N, 140° 54.4' E	213	7	300 G/T × 4	
	No.3 Quay	36° 56.6' N, 140° 54.4' E	150	8	300 G/T × 3	
No.2 Wharf	No.3, 4 Quays	36° 56.6' N, 140° 54.0' E	Each 130	6.5 ~ 8.5	5,000 × 2	
	No.5, 6 Quays	36° 56.6' N, 140° 53.9' E	Each 94	4 ~ 6	1,000 × 2	
No.3 Wharf	No.1 ~ 4 Quays	36° 56.5' N, 140° 53.8' E	Each 175	9 ~ 10	12,000 × 4	
	No.5, 6 Quays	36° 56.5' N, 140° 53.7' E	Each 73	4 ~ 4.5	1,000 × 2	
	No.7 Quay	36° 56.5' N, 140° 53.6' E	74	4	1,000 × 1	
No.4 Wharf	No.1 Quay	36° 56.5' N, 140° 53.6' E	90	4 ~ 4.5	1,000 × 1	
	No.2, 3 Quays	36° 56.4' N, 140° 53.5' E	Each 200	9~9.5	12,000 × 2	
	No.4 ~ 6 Quays	36° 56.3' N, 140° 53.4' E	Each 100	6	3,000 × 3	
No.5 Wharf No.1 Quay		36° 56.1' N, 140° 53.2' E	240	11~12	30,000 × 1	
No.6 Wharf	No.1 Quay	36° 56.0' N, 140° 53.0' E	280	13~14.5	55,000 × 1	
	No.2, 3 Quays	36° 56.0' N, 140° 52.8' E	Each 130	6~8.5	5,000 × 2	
No.7 Wharf	No.1, 2 Quays	36° 55.9' N, 140° 52.8' E	Each 270	12~13	40,000 × 2	
	No.3, 4 Quays	36° 55.8' N, 140° 52.7' E	Each 185	7~10.5	12,000 × 2	
	No.5 Quay	36° 55.9' N, 140° 52.6' E	130	6.5~7	5,000 × 1	
Fujiwara Wharf	No.1 Quay	36° 55.8' N, 140° 52.4' E	185	9.5~10.5	12,000 × 1	The vicinity of NE end is shallow.
	No.2 Quay	36° 55.7' N, 140° 52.4' E	240	10.5~12	30,000 × 1	
	No.3 Quay	36° 55.7' N, 140° 52.3' E	185	6.5~9	12,000 × 1	
	No.4 Quay	36° 55.7' N, 140° 52.3' E	130	6~7	5,000 × 1	
Otsurugi Wharf	No.1, 2 Quays	36° 55.6' N, 140° 52.2' E	Each 130	4.5~7	5,000 × 2	
	No.3, 4 Quays	36° 55.5' N, 140° 52.3' E	Each 185	8.5~9	12,000 × 2	Crane
	No.5 ~ 8 Quays	36° 55.4' N, 140° 52.2' E	Each 130	6.5~9.5	5,000 × 4	
Higashi Ko	No.1 Quay	36° 55.8' N, 140° 53.6' E	370	18	120,000 × 1	Crane
	No.2 Quay	36° 56.0' N, 140° 53.7' E	222	17~17.5	90,000 × 2	

5 Apart from the above table, there are private mooring facilities for an oil compare located at the SE end and the SW side of Otsurugi Wharf.

Supply. Fresh water, ice and fuel oil are available.

Repair. Repairs can be arranged.

Maritime authorities and facilities.

Name	Telephone
Fukushima Coast Guard Office (Captain of the Port, Onahama and Soma)	+81-246-54-3450
Onahama Branch Customs	+81-246-92-5151

within radius of 3 M from S Breakwater Light.

Facilities.

Name	Position	Length (m)	Depth (approx. m)	Capacity (D/W×vessel)	Remarks	
Gaiko Public Wharf A Quay	35° 57.9' N, 140° 41.6' E	280	14	10,000 × 1	Aseismatic quay	
Fukashiba Public Quay	35° 55.5' N, 140° 41.9' E	300	5.5 ~ 6	2,000 × 3		
N Public Wharf	C Quay	35° 55.6' N, 140° 39.2' E	170	10	10,000 × 1	
	D Quay	35° 55.7' N, 140° 39.2' E	170	10	10,000 × 1	
	E Quay		170	10	12,000 × 1	With a gantry crane
Ikemukai Quay	35° 54.1' N, 140° 40.7' E	114	5		There are many overhead cables.	
S Public Wharf	A, B Quays	35° 53.2' N, 140° 41.1' E	370	10	15,000 × 2	
	C ~ F Quays	35° 53.0' N, 140° 41.1' E	each 130	6	5,000 × 4	
	G, H Quays	35° 52.9' N, 140° 41.3' E	each 185	10	15,000 × 2	

Apart from the above table, there are many private berths in the port.

5 **Supply.** Fresh water is available.

Maritime authorities and facilities.

Name	Telephone
Kashima Coast Guard Station (Captain of the Port)	+81-299-92-2601
Kashima Branch Customs	+81-299-92-2558
Kashima Maritime Branch of Tokyo District Transport Bureau	+81-299-92-2604
Kashima Detached Office of Tokyo Quarantine Station	+81-299-92-2603
Kashima Sub-branch, Tokyo Branch of Yokohama Plant Protection Station	+81-299-92-3404
Mito Branch Office of Tokyo Regional Immigration Services Bureau (Located in Mito City)	+81-29-300-3601
Ibaraki Prefectural Kashima Port Office	+81-299-92-2111

Tugboats and Ferryboats. Tugboats and ferryboats are available.

Medical facilities.

Name	Telephone	Remarks
Hakujuji General Hospital	+81-299-92-3311	

10

Inubo Saki (35° 43' N, 140° 52' E) (Charts W57, W1050)

General information. This article describes the area from estuary of Tone Kawa to the W extremity of Byobu-ga-Ura, WSW about 7 M.

15 Inubo Saki is a cape at the E extremity of peninsula projecting into sea on the S of Tone Kawa estuary; its E coast consists mostly of sandy beaches; the S coast is black cliffs, about 20 ~ 40 m high, the upper part of which is covered with red clay. Besides Inubo Saki at the E extremity, SE and SW extremities are called Nagasaki Hana and Inuwaka Hana respectively. Tokawa Gyoko and Naarai Ko are located respectively on the E side and NW side of Inuwaka Hana. Byobu-ga-Ura consists of steep cliffs extending for about 5 M.

Inubo Saki is fringed with many small islands and rocks, which makes access to this area dangerous.

20 The water in front of Byobu-ga-Ura is shallow for a good distance from the shore and surf is heavy.

Fog. Fog sets from late May to late August; it is most frequent in July; it generally disappears within daytime, but may remain throughout the day in S wind.

Landmarks.

Landmark	Position	Remarks
Inubo Saki	35° 43' N, 140° 52' E	A cape surmounted by a lighthouse at the end. This promontory gives a good radar response.
Atago Yama	35° 42' N, 140° 51' E	A wooded mountain, 74 m high.

Facilities.

Name	Position	Length (m)	Depth (approx. m)	Capacity (D/W × vessel)	Remarks	
Kawasaki Container No.1 Quay	35° 29.3' N, 139° 45.3' E	431	14	50,000 × 1	Conventional berth Aseismatic quay	
Higashi-Ogishima Quays	No. 1, 2	35° 29.6' N, 139° 45.6' E	185 × 2	12	15,000 × 2	
	No. 3 ~ 9	35° 29.7' N, 139° 46.2' E	240 × 7	12	30,000 × 7	
	No. 21 ~ 31	35° 30.3' N, 139° 45.8' E	130 × 11	5.5~7.5	5,000 × 11	
	A ~ D	35° 29.7' N, 139° 45.5' E	270	12	700 × 4	
Municipal Wharf	No. 1 Quay	35° 30.9' N, 139° 45.0' E	120	6	3,000 × 1	
	No. 2 Pier	35° 30.8' N, 139° 45.0' E	172	9	10,000 × 1	
	No. 3 Pier	35° 30.7' N, 139° 45.0' E	190	10	15,000 × 1	
	No. 4 Pier	35° 30.6' N, 139° 45.1' E	220	9.5	15,000 × 1	
	No. 5 Pier	35° 30.5' N, 139° 45.2' E	211	10	15,000 × 1	
	No. 6 Pier	35° 30.5' N, 139° 45.3' E	209	10	15,000 × 1	
	No. 7 Pier	35° 30.6' N, 139° 45.4' E	180	10	15,000 × 1	
Daikoku Wharf	C1	35° 28.1' N, 139° 40.8' E	300	12 ~ 13	35,000 × 1	Multipurpose berth
	C2	35° 28.1' N, 139° 41.0' E	300	12 ~ 13	35,000 × 1	Multipurpose berth
	C3	35° 27.5' N, 139° 41.6' E	350	15	54,500 × 1	Container terminal
	C4	35° 27.6' N, 139° 41.8' E	350	15	57,500 × 1	Container terminal
	L1 ~ 8	35° 28.0' N, 139° 41.5' E	200 × 8	10 ~ 12	15,000 × 8	International liner
	P1 ~ 4	35° 27.6' N, 139° 40.6' E	130 × 4	5.5 ~ 12	5,000 × 4	Inland transport berth P4 is Multipurpose berth
	T1, 2	35° 27.7' N, 139° 41.4' E	240 × 2	12	30,000 × 2	Multipurpose berth
	T3 ~ T8	35° 27.3' N, 139° 41.1' E	185 × 6	10	15,000 × 6	International tramper
	T9	35° 27.5' N, 139° 41.4' E	240	11.5~12	30,000 × 1	Container berth
Detamachi Wharf	A, B	35° 28.6' N, 139° 38.8' E	135 × 2	6 ~ 6.5	5,000 × 2	Conventional berth
	C, D	35° 28.6' N, 139° 39.0' E	123 × 2	6 ~ 8	5,000 × 2	Conventional berth
Mizuho Wharf Quay	35° 28.2' N, 139° 39.3' E	170	10	10,000 × 1	Conventional berth	
Yamanouchi Wharf Quay	35° 28.0' N, 139° 38.2' E	130	6.5 ~ 7.5	5,000 × 1	Conventional berth Aseismatic quay	
Shinko Wharf	No. 5	35° 27.3' N, 139° 38.6' E	202	7	10,000 × 1	Conventional berth
	No. 8	35° 27.4' N, 139° 38.5' E	145	7~8.5	10,000 × 1	Conventional berth
	No. 9		340	9.5	70,000 G/T × 1	Conventional berth
Osanbashi Wharf	A, B	35° 27.1' N, 139° 38.9' E	225 × 2	12	30,000 × 2	Public liner berth
	C	35° 27.1' N, 139° 38.9' E	350	10~11	30,000 × 1	Public liner berth
	D	35° 27.0' N, 139° 38.9' E	100	10	30,000 × 1	Public liner berth
Yamashita Wharf	No. 1	35° 26.8' N, 139° 39.2' E	180	10	15,000 × 1	Conventional berth
	No. 2	35° 26.9' N, 139° 39.3' E	200	12	20,000 × 1	Conventional berth
	No. 3	35° 27.0' N, 139° 39.4' E	220	12	25,000 × 1	Conventional berth
	No. 4 ~ 10	35° 26.9' N, 139° 39.7' E	180 × 7	9~10	15,000 × 7	Conventional berth
Honmoku Wharf	Root of A Jetty	35° 26.6' N, 139° 39.9' E	100	5.5	2,000 × 1	Inland transport berth
	A1 ~ 3	35° 26.8' N, 139° 40.0' E	200 × 3	8.5 ~ 10	15,000 × 3	Conventional berth
	A5, 6	35° 26.8' N, 139° 40.4' E	300 × 2	12 ~ 13	35,000 × 2	Container terminal
	A7, 8	35° 26.6' N, 139° 40.2' E	250 × 2	12	25,000 × 2	Container terminal
	B1	35° 26.4' N, 139° 40.3' E	200	10	15,000 × 1	Conventional berth
	B2~4	35° 26.6' N, 139° 40.4' E	200 × 3	11	15,000 × 3	Conventional berth
	BC1	35° 26.5' N, 139° 40.8' E	390	12~16	60,000 × 1	Container terminal with 3 Gantry cranes Aseismatic quay
	C5 ~ 9	35° 26.2' N, 139° 40.7' E	200 × 5	13	15,000 × 5	Container terminal with 7 Gantry cranes
	D1	35° 26.0' N, 139° 40.8' E	400	13	40,000 × 1	Container terminal with 5 Gantry cranes
	D4	35° 26.3' N, 139° 41.0' E	400	16	40,000 × 1	Container terminal
	D5	35° 26.4' N, 139° 41.1' E	300	16	60,000 × 1	Container terminal Aseismatic quay

Inaei Wharf	No. 17, 18 Quays	35° 04.8' N, 136° 52.1' E	320	9	8,000 × 2	
	No. 22 ~ 24 Quays	35° 04.6' N, 136° 51.9' E	540	10	15,000 × 3	
	No. 25 Quay	35° 04.5' N, 136° 51.8' E	200	10	15,000 × 1	
Shionagi Wharf	No. 27 Quay	35° 04.4' N, 136° 51.7' E	90	5.5	2,000 × 1	
	No. 28 Quay	35° 04.4' N, 136° 51.7' E	130	7.5	5,000 × 1	Aseismatic quay
	No. 29 Quay	35° 04.3' N, 136° 51.8' E	185	10	15,000 × 1	Aseismatic quay
	No. 31 Quay	35° 04.3' N, 136° 51.6' E	60	3.5 ~ 5	700 × 1	
	No. 32 Quay	35° 04.3' N, 136° 51.7' E	130	7.5	5,000 × 1	
	No. 33 Quay	35° 04.2' N, 136° 51.7' E	185	10	15,000 × 1	
Sorami Wharf	No. 50 Quay	35° 03.4' N, 136° 51.3' E	180	10	15,000 × 1	
	No. 51 Quay	35° 03.4' N, 136° 51.3' E	120	4.5	700 × 2	
	No. 70 Quay	35° 03.7' N, 136° 50.6' E	360	5.5	2,000 × 4	
	No. 95 ~ 97 Quays	35° 04.2' N, 136° 51.5' E	540	5~5.5	700 × 1 1,500 × 1 2,000 × 4	
Kinjo Wharf	No. 52, 53 Quays	35° 03.2' N, 136° 51.2' E	497	8.5~12	35,000 × 2	
	No. 54 ~ 57 Quays	35° 02.8' N, 136° 51.2' E	800	10	15,000 × 4	
	No. 58 ~ 62 Quay	35° 02.6' N, 136° 50.9' E	1,000	10	15,000 × 5	
	No. 71 Quay	35° 03.4' N, 136° 50.5' E	450	1	2,000 × 5	
	No. 72 ~ 75 Quay	35° 03.2' N, 136° 50.3' E	520	5~6	5,000 × 4	
	No. 76, 77 Quays	35° 03.0' N, 136° 50.3' E	400	10~10.5	10,000 × 1 20,000 × 1	For container carriers.
	No. 78, 79 Quays	35° 02.8' N, 136° 50.4' E	400	10	15,000 × 2	For heavy cargo ships.
	No. 80, 81 Quays	35° 02.6' N, 136° 50.5' E	400	10	15,000 × 2	For heavy cargo ships.
	No. 82 ~ 84 Quays	35° 02.3' N, 136° 50.6' E	600	9~10	15,000 × 3	For heavy cargo ships.
No. 85 Quay	35° 02.1' N, 136° 50.7' E	280	11.5~12	50,000 × 1	For heavy cargo ships.	
Yatomi Wharf	No. 6 Quay	35° 01.8' N, 136° 47.9' E	270	12	30,000 × 1	
	No. 7 Quay	35° 01.8' N, 136° 47.8' E	240	12	30,000 × 1	
	No. 88, 89 Quays	35° 02.2' N, 136° 48.0' E	260	7.5	5,000 × 2	
Nabea Wharf	T1 Quay	35° 01.4' N, 136° 48.5' E	350	13~14	50,000 × 1	For container carriers. Aseismatic quay with 3 gantry cranes.
	T2 Quay	35° 01.5' N, 136° 48.5' E	350	13~14	50,000 × 1	For container carriers. Aseismatic quay with 3 gantry cranes.
	T3 Quay	35° 01.6' N, 136° 47.4' E	250	12	30,000 × 1	For container carriers. Aseismatic quay with 2 gantry cranes.
Tobishima Wharf	No. 90 Quay	35° 02.9' N, 136° 49.9' E	185	10	15,000 × 1	For container carriers with 3 gantry cranes.
	No. 91, 92 Quays	35° 02.8' N, 136° 49.9' E	435	10 ~ 12	15,000 × 1 35,000 × 1	
	No. 93, 94 Quays	35° 02.0' N, 136° 50.2' E	700	14~15	50,000 × 2	For container carriers with 6 gantry cranes.
	TS1 Quay	35°01.6' N,136°49.2' E	350	16	108,500 × 1	For container carriers. Aseismatic quay with 3 gantry cranes.
	TS2 Quay	35°01.6' N,136°49.4' E	400	16	108,500 × 1	For container carriers. Aseismatic quay with 3 gantry cranes.
	No. 98, 99 Quays	35° 02.3' N, 136° 48.6' E	370	10	15,000 × 2	For timber carriers.
Oe Wharf	No. 38 Quay	35° 05.3' N, 136° 53.4' E	185	10	15,000 × 1	Aseismatic quay
	No. 39 Quay	35° 05.2' N, 136° 53.4' E	213	9	15,000 × 1	
Showa Wharf No. 40, 41 Quays		35° 04.7' N, 136° 53.4' E	240	7.3	5,000 × 2	
Funami Wharf	No. 43 ~ 45 Quays	35° 04.4' N, 136° 53.2' E	420	5.5	700 × 1 2,000 × 4	For silica sand carriers, soil and stones carriers.

No. 46 ~ 48 Quays	35° 04.4' N, 136° 53.1' E	571	5.5	700 × 1 2,000 × 5	For silica sand carriers, soil and stones carriers.
Shiomi Wharf BX Pier	35° 03.8' N, 136° 52.8' E	200	3.5	300 × 20	Facility for small oil tankers.
Yokosuka Wharf No. 86 Quay	35° 00.6' N, 136° 52.2' E	420	4~4.5	700 × 7	For building material carriers.
Kitahama Wharf No. 87 Quay	35° 00.3' N, 136° 52.0' E	240	4.5	700 × 4	

Apart from the above table, there are many private mooring facilities in various places.

Supplies. Fresh water, fuel oil and ice are available.

Maritime authorities and facilities.

Name	Telephone
4th Regional Coast Guard Headquarters	+81-52-661-1611
Nagoya Coast Guard Office (Captain of the Port)	+81-52-661-1615
Nagoya Ko Vessel Traffic Service Center	+81-52-398-0711
Nagoya Customs Headquarters	+81-52-654-4100
Nanbu Sub-Branch of Nagoya Customs (Located in Chita City)	+81-562-32-5191
Seibu Sub-Branch of Nagoya Customs (Located in Tobishima Village)	+81-567-55-2974
Chubu District Transport Bureau	+81-52-952-8002
Nagoya Quarantine Station	+81-52-661-4131
Nagoya Sub-branch, Chubu Airport Branch of Animal Quarantine Service	+81-52-651-0334
Nagoya Plant Protection Station	+81-52-651-0112
Nanbu Branch of Nagoya Plant Protection Station (Located in Chita City)	+81-562-32-1389
Nagoya Regional Immigration Bureau	+81-52-559-2148
Nagoya Port Authority	+81-52-661-4111

5

Tugboats, Barges and Ferryboats. Available.

Oil waste disposition facilities.

Name	Application	Hours of operation	Waste oil to be disposed	
			Waste heavy oil	Waste light oil
Daiseki Co., Ltd.	+81-52-611-6321	0830 ~ 1700	Bilge and others	
ENEOS Corp.	+81-562-32-3211	0800 ~ 1650	Bilge, water ballast and collect oil.	Water ballast, tank cleaning water.
Idemitsu Kosan Co., Ltd.	+81-562-55-1119	0800 ~ 1700	Bilge, water ballast and collect oil.	Water ballast, tank cleaning water.

Medical facilities.

Name	Telephone	Remarks
Nagoya-Ko Welfare Association Rinko Hospital	+81-52-661-1691	
Chubu Rosai Hospital	+81-52-652-5511	

10

Maritime traffic. There are car ferry services (15,795 G/T etc.) between Tomakomai Ko or Sendai Ku in Sendai-Shiogama Ko. There is also a water bus service that operates between Garden Wharf, Shiomi Wharf and Kinjo Wharf.

Oji Yama	33° 49' N, 135° 59' E	A mountain with trees on the top, 601 m high.
Chimneys	33° 44' N, 136° 01' E	Chimney stacks, red and white, located in the yard of a paper factory on the left shore at the estuary of Kumano Kawa.

Estuary of Kumano Kawa ~ Kantori Saki (Chart W46)

General information. Along this coast of about 9.5 M, Miwasaki Wan, Tenma Wan and Katsuura Wan lie with many islets and rocky reefs both insides and outsides.

5 **Nachi Wan.** (33° 38' N, 135° 58' E) The entrance, open to the E, is wide; it affords shelter in W ~ N winds. The coast extending to the S about 1.1 M from Koma-ga-Saki (33° 39' N, 135° 59' E) is fringed with islets and shoals. Furthermore, it is necessary to exercise caution because stationary nets are installed in the E from October to next July.

Anchorage. The water, with the S extremity of O-Berashi (Refer to item below “Landmarks”), bearing 108° and with the W extremity of Yamanari Shima (20 m high), bearing 170°, 18 m deep, is the anchorage. When entering and anchoring, caution should be exercised with Tsunakiri Shima (33° 38.0' N, 135° 57.5' E; a rock; 1.4 m high) on the S side of the entrance, Shira Iso (33° 38.8' N, 135° 57.8' E; a sunken rock, **minimum depth 7.9 m**) about 160 m SE of Neji Shima (33° 38.9' N, 135° 57.7' E; a rock, 8 m high) lying in the NE part of the bay and other reefs around the head.

Katsuura Wan. (33° 37' N, 135° 57' E) This bay consists of Katsuura Ko, Moriura Wan and Taiji Wan.

15 Numerous islets and rocky reefs are scattered inside and outside of Katsuura Wan. Also, it is necessary to exercise caution because stationary nets are installed in the N and NE of Tomyo Saki from May to December and from November to next June.

Moriura Wan. This is the W branch of Katsuura Wan; it is open widely to the E and encumbered with many sunken reefs, as a consequence, it is not a good anchorage. But the inside is wide and affords anchorage except in E wind.

20 When entering and anchoring, keep away from obstacles such as Tachiotoshi-no-Se-Okii (33° 36.5' N, 135° 57.1' E; a sunken rock, minimum depth 1.4 m), Kamiyakushi (33° 36.7' N, 135° 56.6' E; a sunken rock, minimum depth 2.1 m) and Kaminoyama Dashi (33° 36.4' N, 135° 56.5' E; a sunken rock, minimum depth 2.8 m).

Pearl culture facilities are laid in the head of the inlets.

Taiji Wan. This is the E branch of Katsuura Wan, which opens to the NE.

25 Most parts of the inlet are blocked by rocky reefs. A fairway leads into Taiji Gyoko at the head of the inlet on the SW part.

Landmarks.

Landmark	Position	Remarks
Suzu Shima	33° 41' N, 136° 00' E	Both islands are connected at Miwasaki Gyoko E Breakwater.
Ku Shima	33° 41' N, 135° 59' E	Both islands are composed with gravel and some trees grow on each top.
Radio towers group	33° 42' N, 135° 59' E	Height of each is 244 m, 243 m and 193 m (parabolic antennae) above the ground.
Mezamashi Yama	33° 40' N, 135° 59' E	A wooded mountain with a round shaped peak, 48 m high.
Aka Shima	33° 40' N, 136° 00' E	A dark brown barren rock, 14 m high.
Koma-ga-Saki [Koma Saki]	33° 39' N, 135° 59' E	A cape with a lighthouse at the end, 56 m high.
O-Berashi	33° 38' N, 135° 59' E	A dark brown barren rock, 4 m high. A lighthouse stands on the rock.
Eboshi Yama	33° 42' N, 135° 54' E	A mountain with bare peak, 909 m high. It is conspicuous from the NE.
Myoho San	33° 40' N, 135° 53' E	A wooded mountain, 749 m high. The white swastika (卍) on the mountainside is prominent.
Noroshi Yama	33° 37' N, 135° 57' E	84 m high. A hotel (white) on the central part is prominent day and night.
Yamanari Shima	33° 37' N, 135° 58' E	A group of black rocky islets located at the E of Katsuura Ko. The highest one is Yamanari Shima (20 m high).
Katsuo Shima	33° 36' N, 135° 58' E	A black rock, 4 m high; surmounted by a lighthouse. A good mark when entering Katsuura Wan.
Tomyo Saki [Taiji Saki]	33° 36' N, 135° 58' E	A cape of low cliffs. Rocky islets such as Daimyojin Iwa (15 m high, dark brown) lie in the vicinity of N side of the end.
Kantori Saki	33° 35' N, 135° 58' E	A cape of low and steep cliffs surmounted by a lighthouse which is a conspicuous mark.

Stationary nets are placed in Kashino Saki offing and the vicinity of Kuro Hana at the W about 1 M of the cape.

Landmarks.

Landmark	Position	Remarks
Morito Saki	33° 32' N, 135° 53' E	A cape, 72 m high. It is easily identified with pine trees on the top.
Kasane Yama	33° 31' N, 135° 48' E	302 m high. It is seen black and pointed peak and prominent from offing of Shio-no-Misaki to the S.
Kuro Shima	33° 30' N, 135° 50' E	A wooded island of steep cliffs, 39 m high to the top of trees.
Omori Yama	33° 28' N, 135° 50' E	This is the peak of O Shima, 171 m high. There are two prominent domes on the top (light green, which is seen white from a distance).
Kashino Saki	33° 28' N, 135° 52' E	A cape of cliffs surmounted by a lighthouse.
Izumo Saki	33° 27' N, 135° 48' E	A cape, 38 m high. U Shima (6 m high with a lighthouse at the S end) lies about 500 m NNE of the end.
Shio-no-Misaki	33° 26' N, 135° 45' E	A high cape with flat peak surmounted by a lighthouse.

Paragraph 9 SHIO-NO-MISAKI ~ HI-NO-MISAKI

(Chart JP77)

5

General information. This is the W coast of Kii Hanto with a lot of small curvature in the coastline. There are no large bays except Tanabe Ko and most anchorages are open to the SW. It does not have good ports.

The coast mainly consists of stony and rocky beaches backed by mountains. The water more than 1 M offshore is 20 m deep or more and no dangerous reefs exist except in approaches to Tanabe Ko.

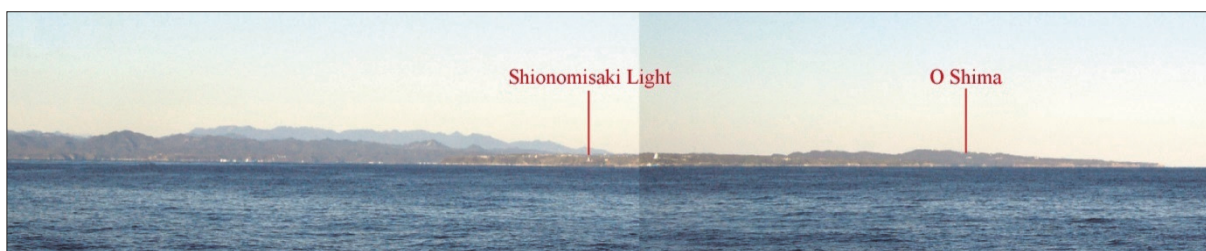
10

There are a few ports with facilities which can moor large vessels; Tanabe Ko and Hidaka Ko (33° 52' N, 135° 09' E) have anchorages for large vessels and wharves for small vessels. Susami Gyoko is frequently used by vessels of 1,000 t or less in W winds and outside of Fukuro Ko and Hidaka Ko afford temporary anchorages only in N ~ E winds.

Weather. In the vicinity of Tanabe Ko on the W coast of Kii Hanto, prevailing wind is SE in spring and autumn, and in February, August and September strong winds are frequent and breakers appear along the coast. Occasional fog occurs in February. Many rainfalls are experienced in spring and summer and fine weather in autumn and winter.

15

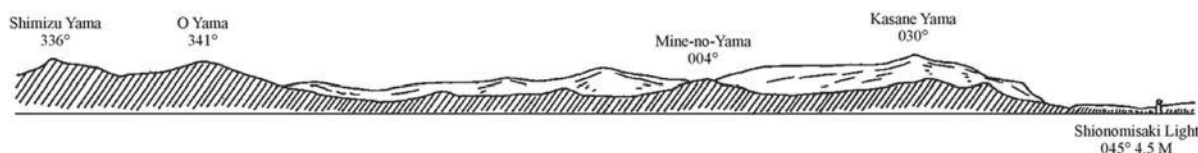
Approaches to Shio-no-Misaki



The vicinity of Shio-no-Misaki seen from the SW

20

Shio-no-Misaki ~ Esu Saki seen from the SW of Shio-no-Misaki



Shio-no-Misaki ~ Seto Saki (Chart JP77)

General information. Along the coast from Shio-no-Misaki to Seto Saki situated outside Tanabe Ko many small inlets lie but only Susami Gyoko is available for ordinary merchant vessels. Bays on the NW side of Shionomisaki Hanto and on the SE side of Seto Saki afford temporary anchorage in certain winds.

25

Hiki Ko (33° 34' N, 135° 27' E) lies at the estuary of Hiki Kawa.

At Shio-no-Misaki, many fishing vessels operate bonito fishing in spring. And drift fishing from shore to off shore in

Facilities.

Name		Position	Length (m)	Depth (Approx. m)	Capacity (D/W × vessel)	Remarks
Mori Ku	No. 1 Pier	33° 42.9' N, 135° 23.6' E	100	4	1,500 × 1	
	No. 2 Pier	33° 43.0' N, 135° 23.6' E	50	4.5	500 × 1	Floating pier.
Shin-Mori Ku	Isoma No. 1 Quay	33° 43.1' N, 135° 23.0' E	120	3.5	500 × 2	
	Isoma No. 2 Quay	33° 42.9' N, 135° 23.1' E	100	5.5	2,000 × 1	Aseismic quay

Maritime authorities and facilities.

Name	Telephone
Tanabe Coast Guard Office (Captain of the Port)	+81-739-22-2001
Construction Department, Nishi-Muro Promotion Bureau of Wakayama Prefecture	+81-739-26-7921

- 5 **Supplies.** Fresh water, fuel oil and ice can be supplied at Egawa Hakuchi. Fresh water is available at Shin-Mori Hakuchi.

Medical facilities.

Name	Telephone	Remarks
Kinan Hospital	+81-739-22-5000	
Tanabe Central Hospital	+81-739-24-5333	
Minami Wakayama Medical Center	+81-739-26-7050	

Kirime Saki ~ Hi-no-Misaki (Chart JP77)

- 10 **General information.** Between Kirime Saki and Hi-no-Misaki there is relatively little access, there is only a small indentation at the NW side of Kirime Saki (Inami) and the E side of Hi-no-Misaki. Shingly shore has many beaches between Kirime Saki and Katsuo Shima (4.7 m high) there are many rocky reefs within 0.5M of the shore.

- 15 The small bay (33° 53' N, 135° 05' E) ENE about 1M of Hi-no-Misaki can be used for ship refuge when the S wind isn't blowing strongly. Hidaka Ko is in the E portion of the bay. There are many sunken rocks within 100m of the N coast of the bay, so attention is required.

Landmarks.

Landmark	Position	Remarks
Matsuma Yama	33° 53' N, 135° 17' E	A bare mountain, 523 m high.
Hi-no-Misaki	33° 53' N, 135° 04' E	A cape of steep cliffs. Lighthouse stands on the cape. Hino Yama (202 m high) is conspicuous in the vicinity of NE of Hi-no-Misaki.

Take-ga-Shima	33° 32.5' N, 134° 19.2' E	An island showing black color with thick woods, 97 m high. It is visible from the S with a distance of about 20 M. A lighthouse stands in the S part.
Shosoku Toge	33° 28' N, 134° 08' E	A conical shaped mountain, 1,083 m high.
Shijuji San	33° 19' N, 134° 11' E	A conical shaped mountain, 383 m high.
Muroto Saki	33° 14.8' N, 134° 10.6' E	A cape of steep cliffs projecting to the S. A lighthouse stands on it.

Paragraph 2 MUROTO SAKI ~ ASHIZURI MISAKI

(Chart JP108)

General information. The coast between Muroto Saki and Ashizuri Misaki encloses a large bay known as Tosa Wan, is entered about 30 M drawing a nearly semicircular coastline.

The NE part forms rather smooth coastline, the NW part is rugged and Kochi Ko, Ura-no-Uchi Wan and Susaki Wan are entered deeply and on the W side lie bays and inlets of every size.

Flat land can be found only around Kochi, in other part, mountains advance to the sea.

In the water E of Shira-no-Hana at the head of the bay, the 20 m depth contour lies mostly about 1 M offshore except in the vicinity of Muroto Saki; in the water W of Shira-no-Hana, it runs mostly within 0.5 M offshore except where there are small inlets.

No dangerous reefs exist outside 1 M offshore along this coast except Susaki Wan and the vicinity.

Care should be taken of stationary nets laid within about 2 M offshore in the bay. Besides, shelter fishery is active. Fishing gears of the shelter fishery are fixed on the bottom of the sea along the coast and are stood marking flags or natural woods. In addition, it is necessary to exercise caution to navigating in the sea area because there are cases when longline fishery and dragnet fishery are operated around the fishing gears. (Refer to the section "Fisheries" of Chapter 7 "NAVIGATIONAL PRECAUTIONS" of Part 1).

Weather. At Muroto Saki, NE wind prevails throughout the year, which is considerably strong showing that winds of 10 m/s or more have appeared about 250 days a year. At Kochi, W wind prevails throughout the year, which is very calm with the average of 2 m/s or less. Wind directions vary in seasons at Ashizuri Misaki (Shimizu), NNE wind prevails in spring and autumn, W or E wind is dominant in summer and northerly wind in winter.

Shelter. Only Susaki Wan (33° 20' N, 133° 17' E) affords shelter to large vessels on the S coast of Shikoku.

Muroto Saki ~ Shimo-Ryuzu Saki (Chart JP108)

General information. The coast between Muroto Saki and Shimo-Ryuzu Saki is regular in shape. The coast from Muroto Saki to the estuary of Nahari Kawa (33° 25' N, 134° 01' E) consists of rocky or stony beaches and the farther W is a stretch of sandy beaches. Relatively wide plains lie W of Tei Misaki, in other area except estuaries of rivers runs a range of mountains overhanging the sea.

The 10 m depth contour runs close to shores, generally within 500 m offshore, outside of which there are no dangerous reefs except Taka Bae (33° 29.0' N, 133° 53.3' E; a sunken rock, 2.3 m deep) off the estuary of Aki Kawa, and Sanbonmatsu (33° 30.9' N, 133° 36.5' E; a sunken rock, 4.4 m deep) and Taka Bae (33° 30.8' N, 133° 36.5' E; a sunken rock, 4.4 m deep) outside Kochi Ko.

Nahari Ko (Port Code: JP NHI) lies NNW of Hane Saki and Tei Ko is located on the N side of Tei Misaki.

Landmarks.

Landmark	Position	Remarks
Gyoto Saki	33° 18' N, 134° 07' E	A cape of rocks surmounted by black woods.
Kasaki Yama	33° 22' N, 134° 07' E	598 m high.
Hane Saki	33° 22.4' N, 134° 02.3' E	There is a lighthouse.
Asahi-ga-Oka	33° 29' N, 133° 59' E	A mountain, 632 m high.
Tei Misaki	33° 31' N, 133° 45' E	A cape surmounted by a lighthouse.
Akiba Yama	33° 36' N, 133° 45' E	A mountain, 490 m high, with a pointed and forested top.
Shimo-Ryuzu Saki	33° 29.8' N, 133° 34.4' E	A cape surmounted by Kochi Light. Shiro Yama (60m high) in the vicinity is a good mark for vessels entering Kochi Ko.
Eboshi Yama	33° 32' N, 133° 31' E	359 m high. A radio tower stands near the peak.

Fukuura Wan. (32° 55' N, 132° 30' E) This inlet, well sheltered by mountains around, 15 ~ 70 m deep, no dangers, always gives the best shelter. Fukuura Gyoko, protected by a breakwater with a lighthouse at the extremity, lies at the head of the inlet.

5 **Funagoshi Wan.** (32° 56' N, 132° 32' E) This inlet entered to the W is deep and well sheltered from all winds. The area, 36 m deep, at the head is a good anchorage. Funakoshi Gyoko lies at the head.

Hisayoshi Wan. (32° 56' N, 132° 34' E) The water, 20 ~ 55 m deep, is calm and a good shelter to some vessels.

Reefs extend to the SE about 700 m from Tengi Hana; Shira Ishi (32° 55.6' N, 132° 34.5' E), 3.3 m high and surmounted by a white pole, at the outer extremity of the reefs is lighted by the projector of Tengi Hana Light.

10 **Fukaura Wan.** (32° 57' N, 132° 35' E) This inlet is entered to the E. Fukaura Ko (Port Code: JP FKR) lies at the head.

The water is always calm and the holding ground is good, but narrow; so it affords shelter to only a few small vessels and crafts. A lighthouse stands on the point at the S extremity of the entrance.

15 **Kozukushi Ura.** (32° 53' N, 132° 42' E) This cove, entered to the SE about 1 M, 10 ~ 30 m deep, sandy and muddy bottom, and well protected by high lands around, affords temporary anchorage to vessels of 100 t class. However in the bay, many raft aquacultures are installed so extreme care is necessary.

The inside consists of two branch inlets, the W one is Sakaki Ura and the area around the head of the E branch has been reclaimed and a -4.5 m Quay, about 180 m long, has been installed.