# Sailing Directions for South and East Coasts of Honshu

Supplement No.9

31 October 2025



Japan Coast Guard

**Explanatory Notes** 

Sailing Directions for South and East Coasts of Honshu - Supplement No.9 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outdated information in Publication No.301 Sailing Directions for South and East Coasts of Honshu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 26 September 2025.

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.

31 October 2025

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.

| Page     | Updated parts (title, port name, etc.)                  | Remarks  |
|----------|---|--|
| After 'C | CAUTION' / Withdrawal of Nautical Chart                 | The said page of supplement No.7 is cancelled. |
| 14       | Aids to Navigation                                      | The said page of supplement No.6 is cancelled. |
| 14-1     | Aids to Navigation                                      | The said page of supplement No.5 is cancelled. |
| 42       | Symbol showing the destination port of AIS (An extract) | is currented.                                  |
| 104      | Sendai-Shiogama Ko                                      |  |
| 106      | Sendai-Shiogama Ko                                      | The said page of supplement No.8 is cancelled. |
| 117      | Hitachi Ko  |  |
| 119      | Hitachinaka Ko  | The said page of supplement No.2 is cancelled. |
| 122      | Kashima Ko  | The said page of supplement No.2 is cancelled. |
| 159      | Chiba Ko  |  |
| 219      | Shimizu Ko  | The said page of supplement No.6 is cancelled. |
| 225      | OMAE SAKI ~ IRAGO MISAKI                                | The said page of supplement No.8 is cancelled. |
| 235      | IRAGO SUIDO   | is suited for                                  |
| 236      | IRAGO SUIDO   |  |
| 238      | MIKAWA WAN  |  |
| 239      | MIKAWA WAN  |  |
| 245      | Mikawa Ko   | The said page of supplement No.1 is cancelled. |
| 249      | Kinuura Ko  | The said page of supplement No.5 is cancelled. |
| 251      | ISE WAN   |  |
| 263      | Nagoya Ko   | The said page of supplement No.7 is cancelled. |
| 272      | Nagoya Ko   | The said page of supplement No.7 is cancelled. |
| 281      | Yokkaichi Ko  | The said page of supplement No.1 is cancelled. |
| 285      | Tsu Ko  | The said page of supplement No.7 is cancelled. |
| 315      | Kochi Ko  | The said page of supplement No.8 is cancelled. |
| 317      | Kochi Ko  | The said page of supplement No.8 is cancelled. |
| 327      | O Shima ~ Zeni Su                                       |  |
| 328      | O Shima ~ Zeni Su                                       |  |
| 360      | INDEX-GAZETTEER   |  |

The nautical charts in English (JP charts) on the left-hand side of the following table have been withdrawn. These chart numbers in Publication No.301 Sailing Directions for South and East Coasts of Honshu (including any Supplement) should be replaced by chart numbers with "W" instead of chart numbers with "JP".

|         | Withdrawn Nautical Charts      | Substitute |
|---------|--------------------------------|------------|
| No.     | Title                          | No.        |
| JP63    | ONAHAMA KO                     | W63        |
| JP64A   | SENDAI-SHIOGAMA KO SHIOGAMA    | W64A       |
| JP64B   | SENDAI-SHIOGAMA KO SENDAI      | W64B       |
| JP65    | HACHINOHE KO                   | W65        |
| JP66    | KEIHIN KO YOKOHAMA             | W66        |
| JP67    | KEIHIN KO KAWASAKI             | W67        |
| JP79    | ISHINOMAKI WAN                 | W79        |
| JP89    | SHIMIZU KO                     | W89        |
| JP91    | YOKOSUKA KO URAGA AND KURIHAMA | W91        |
| JP94    | YOKKAICHI KO                   | W94        |
| JP95    | NORTHERN PART OF ISE WAN       | W95        |
| JP1049  | KASHIMA KO                     | W1049      |
| JP1052  | MIKAWA WAN AND APPROACHES      | W1052      |
| JP1053  | IRAGO SUIDO AND APPROACHES     | W1053      |
| JP1055A | NORTHERN PART OF NAGOYA KO     | W1055A     |
| JP1055B | SOUTHERN PART OF NAGOYA KO     | W1055B     |
| JP1056  | KINUURA KO                     | W1056      |
| JP1057A | NORTHERN PART OF MIKAWA KO     | W1057A     |
| JP1057B | SOUTHERN PART OF MIKAWA KO     | W1057B     |
| JP1061  | NORTHERN PART OF TOKYO WAN     | W1061      |
| JP1062  | MIDDLE PART OF TOKYO WAN       | W1062      |
| JP1064  | IRAGO SUIDO                    | W1064      |
| JP1065  | KEIHIN KO TOKYO                | W1065      |
| JP1067  | KISARAZU KO                    | W1067      |
| JP1081  | URAGA SUIDO                    | W1081      |
| JP1083  | YOKOSUKA KO YOKOSUKA           | W1083      |
| JP1085  | KEIHIN KO NEGISHI              | W1085      |
| JP1086  | MIDDLE PART OF CHIBA KO        | W1086      |
| JP1087  | SOUTHERN PART OF CHIBA KO      | W1087      |
| JP1088  | CHIBA KO KATSUNAN              | W1088      |
| JP1100  | ISHINOMAKI KO                  | W1100      |

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 an Aid to Navigation, and a Virtual in which an 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 25 AIS signal stations.

Part 1

| AIS Signal Station Name                                      | Position                  | Classification | Remarks   |
|--|---------------------------|----------------|---|
| Tokyo Wan Entrance Virtual AIS aid to navigation No 1        | 35° 05.8′ N, 139° 44.5′ E | Virtual        | Controlled by Tokyo Wan<br>Vessel Traffic Service<br>Center.                    |
| Tokyo Wan Entrance Virtual AIS aid to navigation No 2        | 35° 08.1′ N, 139° 45.2′ E | Virtual        | Controlled by Tokyo Wan<br>Vessel Traffic Service<br>Center.                    |
| Tokyo Wan Entrance Virtual AIS aid to navigation No 3        | 35° 10.4′ N, 139° 45.9′ E | Virtual        | Controlled by Tokyo Wan<br>Vessel Traffic Service<br>Center.                    |
| Tokyo W Passage No.6   | 35° 34.8′ N, 139° 48.1′ E | Virtual        | Controlled by Tokyo Wan<br>Vessel Traffic Service<br>Center.                    |
| Keihin Kawasaki Sea-Berth                                    | 35° 28.0′ N, 139° 46.1′ E | Real           |   |
| Uraga Suido Traffic Route Center<br>No.1                     | 35° 12.7′ N, 139° 46.6′ E | Real           | Fitted with Uraga Suido<br>Traffic Route Center No.1<br>Light Buoy              |
| N end of recommended route off the<br>W coast of Izu O Shima | 34° 48.0′ N, 139° 17.0′ E | Virtual        | Controlled by Tokyo Wan<br>Vessel Traffic Service<br>Center.                    |
| S end of recommended route off the<br>W coast of Izu O Shima | 34° 42.2′ N, 139° 10.0′ E | Virtual        | Controlled by Tokyo Wan<br>Vessel Traffic Service<br>Center.                    |
| E end of N entrance of Irago Suido<br>Traffic Route          | 34° 34.8′ N, 136° 59.4′ E | Virtual        | Controlled by Ise Wan<br>Vessel Traffic Service<br>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<br>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<br>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<br>Kantorisaki SE Floating<br>Fish Haven Facility Light         |
| Kashinosaki E Floating Fish Haven facilities                 | 33° 27.9′N, 135° 57.6′E   | Real           | Fitted with the<br>Kashinosaki E Floating<br>Fish Haven Facility Light          |

Part 1

# Symbol showing the destination port of AIS (An extract)

|                   | 1        | ing the destination port | 1        | ,                 | т -     |
|-------------------|----------|--------------------------|----------|-------------------|---------|
| Port Name         | Code     | Port Name                | Code     | Port Name         | Code    |
| Prefecture Name   |          | Prefecture Name          |          | Prefecture Name   |         |
| AJIRO             | AJR      | ASAKAWA                  | ASW      | ATAMI             | AMI     |
| SHIZUOKA          | AJIC     | TOKUSHIMA                | ASW      | SHIZUOKA          | Alvii   |
| AYUKAWA           | 4 3 77 7 | CHIBA 4KU                | 43.15    | CHIBA             | CLID    |
| MIYAGI            | AYU      | CHIBA                    | ANE      | CHIBA             | CHB     |
| CHIBA KATSUNANKU  |          | CHIYOZAKI                |          | CHOSHI            |         |
| CHIBA             | FNB      | MIE                      | CYZ      | IBARAKI / CHIBA   | CHO     |
|                   | +        |                          |          |                   |         |
| ENA               | ENA      | FUKAURA                  | FKR      | FUKUE             | FKE     |
| FUKUSHIMA         |          | EHIME                    |          | AICHI             |         |
| GOKASYO           | GKS      | HABU                     | HAU      | HACHINOHE         | HHE     |
| MIE               | GIXS     | TOKYO                    | IIAU     | AOMORI            | IIIIL   |
| HAIBARA           | TIDA     | НАМАЛМА                  | 1111/4   | HAMANA            | III (NI |
| SHIZUOKA          | HBA      | MIE                      | HJM      | SHIZUOKA          | HMN     |
| HEDA              |          | HIDAKA                   |          | HIGASHIHAZU       |         |
| SHIZUOKA          | HAD      | WAKAYAMA                 | HDK      | AICHI             | HGH     |
| HIKI              |          | HIKIMOTO                 |          | HIRAKATA          |         |
|                   | HIK      |                          | HMT      |                   | HRK     |
| WAKAYAMA          |          | MIE                      |          | IBARAKI           |         |
| HIROTA            | HTA      | HITACHI                  | HTC      | HITACHINAKA       | HIC     |
| IWATE             | 11171    | IBARAKI                  | 1110     | IBARAKI           | 1110    |
| HIWASA            | HWS      | INATORI                  | INID     | IRAGO             | IDV     |
| TOKUSHIMA         | HWS      | SHIZUOKA                 | INR      | AICHI             | IRK     |
| ISHINOMAKI        |          | ISSIKI                   |          | ITOH              |         |
| MIYAGI            | ISM      | AICHI                    | IKJ      | SHIZUOKA          | ITJ     |
| IZUMI             |          | KAMAISHI                 |          | KAMIKAWAGUCHI     |         |
|                   | IZM      |                          | KIS      |                   | KMW     |
| AICHI             |          | IWATE                    |          | KOCHI             |         |
| KAMINATO          | KMM      | KAMINOKAE                | KMK      | KANNOURA          | KRA     |
| TOKYO             | 1111111  | KOCHI                    | 121111   | KOCHI             | 11101   |
| KASHIMA           | KSM      | KATSUURA                 | KUR      | KATSUURA          | KAT     |
| IBARAKI           | KSW      | CHIBA                    | KUK      | WAKAYAMA          | KAI     |
| KEIHIN KAWASAKIKU | IZMC     | KEIHIN TOKYOKU           | TVO      | KEIHIN YOKOHAMAKU | VOI     |
| TOKYO / KANAGAWA  | KWS      | TOKYO / KANAGAWA         | TYO      | TOKYO / KANAGAWA  | YOK     |
| KESENNUMA         |          | KINOMOTO                 |          | KINUURA           |         |
| MIYAGI            | KSN      | MIE                      | KNT      | AICHI             | KNU     |
| KISARAZU          |          | KOCHI                    |          | KOZANISHIMUKAI    |         |
|                   | KZU      |                          | KCZ      |                   | KOB     |
| CHIBA             |          | KOCHI                    |          | WAKAYAMA          |         |
| KUJI              | KJI      | KURE                     | KUE      | KUSHIMOTO         | KUJ     |
| IWATE             | 1101     | KOCHI                    | HOL      | WAKAYAMA          | 1100    |
| KUWANA            | KNA      | MANAZURU                 | MNA      | MATSUZAKA         | MSA     |
| MIE               | KINA     | KANAGAWA                 | IVIINA   | MIE               | WISA    |
| MATSUZAKI         | 1 (777   | MIKAWA                   | 3 677777 | MISAKI            | 3 6777  |
| SHIZUOKA          | MTZ      | AICHI                    | MKW      | KANAGAWA          | MIK     |
| MIYAKO            |          | MOROZAKI                 |          | MOTOMACHI         |         |
| IWATE             | MYK      | AICHI                    | MRZ      | TOKYO             | MOT     |
|                   |          |                          | 1        |                   |         |
| MUGI              | MUG      | MUROTOZAKI               | MRJ      | MUROTSU           | MUX     |
| TOKUSHIMA         |          | KOCHI                    | 1        | KOCHI             |         |
| MUTSUOGAWARA      | MUT      | NAGASHIMA                | NSA      | NAGOYA            | NGO     |
| AOMORI            | 10101    | MIE                      | 110/1    | AICHI             | 1,00    |
| NAHARI            | NITIT    | NAKAMINATO               | NIMT     | NAKANOSAKU        | NIZV    |
| KOCHI             | NHI      | IBARAKI                  | NMT      | FUKUSHIMA         | NKX     |
| NAKIRI            | <b>_</b> | NIIJIMA                  |          | NUMAZU            |         |
| MIE               | NKR      | TOKYO                    | NIJ      | SHIZUOKA          | NUM     |
| OARAI             |          | OFUNATO                  | 1        | OGINOHAMA         |         |
|                   | OAR      |                          | OFT      |                   | OGH     |
| IBARAKI           |          | IWATE                    | 1        | MIYAGI            |         |
| OIGAWA            | OIG      | OKATA                    | OAA      | OKUBO             | OKB     |
| SHIZUOKA          | 010      | TOKYO                    | 07171    | ТОКҮО             |         |
|                   |          |                          |          |                   |         |

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divided into 4 sections, No.1 to 4. There is a prescribed passage from Section 2 to 4. This port is one of the leading fishing bases in Japan and, at the same time, is a principal port in the Sendai-Shiogama industrial zone.

Shiogama Gyoko (38° 19.4' N, 141° 02.8' E) is located in the Section 1 of Shiogama Ku. Sendai Ku was constructed by means of dredging the area about 1 M SW of Kouga Saki (Goten Zaki) for the purpose of developing the local industrialization.

Shiogama Ku Sections 1 and 2 (collectively called as 'inner port') are well sheltered and safe.

**Safeguards against Typhoon and Tsunami.** In order to prevent marine disasters caused by typhoon and tsunami etc., Sendai-Shiogama Ko Tsunami and Typhoon etc. 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: Miyagi Coast Guard Office).

**Tides.** In Sendai-Shiogama Ko, mean higher high water is 1.4 m, mean lower low water is 0.3 m, and mean sea level is 0.92 m.

Tidal currents. In Yogasaki Suido (passage), flood (ebb) stream flows WNW (ESE) at the rate of 1.8 (2.6) kn.

# Port communications.

With the Captain of the Port

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

| Call name                  | Frequency | Hours of<br>Operation | Contact                   | Remarks |
|----------------------------|-----------|-----------------------|---------------------------|---------|
| SHIOGAMA COAST GUARD RADIO | 16 / 12ch | 24 hours              | Miyagi Coast Guard Office |         |

#### With the Port Authority.

Port communications by a VHF radiotelephone system between a vessel and the Port Authority are available.

| Call name         | Frequency         | Hours of Operation | Contact              | Remarks                         |
|-------------------|-------------------|--------------------|----------------------|---------------------------------|
| SENDAI PORT RADIO | 16 / 11, 12, 14ch | 24 hours           | TEL: +81-22-357-0701 | Sendai Port Area<br>VTIS Center |

**Pilotage.** Pilotage is available through Licensed Pilots' Association, Sendai Pilotage District (Refer to Chapter 6 "PILOTAGE" of Part 1).

**Signals.** Traffic control signals on fairway are indicate by Miyagi Coast Guard Office Shiogama Signal Station (38° 19.4' N, 141° 04 .2' E) on Mahanashi Shima.

The certain vessels, when entering or leaving this fairway, should navigate subjected to the corresponding traffic control signals on Miyagi Coast Guard Office Shiogama Signal Station. (Refer to Article 20-2, Appended table 4 of the Regulations for the Enforcement of the Port Regulations Law).

The traffic control signals are as follows.

| Designation   |                                       | lisplaying signals                          | Meanings of signals  |
|---|---------------------------------------|---|--|
| Designation   | By flashing light By shapes and flags |   |  |
| Inward signal   | 1 white flashing every 2 seconds.     | 1 black cone shape (point up).              | Inward-bound vessels may enter the port. Outward-bound vessels of 500 G/T or more shall stop navigating and stand by. Vessels of less than 500 G/T may leave the port.   |
| Outward<br>signal<br>(Section 1 and<br>Section 2)         | 1 red flashing every 2 seconds.       | 1 black square shape.                       | Outward-bound vessels may leave the port, provided that vessels of 500 G/T or more departing from Section 1 and Section 2 shall stop navigating and stand by.  Inward-bound vessels of 500 G/T or more shall wait outside the passage and E of a line joining the Hanabuchi Saki Harbour Limit Post and the peak of Kenashi Shima, keeping out of the ways of outward-bound vessels navigating in the passage.  Vessels of less than 500 G/T may enter the port. |
| Outward<br>signal<br>(Sendai<br>Thermal<br>Power Station) | 2 red flashings<br>every 3 seconds.   | 1 black square, above<br>1 red square flag. | Outward-bound vessels may leave the port, provided that vessels of 500 G/T or more departing from Sendai Thermal Power Station quay shall stop navigating and stand by. Inward-bound vessels of 500 G/T or more shall wait outside the passage and E of a line joining the Hanabuchi Saki Harbour Limit Post and the peak of Kenashi Shima, keeping out of the ways of outward-bound vessels navigating in the passage.  |

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**Precaution for entering the port.** In the case of vessels intending to enter to Shiogama Ku, should be kept enough distance from O Ne Light Buoy (38° 15′ 56.2″ N, 141° 09′ 51.5″ E, Morse code A (•—), Green light, every 8s) and Oki-no-Taka Ne Light Bouy (38° 17′ 26.8″ N, 141° 09′ 18.5″ E, Morse code B (—•••), Green light, every 8s) and Navigating the west side is very dangerous because there are several shallows in the vicinity.

- 1. Public quays (water depths of 4.5 m or greater) may be tentatively 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.

The waters south of Sendai Ku have been designated as a fishing ground where aquaculture facilities are planned to be installed, and it is extremely dangerous to enter and leave the port between the eastern end of the Sendai South Breakwater and the southwestern end of the Sendai Offing Breakwater.

There have been several accidents where ships attempting to enter port from this area have run aground on aquaculture facilities.

3. Any vessels (except steam launches, etc.) intending to use Sendai Ku must submit a pre-entry notification to the Sendai Port Area VTIS Center at least three hours prior to entering the port.

**Overhead cables.** An overhead cable (38° 20.0' N, 141° 06.3' E; 24 m high) spans between the NE coast of Katsura Shima and the W coast of Nono Shima, and another one (38° 20.3' N, 141° 07.0' E; 25 m high) between the E coast of Nono Shima and the W coast of Sabusawa Shima. Besides that it is also in between the E coast of Sabusawa Shima and Miyato Shima (38° 20.3' N, 141° 07.9' E, 15m high).

**Anchorage.** The anchorage in the outer harbour of Sendai-Shiogama Ko is protected on the E side by the reefs around Funairi Shima and Karakai Shima and on the S side by reefs extending to the NE from Hanabuchi Saki; it is suitable for vessels, 6 m or less in draughts, but the holding ground is not very good with sandy bottom. In the vicinity of the anchorage E of Karakai Shima, waves may suddenly rise in strong E to SE winds due to the shape of the sea bed, so care is necessary to prevent dragging anchor and shifting cargoes. It should be noted that aquaculture facilities of seaweed are laid N of a line joining Mizu Shima and the N extremity of Funairi Shima, and the N side of the anchorage situated E of Karakai Shima.

A quarantine anchorage (38° 18.5' N, 141° 08.5' E) is provided at the entrance of Shiogama Ku, and another one in position (38° 13.2' N, 141° 06.5' E) SE of Sendai Ku. The designated anchorages for vessels carrying dangerous substance are provided in Shiogama Ku Sections 3 and 4, and in Sendai Ku.

Facilities.

| Name        |               | Name                       | Position                   | Length (m)  | Depth (approx. m) | Capacity (D/W×vessel)                | Remarks   |
|-------------|---------------|----------------------------|----------------------------|-------------|-------------------|--------------------------------------|---|
|             | TeizanWharf   | No.1 Quay                  | 38° 19.1' N, 141° 02.6' E  | 160         | 5.5 ~ 6           | 15,000 × 1                           | There is a pier at NE end and rough ground ahead. |
|             | ıWh           | No.2 Quay                  | 38° 19.1' N, 141° 02.7' E  | 213         | 5.5 ~ 8           | 10,000 × 1                           |   |
| S           | arf           | No.3, 4 Piers              | 38° 18.9′ N, 141° 02.6 ′ E | 130<br>each | 6~8.5             | 7,500 × 2                            |   |
| Shiogama Ku | N             | E Wharf<br>Io.1 ~ 3 Quays  | 38° 19.1' N, 141° 02.5' E  | 320         | 6~7               | 4,500 × 3                            | Fronted by foul ground                            |
| ama I       | <b>4</b> →    | No.4 ~ 6 Quays             | 38° 19.1' N, 141° 02.4' E  | 258         | 3.5 ~ 9           | $7,500 \times 1$<br>$1,500 \times 2$ |   |
| ű           | Naka<br>Wharf | No.7, 8 Quays              | 38° 19.1' N, 141° 02.2' E  | 157         | 3 ~ 5.5           | 700 × 2                              |   |
|             | f             | Front Pier                 | 38° 19.2′ N, 141° 02.3′ E  | 168         | 3 ~ 5.5           | 3,000 × 2                            |   |
|             | W             | est Wharf Pier             | 38° 19.2′ N, 141° 02.0′ E  | 320         | 3 ~ 4.5           | $1,500 \times 2$<br>$2,000 \times 2$ |   |
|             | Te            | ogu Wharf Pier             | 38° 18.7′ N, 141° 02.9′ E  | 180         | 4.5               | 3,000 × 2                            |   |
|             | Takan         | natsu WharfQuay            | 38° 16.5' N, 141° 01.5' E  | 240         | 12                | 30,000 × 1                           |   |
|             | Ta            | kamatsu Wharf<br>No.2 Quay | 38° 16.3′ N, 141° 01.4′ E  | 280         | 13.5              | 55,000 × 1                           |   |
| Š           | T             | akasago Wharf<br>No.1 Quay | 38° 16.1' N, 141° 01.2' E  | 270         | 11.5 ~ 12.5       | 30,000 × 1                           | Container crane                                   |
| Sendai      | T             | akasago Wharf<br>No.2 Quay | 38° 16.1' N, 141° 01.4' E  | 330         | 13.5              | 50,000 × 1                           | Container crane                                   |
| Ku          | Koyo          | Wharf No.1 Quay            | 38° 16.0′ N, 141° 01.9′ E  | 240         | 10 ~ 12           | 30,000 × 1                           |   |

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.

**Anchorage.** The quarantine anchorage is located within NE at the S end (36° 28.9′ N, 140° 38.0′ E) of East Breakwater.

**Anchoring prohibited.** It is the area between East Breakwater and No.1 Wharf and the area where it is prohibited in it with the area spreading to the S along the W side of East Breakwater from the area prohibited from laying anchor.

#### Facilities.

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| Name          |           | Position                  | Length (m) | Depth (approx. m) | Capacity (D/W×vessel) | Remarks        |
|---------------|-----------|---------------------------|------------|-------------------|-----------------------|----------------|
|               | A Dolphin | 36° 29.9′ N, 140° 37.6′ E | 120        | 3.5               | 1,000×1               | The depth that |
| No.1          | B Quay    | 36° 29.8′ N, 140° 37.7′ E | 121        | 6.5               | 5,000×1               | surveyed after |
| Wharf         | C Quay    | 36° 29.8′ N, 140° 37.7′ E | 130        | 7                 | 5,000×1               | the Great East |
|               | D Quay    | 36° 29.8′ N, 140° 37.6′ E | 185        | 10                | 15,000×1              | Japan          |
| No.2<br>Wharf | B Quay    | 36° 29.7′ N, 140° 37.5′ E | 165        | 8                 | 10,000×1              | Earthquake     |
| No.3<br>Wharf | B Quay    | 36° 29.5' N, 140° 37.5' E | 260        | 12                | 26,000×1              |                |
|               | A Quay    | 36° 29.5' N, 140° 37.1' E | 70         | 3                 | $1,000 \times 1$      |                |
| NI - 4        | B Quay    | 36° 29.4′ N, 140° 37.1′ E | 70         | 5                 | $1,000 \times 1$      |                |
| No.4<br>Wharf | C Quay    | 36° 29.4′ N, 140° 37.2′ E | 130        | 7                 | 5,000×1               |                |
| wnari         | D Quay    | 36° 29.3′ N, 140° 37.2′ E | 185        | 9                 | 15,000×1              |                |
|               | E Quay    | 36° 29.2' N, 140° 37.2' E | 240        | 9.5               | $30,000 \times 1$     |                |
|               | A Quay    | 36° 29.1' N, 140° 36.9' E | 130        | $6 \sim 9.5$      | $5,000 \times 1$      |                |
| No.5          | B Quay    | 36° 29.1' N, 140° 37.1' E | 185        | 9                 | 15,000×1              |                |
| Wharf         | C Quay    | 36° 29.1' N, 140° 37.1' E | 185        | 9.5               | 15,000×1              |                |
|               | D Quay    | 36° 29.0′ N, 140° 37.2′ E | 240        | $10 \sim 11.5$    | 30,000×1              |                |

# Supply. Fresh water is available.

### Maritime authorities and facilities.

| Name  | Telephone                        |
|---|----------------------------------|
| Hitachi Branch of Ibaraki Coast Guard Office (Acting Captain of the port) | +81-294-29-0118                  |
| Hitachi Sub-branch of Kashima Branch Customs                              | +81-294-52-2128                  |
| Ibaraki Branch of Kanto District Transport Bureau (Located in Mito City)  | +81-29-247-5348                  |
| Hitachi Detached Office of Tokyo Quarantine Station                       | (+81-299- <mark>54-0032</mark> ) |
| (To be contacted to Ibaraki Airport Detached Office Station)              | (+81-299-54-0032)                |
| Hitachi Sub branch, Tokyo Branch of Yokohama Plant Protection Station     | (+81-3-3599-1137)                |
| (To be contacted to Tokyo Branch of Yokohama Plant Protection Station)    | (+81-3-3399-1137)                |
| Mito Branch Office of Tokyo Immigration Bureau (Located in Mito City)     | +81-29-300-3601                  |
| Ibaraki Prefectural Ibaraki Port / Hitachi District Office                | +81-294-52-4000                  |

Tugboats. Available.

#### Facilities.

|             | Name            | Position                  | Length (m) | Depth (Approx. m) | Capacity (D/W×vessel) | Remarks                |
|-------------|-----------------|---------------------------|------------|-------------------|-----------------------|------------------------|
|             | A Quay          | 36° 25.9' N, 140° 37.5' E | 290        | 14.5              | 50,000 × 1            | Aseismatic quay, crane |
|             | B Quay          | 36° 25.9' N, 140° 37.3' E | 230        | 12.5              | 30,000 × 1            | Crane                  |
|             | C Quay          | 36° 25.9' N, 140° 37.2' E | 170        | 9.5 ~ 10          | 10,000 × 1            | Crane                  |
| z           | D Quay          | 36° 25.9' N, 140° 37.0' E | 130        | 7.5               | 5,000 × 1             |                        |
| North Wharf | E Quay          | 36° 25.9' N, 140° 36.9' E | 130        | 7.5               | 5,000 × 1             |                        |
| μV          | F Quay          | 36° 25.9′ N, 140° 36.8′ E | 130        | 7.5               | 5,000 × 1             |                        |
| Vha         | G Quay          | 36° 25.9′ N, 140° 36.7′ E | 100        | 5                 | 2,000 × 1             |                        |
| 禹           | H Quay          | 36° 25.9' N, 140° 36.6' E | 100        | 5                 | 2,000 × 1             |                        |
|             | I Quay          | 36° 25.9′ N, 140° 36.6′ E | 100        | 5                 | 2,000 × 1             |                        |
|             | J Quay          | 36° 25.8' N, 140° 36.6' E | 100        | 5.5               | 2,000 × 1             |                        |
|             | K Quay          | 36° 25.7' N, 140° 36.6' E | 100        | 6.5 ~ 7           | 2,000 × 1             |                        |
| Cent<br>A Q | er Wharf<br>uay | 36° 25.6' N, 140° 36.6' E | 130        | 6 ~ 7             | 5,000 × 1             | Aseismatic quay        |
| Cent<br>B Q | er Wharf<br>uay | 36° 25.6' N, 140° 36.7' E | 250        | 8.5 ~ 9           | 6,500 × 1             |                        |
| Cent<br>C Q | er Wharf<br>uay | 36° 25.6' N, 140° 36.9' E | 300        | 12                | 30,000 × 1            | Aseismatic quay        |
| Cent<br>D Q | er Wharf<br>uay | 36° 25.6' N, 140° 37.2' E | 300        | 12                | 70,000 × 1            |                        |
| Sout<br>A Q | h Wharf<br>uay  | 36° 24.3′ N, 140° 36.6′ E | 180        | 4                 | 2,000 × 1             |                        |
| B Q         |                 | 36° 24.3′ N, 140° 36.7′ E | 180        | 4                 | 2,000 × 1             |                        |
| Sout<br>C Q | h Wharf<br>uay  | 36° 24.3' N, 140° 36.8' E | 260        | 6~6.5             | 5,000 × 1             |                        |

Apart from the above table, a basin (36° 24.6' N, 140° 36.7' E) is situated respectively on the N side of the inshore part of S Wharf.

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

#### Maritime authorities and facilities.

| Name   | Telephone       |
|--|-----------------|
| Hitachi Sub-branch of Kashima Branch Customs (Located in Hitachi City)   | +81-294-52-2128 |
| Ibaraki Branch of Kanto District Transport Bureau (Located in Mito City) | +81-29-247-5348 |
| Ibaraki Prefectural Ibaraki Port Office                                  | +81-29-265-1260 |

Tugboats. Available.

# Iso Saki ~ Inubo Saki (Charts W62, JP1097, W1050)

**General information.** Except in areas in the vicinities of Iso Saki and Inubo Saki, the coast, about 42 M in length, consists of a chain of sandy beaches washed by surf all the time backed by a range of wooded hills. The inland is a wide area of plains, where Naka Kawa in the N Part and Tone Kawa in the S part flow into the Pacific. Other than Tsukuba San (36° 14' N, 140° 06' E; 876 m high), there are no noticeable peaks in this area.

The 10 m depth contour lies within  $0.5 \sim 1$  M offshore and no dangerous reefs exist along the coast except O Ne (35° 49' N, 140° 54' E, the depth 17.5 m) lying N of Inubo Saki.

Oarai Ko (36° 18' N, 140° 35' E) lies on the W of Oarai Misaki and Isozaki Gyoko (36° 21' N, 140° 37' E) near Hira Iso is for use of only local fishing vessels.

The coastal water off the coast between Nakaminato Ko (36° 20' N, 140° 36' E; Chart W47) and Oarai Ko, numerous small fishing boats operate in early morning, and many pleasure boats come out on holidays.

There are many recreational fishing boats in the offing of Kashima Ko.

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# Landmarks.

| Landmark     | Position                  | Remarks  |
|--------------|---------------------------|--|
| 3 chimneys   | 35° 55.1' N, 140° 42.0' E | Chimney stacks, each about 205 meters high, about 205 meters high, 234 meters high in turn from the E; red and white. All of those are located in a thermal power station. |
| A tower      | 35° 54.8' N, 140° 40.3' E | An observatory, 58 m high, located in a park, lighted at night.  |
| A chimney    | 35° 54.6' N, 140° 41.3' E | A chimney stack, 126 m high, red and white.  |
| Wind turbine | 35° 55.4' N, 140° 42.0' E |  |
| Wind turbine | 35° 55.1' N, 140° 42.5' E |  |

| Port regulations.                                    |  |
|--|--|
| Restriction on anchoring                             | No vessel may anchor or loose a vessel or any other object in tow in the sea area (hereafter   |
| etc. (Article 23 of                                  | referred to as "Kashima Fairway" in the following Article and Annex Table No.4) enclosed by  |
| Regulations for the                                  | the following lines:   |
| Enforcement of the Port                              | The line drawn from a position (hereafter referred to as "Point A" in this Article) 247° 430 m   |
| Regulations Law)                                     | from the NE extremity (35° 55' 33" N, 140° 42' 00" E) of Fukashiba Public Quay to a position   |
|  | 55° 900 m, the line drawn thence to a position 35° 870 m, the line drawn thence to a position  |
|  | 3.5° 2,670 m, the line drawn thence to a position 273.5° 480 m, the line drawn thence to a   |
|  | position 183.5° 2,510 m, the line drawn thence to a position 215° 940 m, the line drawn thence   |
|  | to a position 235° 560 m, and the line drawn thence to Point A; except in the following cases:   |
|  | 1) the vessel intends to avoid marine disasters;   |
|  | 2) the vessel is not under command;  |
|  | 3) the vessel is engaged in rescue of human life or in imminent danger;  |
|  | 4) the vessel is engaged in a construction or works under the permission of the Captain of the   |
| Naniastianal   | Port in accordance with Article 31 of the Port Regulations Law.  |
| Navigational   | 1. Vessels with a length of 190 m or more (tankers of 1,000 G/T or more which is loaded with   |
| precautions (Article 23-<br>2 of Regulations for the | crude oil, liquefied petroleum gas or any other liquid with a ignition point of below 23°C by closed up ignition-point-meter or in which it has not been confirmed by the captain, after |
| Enforcement of the Port                              | unloading materials generating flammable or explosive vapor, and conducting gas check, that  |
| Regulations Law)                                     | there is no danger of fire or explosion; this clause is applied hereinafter correspondingly) should  |
| Regulations Law)                                     | report the matters described in each Item of Article 38 Paragraph 2 of the Port Regulations Law  |
|  | when proceeding to Kashima Ko by Kashima Fairway or when taking departure from Kashima   |
|  | Ko through the fairway (the matters in Item 3 mean the estimated time of arrival near the  |
|  | entrance to Kashima Fairway when proceeding, and the estimated time of departure when  |
|  | taking departure) to Captain of the Port by noon of the day before proceeding or departing,  |
|  | respectively.  |
|  | 2. Vessels making reports of estimated time as described in the preceding Paragraph, should  |
|  | report to the Captain of the Port immediately when the change has been made on said items.   |
|  | Consultation; the matters described in each Item of Article 38 Paragraph 2 of the Port   |
|  | Regulations Law:   |
|  | 1) Name of the vessel.   |
|  | 2) Gross tonnage and length of the vessel.   |
|  | 3) Estimated time for the vessel to navigate through the fairway.  |
|  | 4) Means of communicating with the vessel.   |
|  | 5) The mooring facility within the specified port where the vessel is anchored or seeks to   |
|  | anchor.  |

#### Indication of Course and Destination etc.

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| Indication of Course and Destination (Japan Coast                 | Flag Signals            | Symbols showing the destination in the port | Meanings of Signals and Symbols   |
|---|-------------------------|---|---|
| Guard Notice No.35,<br>1995) and Symbol<br>showing Destination of | 2nd Substitute,<br>D    | D   | Proceeding to mooring facilities N of the line joining the SE extremity of Central Wharf in Chiba Ku Section 1 and the SW extremity of Dezu Wharf.  |
| Automatic Identification<br>System (Japan Coast                   | 2nd Substitute,         | C   | Proceeding to the S of Central Wharf within the mooring facilities in Chiba Ku Section 3.   |
| Guard Notice No. 94,<br>2010)                                     | 2nd Substitute,         | S   | Proceeding to the mooring facilities in Chiba Ku Section 3 excluding the S of Central Wharf.  |
|   | 2nd Substitute,<br>F, S | FS  | Proceeding from Funabashi Central Wharf South<br>Quay and Funabashi Central Wharf North E Quay to<br>M Quay.  |
|   | 2nd Substitute,<br>F, N | FN  | Proceeding to mooring facilities W of the line joining the NE extremity of Funabashi Central Wharf North Quay and Hinode Lock in Katsunan Ku.   |
|   | 2nd Substitute,<br>I, W | I W   | Proceeding to mooring facilities W of the line-<br>joining the point at 341° 580m from the point at<br>334.5° 420 m from the Shiohama triangulation<br>point (35° 40′ 10″ N, 139° 56′ 49″ E). |
|   | 2nd Substitute,<br>I, E | ΙE  | Proceeding to mooring facilities N of the line-joining the point at 72.5° 510m from the point at 66.5° 610m from the Shiohama triangulation point (35° 40′ 10″ N, 139° 56′ 49″ E).            |

**Restrictions to the navigational traffic and others** (Article 38 of the Port Regulations Law, Article 20-2 of the Regulations for the Enforcement of the Port Regulations Law).

The Captain of the Port shall instruct the necessary measures concerning operation of the concerned vessels in Chiba Passage and Ichihara Passage when there is a fear of causing danger in vessel navigation and instruct to alter its expected time of navigating in the concerned passage when necessary to arrange another ship to be watchful of the course of the concerned principal vessel.

**Information provided by the Captain of the Port shall be listened to** (Article 41 of the Port Regulations Law, Article 20-3 of the Regulations for the Enforcement of the Port Regulations Law).

Through the VHF wireless phones in attention to ships net tonnage 500 G/T and over, the Captain of the Port shall provide infomation about the sunken ships, other pieces of information about detrimental things to navigation and necessary information, which designated vessels are supposed to listen (Refer to Fig.33 and Fig.28) for safe navigation in the concerned routes.

The designated ships shall listen to infomation provided by the Captain of the Port while navigating in the applicable waters pursuant to the Port Regulations Law (Refer to Fig.33 and Fig.28).

Advices for Adherence to the navigation rules and the prevention of dangers (Article 42 of the Port Regulations Law, Article 20-5 of the Regulations for the Enforcement of the Port Regulations Law).

The Captain of the Port shall advise the concerned vessels measures regarding adherence to the navigation rules, course change and others to prevent dangers over the VHF wireless phones.

**Pilotage.** Pilotage is available on request through the Shimizu Pilot Association (Refer to Chapter 6 "PILOTAGE" of Part 1).

#### Landmarks.

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| Landmark            | Position                  | Remarks   |
|---------------------|---------------------------|---|
| A conspicuous house | 35° 03.5' N, 138° 26.9' E | A radio relay station, located on halfway up the Taka Yama, 446 m high, square shaped, white. |
| A temple            | 35° 02.9' N, 138° 30.8' E | Kiyomi temple.  |

**Passage.** A passage, about 2.7 M long, about 200 ~ 300 m wide and 12 ~ 25 m deep, is provided from the entrance of the port to the entrance of Section 1. Alignment of Shimizu Ko Leading Lights (front light: 34° 59.7' N, 138° 29.9' E; rear light: 34° 59.6' N, 138° 29.9' E; bearing 181.4° of two lights in line), leads to the center of the passage.

**Precautions for entering the port.** At weekends, there are many windsurfers, sailing boats, ferryboats etc. in the passage in the vicinity of Ma Saki.

Shimizu Ko Miho Breakwater N Light (35° 01.4' N, 138° 31.5' E) and Shimizu Ko Outer Harbour Breakwater S Light (35° 01.7' N, 138° 31.2' E) are reportedly difficult to be distinguished from the lights in the background at night.

**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 the Captain of the Port.

**Mooring buoy.** There are two mooring buoys in Section 1.

**Anchorage.** The quarantine anchorage is located in the vicinity of the position (35° 02.0' N, 138° 31.5' E) which is E of the Outer Harbour Breakwater. During rough weather, the quarantine services are offered in the area SSW of Ma Saki. Anchorage for vessels carrying dangerous substance is designated within Section 3.

# Facilities.

| Fa           | Facilities.               |                                  |   |            |                   |  |   |
|--------------|---------------------------|----------------------------------|---|------------|-------------------|--|---|
|              | Name                      |                                  | Position  | Length (m) | Depth (Approx. m) | Capacity<br>(D/W ×<br>vessel)                          | Remarks   |
| Shin -Okitsu | Shin -Okitsu<br>Wharf     | No. 1, 2 Quays                   | 35° 02.4' N, 138° 31.1' E                         | 700        | 15                | 60,000 × 2   | Container<br>Aseismatic quay                                    |
|              | ₹ZÇ                       | No. 1 ~ 3 Quays                  | 35° 02.4' N, 138° 30.8' E                         | 556        | 9.5 ~ 10          | 15,000 × 3   | Aquatic products  |
|              | Okitsu<br>No. 1<br>Wharf  | No. 4, 5 Quays                   | 35° 02.6' N, 138° 30.7' E                         | 181        | 3.5 ~ 6           | 2,000 × 2  | Metals  |
| Š            |                           | No. 6 ~ 9 Quays                  | 35° 02.4' N, 138° 30.7' E                         | 740        | 7 ~ 9.5           | 15,000 × 4   | Aquatic products  |
| Okitsu       | 0.2<br>0.2                | No. 10 Quay                      | 35° 02.2' N, 138° 30.7' E                         | 168        | 6.5 ~ 7.5         | 5,000 × 1  |   |
| -            | Okitsu<br>No. 2 Wharf     | No. 11, 12 Quays                 | 35° 02.3' N, 138° 30.6' E                         | 440        | 11.5 ~ 12         | 30,000 × 2   | Aseismatic quay Pulp  |
|              | arf                       | No. 13, 14 Quays                 | 35° 02.5' N, 138° 30.5' E                         | 370        | 9.5 ~ 10          | 15,000 × 2   | Aseismatic quay Plywood   |
|              |                           | No. 1 ~ 4 Quays                  | 35° 02.6' N, 138° 30.4' E                         | 240        | 3.5 ~ 4           | 700 × 4  | Recyclable materials  |
|              | Z.0                       | No. 5 Quay                       | 35° 02.4' N, 138° 30.4' E                         | 135        | 7                 | 5,000 × 1  |   |
|              | Sodeshi<br>No. 1 Wharf    | No. 6 ~ 8 Quays                  | 35° 02.2' N, 138° 30.4' E                         | 720        | 11~12             | $30,000 \times 3$                                      | Container Chassis   |
| S            | esh<br>Wh                 | No. 9, 10 Quays                  | 35° 01.9' N, 138° 30.4' E                         | 350        | 9                 | $10,000 \times 2$                                      |   |
| Sodeshi      | arf I                     | No. 11 Quay                      | 35° 02.0' N, 138° 30.3' E                         | 240        | 12                | 30,000 × 1   | Coal products, Timber   |
| sh:          |                           | No. 12 ~ 15 Quays                | 35° 02.1' N, 138° 30.2' E                         | 520        | 6 ~ 7             | 5,000 × 4  | Metals  |
|              | So                        | No. 16 Quay                      | 35° 02.0' N, 138° 30.1' E                         | 330        | $9.5 \sim 12$     | $30,000 \times 1$                                      | Recyclable materials  |
|              | Sodeshi<br>No. 2<br>Wharf | No. 17 Quay                      | 35° 01.8' N, 138° 30.0' E                         | 165        | 9                 | $10,000 \times 1$                                      | Petroleum products  |
|              | sh:                       | No. 18 Quay                      | 35° 01.9' N, 138° 29.9' E                         | 72         | $1.5 \sim 7.5$    | 1,000 × 1  | LPG   |
|              |                           | No. 1 ~ 5 Quays                  | 35° 01.1' N, 138° 29.6' E                         | 497        | 5 ~ 5.5           | 3,000 × 5  | Aquatic products  |
|              | .H                        | No. 6, 7 Quays                   | 35° 01.2' N, 138° 29.5' E                         | 149        | 2~4               | 700 × 2  |   |
| ш            | Ejiri                     | No. 8 ~ 12 Quays                 | 35° 01.3' N, 138° 29.4' E                         | 340        | 3~4               | 700 × 5  | Ferry, Heavy oil  |
| Ejiri        | Wharf                     | No. 13 ~ 16 Quays                | 35° 01.3' N, 138° 29.7' E                         | 262        | $3.5 \sim 4.5$    | 700 × 4  |   |
|              | narf                      | No. 17, 18 Quays                 | 35° 01.2' N, 138° 29.7' E                         | 185        | 3.5 ~ 5.5         | $3,000 \times 2$                                       | Aquatic products  |
|              |                           | Shimizu Wharf No. 1 ~ 5<br>Quays | 35° 00.7' N, 138° 29.7' E                         | 323        | 3.5 ~ 4           | 700 × 5  | Feeding stuffs and fertilisers                                  |
| Hi           | Hino                      | No. 1 Quay                       | 35° 00. <mark>3</mark> ' N, 138° 29. <b>9</b> ' E | 410        | 5~12              | Cruise ship<br>15,000 × 1<br>Cruise ship<br>30,000 × 1 | When piers 1 and 2 are used continuously, 230,000t cruise ships |
| Hinode       | Hinode Wharf              | No. 2 <del>, 3</del> Quay        | 35° 00.5' N, 138° 29.9' E                         | 410        | <del>8-</del> 12  | Cruise ship $15,000 \times 2$                          | can be used.  |
|              | arf                       | No. 4, 5 Quays                   | 35° 00.5' N, 138° 29.8' E                         | 480        | 12                | 30,000 × 2   | Ferry Passenger ship, Pulp<br>Aseismatic quay                   |
|              |                           | Tomoe Sagan Quay                 | 35° 00.2' N, 138° 29.8' E                         | 100        | 3 ~ 4.5           | $1,000 \times 1$                                       |   |

The 20 m depth contour lies within 1 M offshore on the E half of this coast, then gradually moves seaward as going W from the entrance of Hamana Ko and reaches about 6.5 M offshore at Irago Misaki. There is no dangerous reef with the depth of 10 m or less outside 1 M offshore except the area extending to W 8 M from Omae Saki.

Hamana Ko (34° 42' N, 137° 35' E) (Chart W1215) lies at the entrance of Hamana Ko (lake), Fukude Gyoko (34° 40' N, 137° 54' E) is located in the estuary of Ota kawa at ENE of the estuary of Tenryu Kawa and Akabane Gyoko (34° 36' N, 137° 11' E) is situated WSW of Takamatsu Saki lying on the S side of Atsumi Hanto. There are also detached breakwaters and submerged jetties near Irago Misaki, W of Akabane Gyoko, and near Takatsuka district coastal area in W of Hamana Ko. There is neither port nor bay affording shelter.

#### Landmarks.

| Landmark               | Position                             | Remarks   |
|------------------------|--------------------------------------|---|
| A bridge building      | 34° 41' N, 137° 36' E                | Hamana O Hashi, 24 ~ 26 m high. Bridge lights are attached.   |
| Takamatsu Saki         | 34° 37' N, 137° 13' E                | A small projection, 29 m high, thickly covered with pine trees.<br>A detached rock (12 m high) in front of it makes easy to identify this cape. |
| O Yama                 | 34° 3 <mark>6</mark> ′ N, 137° 09′ E | A conspicuous mountain, 328 m high.   |
| A conspicuous building | 34° 35' N, 137° 02' E                | A hotel, cream 5-storied building, 137 m high.<br>It is located SE of Choppori Yama.  |

**Precaution for navigation.** At the southern coastal waters of Atsumi Hanto, trawlnet fishery and boat seine fishery are performed actively.

# Paragraph 4 IRAGO SUIDO

(Charts JP1064, JP1053, JP1051)

**General information.** This channel separates Irago Misaki from Kami Shima at the entrance of Ise Wan, and is the safest route for entering Ise Wan and Mikawa Wan from the open sea. There are detached dangerous reefs on the both sides of the channel and the width of the passage with the depth of 10 m or more is about 1 M.

There are many navigating vessels of various size in this channel, therefore the average daily number of vessels in 2019 was about 409 vessels. It is necessary to exercise adequate caution in navigating this channel because of high density of fishing vessels operating in this waters besides.

The Maritime Traffic Safety Law is applied to the water N of the line joining O Yama triangulation point (34° 36' 07" N, 137° 08' 47" E) located in the W part of Atsumi Hanto and Ijika Light (34° 26' 40" N, 136° 55' 25" E), which includes Ise Wan and the entrance, and Irago Suido. Irago Suido Traffic Route is set in the central part of Irago Suido under provisions of this law.

Tidal currents. (Refer to Figs. 45 and 46)

At the central part between Irago Misaki and Kami Shima, flood (ebb) stream flows toward the NW (SE), with a maximum flow velocity of 2.6kn.

**Pilotage.** Ise-Mikawa Wan Pilotage Area covers the water of Irago Suido Traffic Route and nearby sea areas (Refer to Chapter 6 "PILOTAGE" of Part 1).

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3. Restriction on entry time into the traffic route.

Vessels of 50,000 G/T or more carrying dangerous cargo, and vessels of 25,000 G/T or more carrying liquefied gas should enter the traffic route from 1 hour before sunrise till sunset.

However, vessels of 25,000 G/T or more loading dangerous liquefaction gas which have both a boat with firefighting equipment and an escort boat, which are equipped with a night vision binoculars etc., can enter the traffic route at a period of time from 19:00 JST (In case of the sunset time after 19:00 JST, the time is at sunset.) to 03:00 JST of the next day.

#### 4. Restriction in overtaking.

A vessel should avoid overtaking another vessel, as far as practicable, in the traffic route, and in the vicinity of the entrance and positions where vessels change the courses.

- 4. Change of notification and confirmation.
- (1) The following items should be also reported when the vessel reports the "Notification of Traffic Route".
- a. Port of departure

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- b. Whether a pilot while navigating the traffic route has been arranged or not
- (2) Vessels already reported the "Notification of Traffic Route" should report the Change of Notification at each change, when the estimated time of entering the traffic route is changed five minutes or more during duration from three hours before the estimated time of entering the traffic route and position report described in "7 Position Report".
  - 5. Confirmation of traffic control.
  - (1) A vessel navigating in the traffic route should pay sufficient attention to the signals at the Irago Suido Traffic Control Signal Station. Traffic Control Signal Station and make sure to ascertain controlling conditions.
  - (2) A vessel of 130 m or more in length should contact the traffic control officer by VHF ch16 to confirm the conditions of traffic control before approaching the traffic route unless such signals as described in the preceding paragraph has been confirmed.
    - 6. Position Report etc. (Refer to Fig. 50)
- Vessels with a length of 50 m or more and "Vessels Towing Object etc." having a length of 100 m or more, (excluding vessels which is equipped with Automatic Identification System and is transmitting information appropriately), are required to notify "Position Report" to Ise Wan Vessel Traffic Service Center when they reach the first Position Report Line.

Note: "Vessels Towing Object etc." means that vessels navigating while pushing or towing vessels, rafts or other objects and with a distance of 100 m or more from the tugboat bow to the back end of the objects or from push boat stern to the head of the objects.

- (1) Reporting items.
- a. Name of the vessel
- b. Present position or an abbreviation of the Position Report Line that has been passed and the time of passing the
   line (Japan standard time, 24 hour clock)

#### (2) Position reporting lines.

| Name of position reporting line | Abbreviation | Position  |
|---------------------------------|--------------|---|
| Ise Wan Entrance South          | IS line      | The line drawn from Ijika Light to the point 90° 20.5 km from Ijika Light.  |
| Ise Wan Entrance East           | IE line      | The line drawn from Oyama Triangulation Point to the point 180° 17.7 km from Oyama Triangulation.   |
| Nakayama Suido East             | NE line      | The line drawn from Tatsumasaki Light to the S end of Saku Shima.   |
| Morozaki Suido South            | MS line      | The line drawn from the S end of Saku Shima to Hazu Misaki.   |
| Ise Wan Entrance North          | IN line      | The line drawn from the Toyohama Ko Nakazu Off Breakwater W Light to the point 217° 11.1 km from Toyohama Ko Nakazu Off Breakwater W Light. |

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| Ise Wan Entrance West | IW line | The line drawn from the W end of Toshi Shima to the point 0° 13.3 km from the W end of Toshi Shima. |
|-----------------------|---------|---|
| Sugashima Suido East  | SE line | The line drawn from the E end of Suga Shima to the SE end of Toshi Shima.                           |

# 7. Staying in touch with Ise Wan Vessel Traffic Service Center.

Vessels with a VHF radiotelephone system (ch16, 156.8 MHz) shall stay in touch with Ise Wan Vessel Traffic Service Center in case of information etc. provided pertaining to the safety of navigation while in the traffic route, in main tracks to the traffic route and in sea areas around the traffic route.

Furthermore, vessels with ch13 shall keep watch on it as well as ch16 since Ise Wan Vessel Traffic Service Center may make a call by ch13 when ch16 is congested.

8. Waiting place under restriction on entry into the traffic route.

A vessel prohibited to enter the traffic route under limited visibility and other case.

(1) A northbound vessel

A northbound vessel should wait in the area which dose not reaches Ise Wan No. 1 Light Buoy (34° 31.0′ N 137° 03.6′ E), keeping out of the ways of other vessels.

(2) A southbound vessel

A southbound vessel should adjust the time of departure as far as practicable but a southbound vessel under way should wait in the area which does not reach Ise Wan No. 3 Light buoy, keeping out of the ways of other vessels.

9. Preparation of emergency fire wires. (Refer to Fig. 30)

A vessel carrying dangerous cargo (except tankers equipped with SUNKENBITT having ample strength) prescribed by the Maritime Traffic Safety Law should prepare emergency fire wires at the bow and the stern for immediate use in case of emergency.

10. Preparation of charts.

Vessels navigating in Ise Wan and Mikawa Wan should prepare at least the following charts issued by Hydrographic and Oceanographic Department of Japan Coast Guard and obtain the latest information of port in advance.

| u | the occanographic Department of Jupan Coast Guard and Cotain the facest information of port in advance. |                            |           |             |  |  |  |
|---|---|----------------------------|-----------|-------------|--|--|--|
|   | Chart No.   | Title                      | Chart No. | Title       |  |  |  |
|   | JP1051  | Ise Wan                    | JP1064    | Irago Suido |  |  |  |
|   | JP1053  | Irago Suido and Approaches |           |             |  |  |  |

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# Paragraph 5 MIKAWA WAN

(Charts JP70, JP1052, JP1053)

**General information.** Mikawa Wan is a large bay lying on the E of Ise Wan and enclosed by Atsumi Hanto and Chita Hanto. The area W of the line joining Tatsuma Saki Light, the S extremity of Saku Shima and Hazu Misaki, the S extremity of Chita Hanto is called Ise Wan; Mikawa Wan is the area  $E \sim N$  of it (See the 1st article of the Cabinet order for the Enforcement of the Maritime Traffic Safety Law.).

Mikawa Wan is divided into two branch bays by the line joining Hazu Misaki (34° 42' N, 136° 58' E) and Ikuta Hana (34° 47' N, 137° 02' E), the E side of which is Atsumi Wan and the N side is Chita Wan. Mikawa Wan, depths are regular, not more than 20 m deep except in the vicinity of the entrance, muddy and sandy bottom giving a good holding ground, is better shelter than Ise Wan in northerly or easterly winds. However, caution is necessary for dredging anchor at the time of the strong wind from the W.

Nakayama Suido and Morozaki Suido at the entrance are described in the next section, "Approaches to Mikawa Wan". **Pilotage.** Pilotage is available on request through the Ise-Mikawa Wan Pilot Association (Refer to Chapter 6

"PILOTAGE" of Part 1).

Navigational information. 4th Regional Coast Guard Headquarters compiled information which help vessels to navigate in Ise Wan, Mikawa Wan, or cardinal ports of those bays, and published in the following web page as "Marine Traffic Guidebook in Ise Wan and Mikawa Wan."

URL: https://www.kaiho.mlit.go.jp/04kanku/safety/rule/000002.html

**Precaution for navigation.** At Mikawa Wan, trawlnet fishery and boat seine fishery are performed actively almost throughout the whole year. It is necessary to exercise caution to boat seine fishery in particular, because 2 fishing boats are pulling a fishing net reaching up to a maximum length of 500 m together as a pair. In addition, the feature of boat seine fishery is that there are buoys on the surface of the water owing to pulling at a fishing net in the surface layer or the middle layer. When mariners found these fishing boats, vessels should navigate at a distance sufficient to avoid them and should not approach the operational area of them. (Refer to the section "Fishery" of Chapter 7 "NAVIGATIONAL PRECAUTIONS" of Part 1).

Furthermore, at coastal waters of between No Shima and Tatsuma Saki, dive fishery is performed actively almost throughout the whole year. Generally, small fishing boats engaged in dive fishery anchor and hoist a international flag "A".

#### **Approaches to Mikawa Wan** (Charts JP1052, JP1053, W1054)

**General information.** No Shima, Shino Shima, Tsukumi Shima and Himaka Shima lie in N-S direction in the vicinity of the entrance of Mikawa Wan. Saku Shima is situated separately from these islands. These islands are low lying with a height 50 m or less. Shinoshima Ko (Port Code: JP SNJ) lies on the N coast of Shino Shima; the water is calm in winds from every direction.

Nakayama Suido lies between No Shima and Atsumi Hanto, and Morozaki Suido separates Himaka Shima from Chita Hanto. Both passages N and S of Saku Shima can be used when navigating between Atsumi Wan and Chita Wan, but it is recommended not to take the N passage as shoals, 5 m deep or less, lie on the N side of Saku Shima extending from Ikuta Hana on the northward opposite shore.

Vessels navigating between Himaka Shima and Saku Shima should exercise caution with aquaculture facilities laid within about  $0.4 \sim 1$  M offshore of the both island, which extremely narrow the channel.

**Nakayama Suido.** This channel is an important place for maritime traffic where it lies between W shore of Chita Hanto and No Shima. There is Tono Se (34° 38.2' N, 137° 01.2' E; 4.1 m deep, with a light buoy on the N side) near the middle part of this channel, and a shallow point (10 m deep or less, about 1 M long in N-S direction) near SW 1.5 M of Tono Se. Furthermore, there is Nakayama Suido Passage (A development and preservation passage, 4 light beacons are installed in there) at the N of the shallow point. (Refer to Fig. 51)

**Morozaki Suido.** (34° 41' N, 136° 59' E) The central part is 30 m deep or more but on its both sides numerous dangerous reefs lie and depth contours of  $5 \sim 20$  m run very closely each other, nearly lying on top of the other. In the

result, the passage width with depths of 20 m or more comes to merely about 500 m. This channel is fishing grounds and many fishing vessels operate all the time, especially on holidays, numerous fishing boats and recreational fishing boats gather in the channel, which makes it difficult for general vessels to pass through the channel.

It should be noted that there are aquaculture facilities of seaweeds on the both side of Morozaki Suido and along the shores of islands in the vicinity.

**Tidal currents.** Refer to Figs. 45 and 46.

#### Landmarks.

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| Landmark        | Position  | Remarks  |
|-----------------|---|--|
| Tatsuma Saki    | 34° 39.6' N, 137° 04.2' E                             | A low cape surmounted by a lighthouse which is clearly visible after going round Irago Misaki.   |
| 5 wind turbines | 34° 38.4′ N, 137° 03.2′ E                             | About 101 m high.  |
| Chimney         | 34° 39. <mark>2</mark> ' N, 137° <mark>03.9'</mark> E | 152 m and 203 m high respectively, red and white, located in the yard of Atsumi thermal power station. These are conspicuous together with TV towers and tanks in the vicinity.                      |
| No Shima        | 34° 39.5' N, 137° 00.5' E                             | An island, standing at the S extremity of the group of islands around the entrance. A lighthouse stands at the S side.   |
| Shino Shima     | 34° 40.6′ N, 137° 00.2′ E                             | Higashi Yama (41 m high) at the NE end is conspicuous with thinly grown old pine trees.  |
| Tsukumi Shima   | 34° 41.5' N, 137° 00.5' E                             | 44 m high, thickly covered with bush and weeds. The slope on the N side collapses from the peak, which is conspicuous.   |
| Hazu Misaki     | 34° 41.8' N, 136° 58.4' E                             | A cape of which S side forms reddish cliffs. It is easily identified with an observatory (38 m high) at the end. Byobu Iwa (2.9 m high), a conspicuous mark, stands close S of the end of this cape. |
| Saku Shima      | 34° 43.7' N, 137° 02.6' E                             | An island with the peak on the E part, 38 m high.  |

# Approaches to Morozaki Suido



The vicinity of Morozaki Suido seen from the N



The vicinity of Morozaki Suido seen from the S

**Weather.**  $W \sim NW$  wind prevails throughout the year.

**Port communications.** Port communications by a VHF radiotelephone system between a vessel and the Port Authority are available.

| Call name  | Frequency   | Hours of<br>Operation | Contact               | Remarks |
|--|-------------|-----------------------|-----------------------|---------|
| MIKAWAWAN PORT RADIO<br>MIKAWAWAN PORT RADIO NO. 2 | ch16/11, 12 | 24 hours              | TEL: +81- 532-34-7850 |         |

5 **Pilotage.** Pilotage is available on request through the Ise-Mikawa Wan Pilot Association (Refer to Chapter 6 "PILOTAGE" of Part 1).

#### Landmarks.

|           | Landmark                                       | Position                  | Remarks  |
|-----------|--|---------------------------|--|
| T         | 2 chimneys 34° 42.3' N, 137° 16.0' E T         |                           | There are silos close to the W.  |
| Tahara    | Kasa Yama                                      | 34° 42.4′ N, 137° 16.7′ E | A conical mountain, 79 m high.   |
| ra        | Zao San  | 34° 41.1' N, 137° 15.7' E | A mountain, 250 m high; located in the S interior of the port.           |
|           | Wind turbines                                  | 34° 43.6' N, 137° 17.5' E | 8 wind turbines, 110-112 m in height.                                    |
| ŷ         | Group  | 34 43.0 N, 137 17.3 E     | 8 which terrorines, 110-112 in in height.                                |
| oh        | 3 portal cranes                                | 34° 43.4' N, 137° 18.6' E | Red and white, located in the shipyard.                                  |
| Toyohashi | A chimney                                      | 34° 43.4' N, 137° 19.0' E | 83 m high, red and white; located in the yard of Toyohashi Power         |
| 1.        | 2. A chilling 34 43.4 N, 137 19.0 E            |                           | Station, Akemi Electric Power, Ltd.                                      |
| g         | Take Shima                                     | 34° 48.6' N, 137° 13.9' E | An island where trees grow thickly; surmounted by a shrine on the top of |
| ij        | B Take Sillina 34 48.0 N, 137 13.9 E           |                           | there.   |
| Gamagori  | Omae Saki                                      | 34° 46.0' N, 137° 10.6' E | A cape where trees grow thickly; surmounted by a shrine on the point of  |
| Ħ.        | 9.   Omae Saki   34° 46.0' N, 137° 10.6' E   t |                           | there.   |

**Navigation Rules.** In the sea area (self-imposed restraint waters) of about 2 M from the fairway between Jinno N Breakwater and Jinno S Breakwater to the inside of Mikawa Port Toyohashi district, a self-imposed restraint rule is established to prevent overtaking or head-on situation for vessels with a length of 100 meters or more.

The details are shown in the following web page.

URL: https://www.kaiho.mlit.go.jp/04kanku/safety/rule/000002.html

**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 the Captain of the Port.

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.

**Overhead cable.** An overhead cable (34° 42.8' N, 137° 18.3' E; 54 m high) spans between the N side of Akemi Wharf No.6 Quay (Toyohashi district) and the westward opposite shore.

#### Anchorage.

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<u>Toyohashi district.</u> A water about 2 M WSW of the estuary of Toyo Kawa, about 7 m deep, affords anchorage. The quarantine anchorage (34° 44.1' N, 137° 13.2' E) is located in the vicinity of position NW about 2 M of Hime Shima. It tends to drag in W wind in these anchorages.

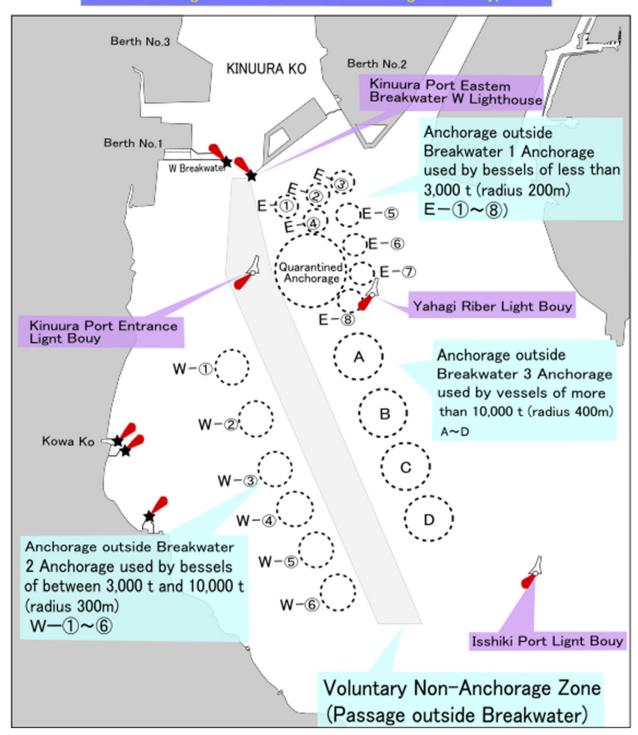
25 <u>Gamagori district.</u> A water, about 6 m deep, W of the area about halfway between Take Shima (34° 48.6' N, 137° 13.9' E) and O Shima (34° 47.3' N, 137° 14.0' E) outside the breakwater is a good anchorage.

When strong W winds blow in winter, the E side of O Shima is relatively suitable for the anchorage. Paying attention to nearby aquaculture facilities is needed.

The quarantine anchorage (34° 44.9′ N, 137° 12.0′ E) is located in the vicinity of position SE about 2 M of Hashida Hana.

Fig. 52 The Voluntary No-Anchoring Area in Chita Wan [Replaced by the new image]

These anchorages are not suitable for mooring to avoid typhoons



#### Weather.

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Monsoon in winter. NW winds blow approximately from October to next April with the peak season from December to early next March. Nagoya/Yokkaichi area and Irago Misaki area often experience these winds in much different wind speed, and sometimes strong winds of 20 m/s or more on a typhoon scale blow around Irago Misaki.

This phenomenon is caused by the land shape on the wind route. NW winds which had traveled over the Sea of Japan converge at Wakasa Wan, and then blow through the lower part of Suzuka Mountains to become fall winds on the way to Ise Wan. Then these winds, going S, re-converge at the bay entrance and blow through the bay entrance gaining force. (Ise wan is a pouch in shape with a narrow entrance and a wide mid-bay). These strong winds are reported to reach  $50 \sim 70 \text{ M}$  off Irago Misaki.

These strong winds often appear when the pressure distribution is high to the W and low to the E with isobars run parallel over Ise Wan in a N/S direction.

They also appear when a powerful high pressure hangs over the Sea of Japan right after a developed extratropical cyclone has traveled along the S coast of Honshu.

The winds in the latter case are often gusty ones.

Monsoon in summer. Approximately between May and September, winds from between SE and SSE are frequent, and the daytime wind speed is usually about  $4 \sim 6$  m/s.

Fog. Fog occurs from early March to late July with occasional dense fog at the entrance of Ise Wan and the vicinity. Mainly  $N \sim NW$  wind carries fog. Particularly when such wind is accompanied by a light rain, it then becomes dense fog.

**Tidal currents.** Refer to Figs. 45 and 46.

**Pilotage.** Pilotage is available on request through the Ise-Mikawa Wan Pilot Association (Refer to Chapter 6 "PILOTAGE" of Part 1).

**Navigation Rules.** 4th Regional Coast Guard Headquarters instructs vessels of 500 G/T or more which will navigate in Ise Wan to observe the following navigation rules. (Refer to Fig. 53)

- 1. Vessels which will navigate for S or N between Nagoya Ko and Irago Suido, shall navigate as continuing to watch Ise Wan Light Beacon No.4, Ise Wan Light Buoys No.5 and 6 on the port side.
- 2. Vessels which will navigate for S or N between Yokkaichi Ko and Irago Suido, shall navigate as continuing to watch Ise Wan Light Beacon No.4 and Ise Wan Light Buoy No.5 on the port side.

Navigational information. 4th Regional Coast Guard Headquarters compiled information which help vessels to navigate in Ise Wan, Mikawa Wan, or cardinal ports of those bays, and published in the following web page as "Marine Traffic Guidebook in Ise Wan and Mikawa Wan."

URL: https://www.kaiho.mlit.go.jp/04kanku/safety/rule/000002.html

**Precaution for navigation.** At Ise Wan, trawlnet fishery and boat seine fishery are performed actively almost throughout the whole year. It is necessary to exercise caution to boat seine fishery in particular, because 2 fishing boats are pulling a fishing net reaching up to a maximum length of 500 m together as a pair. In addition, the feature of boat seine fishery is that there are buoys on the surface of the water owing to pulling at a fishing net in the surface layer or the middle layer. When mariners found these fishing boats, vessels should navigate at a distance sufficient to avoid them and should not approach the operational area of them. (Refer to the section "Fisheries" of Chapter 7 "NAVIGATIONAL PRECAUTIONS" of Part 1).

Furthermore, deep-draught vessels should exercise caution with Oki-no-Se (34° 37.5' N, 136° 56.6' E; 11.3 m deep, a light buoy is installed) and a submerged wreck in W about 1.5 M of the shallows.

**Indication of Course and Destination etc.** (Refer to Fig. 54)

| indication of course a   |
|--------------------------|
| Indication of Course and |
| Destination (Japan Coast |
| Guard Notice No.35,      |
| 1995) and Symbol         |
| showing Destination of   |
| Automatic Identification |
| System (Japan Coast      |
| Guard Notice No. 94,     |
| 2010)                    |
|                          |
|                          |
|                          |

| nd Destination e           | tc. (Refer to Fig. 54)                      |  |
|----------------------------|---|--|
| Flag Signals               | Symbols showing the destination in the port | Meanings of Signals and Symbols  |
| 1st substitute and E       | _   | Proceeding in E Passage to take departure.   |
| 1st substitute and W       | _   | Proceeding in W Passage to take departure.   |
| 2nd substitute,<br>E and 1 | E 1   | Proceeding to mooring facilities on the W side of Kitahama Wharf (form J2 to G1 Piers) or the anchorage for vessels carrying dangerous substance located in the area within a radius of 300 m from the position 089° 1,270 m from Nagoya Ko Storm Tide Breakwater E Signal Station.  |
| 2nd substitute,<br>E and 2 | E 2   | Proceeding to mooring facilities on the S side of Tokaimotohama Wharf, on the N side of Kitahama Wharf (from G6 to G4 Piers) or Yokosuka Wharf.  |
| 2nd substitute,<br>E and 3 | E 3   | Proceeding to mooring facilities on the W side of Tokaimotohama Wharf.   |
| 2nd substitute,<br>E and 4 | E 4   | Proceeding to mooring facilities on the N side of Tokaimotohama Wharf.   |
| 2nd substitute,<br>E and 5 | E 5   | Proceeding to mooring facilities in Shinpo Wharf.  |
| 2nd substitute,<br>B and 1 | B 1   | Proceeding to mooring facilities on the S side of Shiomi Wharf (BL and BK Piers) or the anchorage for vessels carrying dangerous substance located in the area enclosed by the line drawn from the SW extremity of Shiomi Wharf to the position 180° 400 m, the line drawn thence to the position 083° 430 m, the line drawn thence at 000°, and the shore line. |
| 2nd substitute,<br>B and 2 | B 2   | Proceeding to mooring facilities on the E side of Shiomi Wharf (from BH2 to BY Piers).   |
| 2nd substitute,<br>B and 3 | В 3   | Proceeding to mooring facilities on the N side of Shiomi Wharf (from Q1 to B3 Piers).  |
| 2nd substitute,<br>B and 4 | B 4   | Proceeding to mooring facilities on the W side of Shiomi Wharf (from B4 to BJ Piers).  |
| 2nd substitute,<br>N and 1 | N 1   | Proceeding to mooring facilities in Showa Wharf or Funami Wharf.   |
| 2nd substitute,<br>N and 2 | N 2   | Proceeding to mooring facilities in Garden Wharf, Ote Wharf, Tsukiji E Wharf or Oe Wharf.  |
| 2nd substitute,<br>N and 3 | N 3   | Proceeding to piers in Isshu Cho, or mooring facilities in Inaei Wharf or Shionagi Wharf.  |
| 2nd substitute,<br>N and 4 | N 4   | Proceeding to mooring facilities on the E side of Sorami Wharf.  |
| 2nd substitute,<br>K and 1 | K 1   | Proceeding to Kinjo Wharf from No.52 to No.57 Quays.   |
| 2nd substitute,<br>K and 2 | K 2   | Proceeding to Kinjo Wharf from No. 58 to No. 62Wharfs.   |
| 2nd substitute,<br>K and 3 | K 3   | Proceeding to Kinjo Wharf from No. 76 to No. 85 Quays.   |
| 2nd substitute,<br>W and 1 | W 1   | Proceeding to Kinjo Wharf from No. 71 to No. 75 Quays, or mooring facilities on the W side of Sorami Wharf or on the E side of Kibakanaoka Wharf.  |
| 2nd substitute,<br>W and 2 | W 2   | Proceeding to mooring facilities on the E side of Tobishima Wharf.   |
| 2nd substitute,<br>W and 3 | W 3   | Proceeding to mooring facilities on the S side of Tobishima Wharf.   |
| 2nd substitute,<br>W and 4 | W 4   | Proceeding to mooring facilities on the W side of Tobishima Wharf or on the E side of Yatomi Wharf or mooring buoys in Section 4.  |

Miscellaneous goods and Heavy objects, etc. (Aseismatic quay.) No. 38 Quay 35° 05.3' N, 136° 53.4' E 185 10  $10,000 \times 1$ <sub>Qe</sub> Wharf Miscellaneous goods and No. 39 Quay 35° 05.2' N, 136° 53.4' E 9  $10,000 \times 1$ 213 Heavy objects, etc. Showa Wharf 240 35° 04.7' N, 136° 53.4' E 7.5  $3,000 \times 2$ Fertilizers and Chemicals. No. 40, 41 Quays No.  $43 \sim 45$  $450 \times 1$ 35° 04.4' N, 136° 53.2' E 420  $5\sim6$ Silica sand, Soil stones.  $1,500 \times 4$ Quays No. 46 ~ 48 450 × 1 35° 04.4' N, 136° 53.1' E 571  $5 \sim 5.5$ Silica sand. Soil stones. Quays  $15,000 \times 5$ No. 17, 18 35° 04.8' N, 136° 52.1' E 320 9  $10,000 \times 2$ Cotton, Wool, Grains, etc. Quays No. 22 ~ 24 Miscellaneous goods and 35° 04.6' N, 136° 51.9' E 540 10  $10,000 \times 3$ Quays Automobiles. Miscellaneous goods and 200 10  $10,000 \times 1$ No. 25 Quay 35° 04.5' N, 136° 51.8' E Automobiles.  $1,500 \times 1$ Shionagi Wharf No.  $27 \sim 29$ Coal. (No.28, 29 Aseismatic 35° 04.4' N, 136° 51.7' E 405  $5.5 \sim 10$  $3,500 \times 1$ Quay quay)  $10,000 \times 1$ 35° 04.3' N, 136° 51.6' E No. 31 Quay 60  $3 \sim 6.5$  $500 \times 1$ Coal and Mineral products. 35° 04.3' N, 136° 51.7' E No. 32 Quay 130  $6.5 \sim 7.5$  $3.500 \times 1$ Coal and Mineral products. Coal and Mineral products. No. 33 Quay 35° 04.2' N, 136° 51.7' E 185 10  $10,000 \times 1$ 35° 03.4' N, 136° 51.3' E No. 50 Quay 180 10 10.000× 1 Miscellaneous goods. Sorami Wharf Miscellaneous goods. No. 51 Quay 35° 03.4' N, 136° 51.3' E 120 4 or less  $500 \times 2$ 35° 03.7' N, 136° 50.6' E  $1,500 \times 4$ Miscellaneous goods. No. 70 Quay 360 5.5 500 × 1 No. 95 ~ 97 35° 04.2' N, 136° 51.5' E 540  $1.000 \times 1$  $5 \sim 5.5$ Steel. Quays  $1,500 \times 4$ No. 52, 53 35° 03.2' N, 136° 51.2' E 497  $8.5 \sim 12$  $25,000 \times 2$ Automobiles. Quays No.  $54 \sim 57$ 35° 02.8' N, 136° 51.2' E 800 10  $10.000 \times 4$ Automobiles. Quays No.  $58 \sim 62$ General merchandise and 35° 02.6' N, 136° 50.9' E 1,000 10  $10,000 \times 5$ Automobiles. Quay No. 71 Quay 35° 03.4' N, 136° 50.5' E 450  $1,500 \times 5$ General merchandise. No.  $72 \sim 75$ 35° 03.2' N, 136° 50.3' E 520 7.5  $3,500 \times 4$ General merchandise. Quay No. 76, 77 10 **∼** 10.5  $10,000 \times 2$ 35° 03.0' N, 136° 50.3' E 400 Automobiles. Quays No. 78,  $\overline{79}$  $9 \sim 10.5$  $10,000 \times 2$ 35° 02.8' N, 136° 50.4' E 400 Quays No. 80, 81 <u>9</u> ∼ 10  $10,000 \times 2$ 35° 02.6' N, 136° 50.5' E 400 Quays Automobiles. No.  $82 \sim 84$  $9 \sim 12$  $10,000 \times 3$ 35° 02.3' N, 136° 50.6' E 600 Quays No. 85 Quay 35° 02.1' N, 136° 50.7' E 280  $11.5 \sim 12$  $25,000 \times 1$ General merchandise and No. 6 Quay 35° 01.8' N, 136° 47.9' E 270 12  $25,000 \times 1$ Yatomi Automobiles: General merchandise and No. 7 Quay 35° 01.8' N, 136° 47.8' E 240 12  $25,000 \times 1$ Wharf Automobiles: No. 88, 89 Wood and Miscellaneous 7.5 35° 02.2' N, 136° 48.0' E 260  $3.500 \times 2$ Quays goods. Container. Nabeta  $50,000 \times 2$ (Aseismatic quay) T1, T2 Quay 35° 01.5' N, 136° 47.6' E 700  $13 \sim 14$ Gantry crane. Wharf Container. T3 Quay 35° 01.6' N, 136° 47.4' E 285  $30,000 \times 1$ 12 Gantry crane.

Self-imposed restraint waters of anchoring.

| Name | Areas or places   |
|------|---|
| Y-1  | The extended waters from the E entrance of Passage 1 to offing 300 m wide and 1,500 m long.   |
| Y-2  | The extended waters from the E entrance of Passage 2 to offing 400 m wide and 1,500 m long.   |
| Y-3  | The waters enclosed by the line drawn at 130° from Yokkaichi Ko Passage 3 Light Beacon No. 2, the line drawn from Yokkaichi Ko Passage 3 Light Beacon No. 1, the line drawn at 146° from Yokkaichi Ko Passage 3 Light Beacon No. 1, and the boundary line between Y-4 waters. |
| Y-4  | The circular area within a radius of 0.4 M (740.8 m) centred at Yokkaichi Ko Passage 3 Offing Light Buoy.   |
| Y-5  | The waters of 500 m wide on the line which are connected between the position 270° 1,250 m from the N extremity of Isewan Sea-Berth and Yokkaichi Ko Passage 3 Offing Light Buoy.   |
| Y-6  | The circular area within the radius of 1,000 m centred at Cosmo Sea-Berth. (Limited to cases where there are berthing vessels.)   |
| Y-7  | The circular area within the radius of 1,000 m centred at Showayokkaichi Sea-Berth. (Limited to cases where there are berthing vessels.)  |

# Facilities.

|                      | Name                                     | Position                  | Length (m) | Depth (Approx. m) | Capacity (D/W × vessel) | Remarks                 |
|----------------------|--|---------------------------|------------|-------------------|-------------------------|-------------------------|
| Coal Wharf No. 7 34° |  | 34° 56.9' N, 136° 38.0' E | 125        | $4.5 \sim 7$      | 5,000 × 1               |                         |
|                      | No. 1 Quay                               | ,                         | 100        | 5.5               | 2,000 × 1               |                         |
| Ю.                   | South base                               | 34° 56.9' N, 136° 38.2' E | 60         | _                 |                         |                         |
| No.1 Wharf           | No. 2, 3 Quays                           | 34° 56.9′ N, 136° 38.4′ E | 245        | $6 \sim 8.5$      | 10,000 × 1              |                         |
| Vha                  | No. 4, 5 Quays                           | 34° 57.0' N, 136° 38.4' E | 215        | $5.5 \sim 9.5$    | 10,000 × 1              |                         |
| rf                   | No. 6 Quay                               | 34° 57.1' N, 136° 38.3' E | 179        | $2 \sim 2.5$      | 300 × 3                 |                         |
|                      | No. 8 Quay                               | 34° 57.1' N, 136° 38.4' E | 190        | 9.5               | 15,000 × 1              |                         |
| Z                    | No. 9 Quay                               | 34° 57.1' N, 136° 38.5' E | 200        | 10                | 15,000 × 1              |                         |
| No.2 Wharf           | No. 10 Quay                              | 34° 57.1' N, 136° 38.6' E | 200        | $4.5 \sim 5$      | 2,000 × 2               |                         |
| ₩                    | No. 11 Quay                              | 34° 57.2' N, 136° 38.5' E | 200        | $10 \sim 11$      | 15,000 × 1              |                         |
| narf                 | No. 12 Quay                              | 34° 37.2° N, 130° 38.3° E | 140        | 5 ∼ 5.5           | 1,000 × 2               |                         |
| ,                    | No. 19 Quay                              | 34° 57.3′ N, 136° 38.4′ E | 110        | 5                 | 1,000 × 1               |                         |
| $\overline{}$        | No. 13 Quay                              | 34° 57.3′ N, 136° 38.6′ E | 245        | 12                | 30,000 × 1              |                         |
| No.3                 | No. 14 Quay                              | 34° 57.3' N, 136° 38.7' E | 220        | 10                | $15,000 \times 1$       |                         |
| ×                    | No. 15 Quay                              | 34 3/.3 N, 130 38./ E     | 245        | 10                | $12,000 \times 1$       |                         |
| Wharf                | No. 16 Quay                              | 34° 57.4′ N, 136° 38.5′ E | 114        | 6.5               | 5,000 × 1               |                         |
| 1                    | No. 17, 18 Quays                         | 34° 57.3′ N, 136° 38.4′ E | 163        | 5.5               | 2,000 × 2               |                         |
| Ka                   | sumi W No.1 Pier                         | 34° 59.4' N, 136° 39.1' E | 450        | 4                 | 700 t class             |                         |
|                      | No. 22 Quay                              | 34° 59.3′ N, 136° 40.5′ E | 280        | 14                | $60,000 \times 1$       | With 2 unloader cranes. |
| $\mathbf{x}$         | No. 23 Quay                              | 34° 59.3′ N, 136° 40.4′ E | 240        | 12                | 40,000 × 1              | With 1 gantry crane.    |
| ası                  | No. 24, 25 Quays                         | 34° 59.4' N, 136° 40.1' E | 240× 2     | 12                | $40,000 \times 2$       |                         |
| m                    | No. 26 Quay                              | 34° 59.5′ N, 136° 39.9′ E | 300        | 13.2              | 30,000 × 1              | With 2 gantry cranes.   |
| iga                  | No. 27 Quay                              | 34° 59.6′ N, 136° 39.8′ E | 240        | 12                | 25,000 × 1              | With 1 gantry crane.    |
| ura                  | No. 30 ~ 36 Quays<br>No. 37 ~ 41, 43, 44 | 34° 59.6' N, 136° 39.3' E | 420        | 4.5               | 700 × 7                 |                         |
| Kasumigaura S Wharf  | No. 37 ~ 41, 43, 44<br>Quays             | 34° 59.8' N, 136° 39.6' E | 630        | 5.5               | 2,000 × 7               |                         |
| 'ha                  | No. 60 ~ 62 Quays                        | 34° 59.2' N, 136° 40.6' E | 390        | 7.5               | 5,000 × 3               |                         |
| 7                    | No. 70 ~ 73 Quays                        | 34° 59.7′ N, 136° 39.7′ E | 300        | 4.5               | 700 × 4                 |                         |
|                      | No. 74, 75 Quays                         | 34° 59.8' N, 136° 39.9'E  | 130× 2     | 7.5               | 5,000 × 2               |                         |
|                      | sumigaura N Wharf<br>. 80 Quay           | 34° 59.8' N, 136° 40.2' E | 330        | 14                | 50,000 × 1              | With 2 gantry cranes.   |
| На                   | mazono Wharf<br>. 50 ~ 59 Quays          | 34° 59.7′ N, 136° 39.2′ E | 600        | 4.5               | 700 × 10                |                         |
|                      | No. 1, 2 Quays                           | 35° 00.3' N, 136° 39.9' E | 123        | 4.5               | 750 × 2                 |                         |
| Fuso Wharf           | No. 3 Quay                               | 35° 00.2' N, 136° 39.9' E | 85         | 4.5               | 1,500 × 1               |                         |
| Wh                   | No. 4, 5 Quays                           | 35° 00.2' N, 136° 39.8' E | 125× 2     | 7.5               | 5,000 × 2               |                         |
| Ħ,                   | No. 6 Quay                               | 35° 00.1' N, 136° 39.7' E | 170        | 7.5               | 5,000 × 1               |                         |

Apart from the above table, there are many private mooring facilities in the S part of Section 1, in Umaokoshi in Section 3 and Kasumi-ga-Ura.

There are mooring facilities for large liquefied gas tankers in the Kasumigaura and Kawagoe districts.

**Supplies.** Fresh water and fuel oil are available.

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**Anchorage.** A water, around 1 M offshore of the estuary of Iwata Kawa, about 12 m deep, muddy bottom, gives good holding ground and affords anchorage even in the NW wind in winter. However, special caution is required against the strong SE wind which suddenly blows around September.

**Precautions for anchoring.** Attention must be paid to the three mooring chains (with sinkers at their ends) extending about 200 ~ 300 m offshore from Quays No.1 and No.2 of Japan Marine United Corporation (34° 40.7' N, 136° 32.5' E).

#### Facilities.

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|         | Name         | Position                  | Length (m) | Depth (Approx. m) | Capacity (D/W×vessel) | Remarks                   |
|---------|--------------|---------------------------|------------|-------------------|-----------------------|---------------------------|
| Igurazu | - 5.5 m Quay | 34° 40.5' N, 136° 33.1' E | 90         | 4                 | 1,000 × 1             | Gravel, Sand, Stone, etc. |
| Wharf   | - 4.5 m Quay | 34 40.3 N, 130 33.1 E     | 60         | $2\sim3$          | 1,000 × 1             | Gravel, Sand, Stone, etc. |

Apart from the above table, there are private mooring facilities in Igurazu area.

**Supplies.** Limited amount of fresh water, fuel oil and ice can be supplied.

Repairs. Available.

#### Maritime authorities and facilities.

| Name  | Telephone       |
|---|-----------------|
| Tsu Sub-branch of Yokkaichi Branch Customs                                | +81-59-225-2030 |
| Mie Prefectural Matsuzaka Construction Office (Located in Matsuzaka City) | +81-59-223-5203 |

**Maritime traffic.** There is a high speed passenger liner (124 t <del>class</del>) services to Tokoname Ko (Centrair Airport Pier on the east coast of Chubu Centrair International Airport (Centrair island)) from Niezaki area.

# Paragraph 7 KO SAKI ~ HANSU HANA ~ DAIO SAKI

(Chart JP1051)

**General information.** This paragraph describes the coasts and islands in the area from Momotori Suido, Sugashima Suido and Kaburako Suido to Daio Saki by Hansu Hana.

# Momotori Suido ~ Kaburako Suido ~ Hansu Hana (Charts JP1053, W73)

**General information.** Momotori Suido and Kaburako Suido (34° 28.7′ N, 136° 52.6′ E) are channels running in the W part of the entrance of Ise Wan, and connect Ise Wan and the open sea together with Sugashima Suido mentioned below. These channels are general routes of relatively small vessels. Vessels entering Ise Wan from the direction of Daio Saki generally take the route passing a narrow channel (34° 27.0′ N, 136° 55.4′ E) between Ijika Shima and Hansu Hana, Kaburako Suido and Momotori Suido.

Along this route, winds and waves ease through the year, and inlets including Toba Ko are located where vessels are able to seek shelter, take supplies or make communications easily. Consequently many vessels use this route. In navigating these channels, however, careful ship handlings and sharp lookouts are requested because all of these channels are narrow, bend and with small view, many aquaculture facilities such as the laver in addition to other dangerous factors such as complicated tidal currents, many ferry boats and fishing vessels.

Weather. Southwesterly winds are frequent in summer, westerly or northwesterly winds prevail in other seasons.

# Momotori Suido and Islands (Charts JP1053, W73)

**Momotori Suido.** (34° 30.5' N, 136° 50.0' E) This channel separates Toshi Shima, Uki Shima, Tobi Shima and Hinata Shima from the mainland to the SW. It is a good route for small vessels and crafts entering or departing from Ise Wan because of the sufficient depths and many marks despite its largely curved passage.

The narrowest part (34° 30.4' N, 136° 50.5' E) of this channel is situated the interior entrance (between Toshi Shima and Hinata Shima) where the width with the depth of 10 m or more is about 450 m.



# **Kochi Ko** (33° 31' N, 133°34' E) (Chart W110) (Port Code: JP KCZ)

(Photographed May. 2018)

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

General information. The passage ( $120 \sim 210$  m wide) in the vicinity of the entrance is regularly dredged to maintain the planned depth, but it tends to become shallower at times because of the narrow and long features of the passage and sand drifting from Tanezaki Hama in case of storms. Thus the vessels must be cautious when passing the passage.

Depths in the port are generally shallow (depth 8 m or less); the depth water is about 12 m in the vicinity of port entrance.

Extreme weather including typhoon makes the water depth irregular in the area E of the No.7 wharf. Caution should be exercised as groundings have been occurred there. Construction of breakwaters and extension repair work of existing breakwaters are being carried out from the port entrance to the vicinity of Kochi Fairway (Katsurahama area, Tanezaki area, E of No.7 Wharf, S Breakwater, etc.).

The reclaimed land on the E side of the port is utilized by enterprises relating to petroleum, limestone, shipbuilding. A water on the W side,  $2 \sim 4$  m deep, muddy bottom, is safe against every wind and wave and affords anchorage to vessels of 500 t or less.

Kagami Kawa and Kokubu Kawa running through Kochi City flow into the port at its head.

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

**Weather.** W wind prevails throughout the year. Wind speed is very low with annual average about 2 m/s or below. **Tides.** In Kochi Ko, mean higher high water is 1.6 m, mean lower low water is 0.3 m, and mean sea level is 1.08 m. **Tidal currents.** In a port entrance of Kochi Ko (33° 30.0' N, 133° 33.9' E), flood (ebb) stream flows W (E) at the rate of around  $0.6 \sim 0.9$  (1.0) kn.

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

| Call name              | Frequency | Hours of<br>Operation | Contact                  | Remarks |
|------------------------|-----------|-----------------------|--------------------------|---------|
| KOBE COAST GUARD RADIO | ch16 / 12 | 24 hours              | Kochi Coast Guard Office |         |

Pilotage. There is not sea area of pilotage to be established in the Pilotage Law, but pilotage of private qualification

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# Port regulations.

| rort regulations.        |  |
|--------------------------|--|
| Navigational Precautions | 1. Vessels of 1,000 G/T or more (tankers 500 G/T or more) proceeding and taking departure by     |
| (Article 43 of the       | navigating the passages (hereinafter referred to as "Kochi Fairway" in this Paragraph and next   |
| Regulations for the      | Paragraph) S of the line drawn from Kochi Ko Mimase Light (33° 30′ 26″ N, 133° 33′ 34″ E),       |
| Enforcement of the Port  | bearing 90°, shall report the items described in each Item of Article 38 Paragraph 2 of the Port |
| Regulations Law)         | Regulations Law (the items in Item 3 mean the estimated time of arrival near the entrance to     |
| ,                        | Kochi Fairway when proceeding, and the estimated time of departure when taking departure) to     |
|                          | Captain of the Port by noon of the day before proceeding or taking departure, respectively.      |
|                          | 2. Vessels making reports of the items described in the preceding paragraph, shall report to     |
|                          | Captain of the Port immediately when the change has been made on said items.                     |
|                          | Consultation; the matters described in each Item of the Article 38 Paragraph 2 of the Port       |
|                          | Regulations Law:   |
|                          | 1) Name of the vessel.   |
|                          | 2) Gross tonnage and length of the vessel.   |
|                          | 3) Estimated time for the vessel to navigate through the fairway.                                |
|                          | 4) Means of communicating with the vessel.   |
|                          | 5) The mooring facility within the specified port where the vessel is anchored or seeks to       |
|                          |  |

**Caution:** Caution should be exercised with southerly swells developed near the entrance when a depression or a typhoon approaches during spring to autumn.

Bridge buildings. Urado O-Hashi (33° 30.0' N, 133° 34.1' E; 39 m high) spans across the passage near the entrance. Overhead cables. An overhead cable (33° 31.9' N, 133° 33.8' E; height 50 m and 47 m) span crossing the N part of the passage.

The Largest vessel to enter the port. On 10th Oct. 2024, a cruise ship "MSC BELLISSIMA" (171,598t, with a draught of 8.7m) berthed at No.3 Quay of No.7 Wharf.

Mooring buoys. There are many mooring buoys in front of a shipyard located in Shinchiku district.

**Anchorage.** The quarantine anchorage is provided in the vicinity of a position (33° 28.8' N, 133° 35.0' E) SSE of Shimo-Ryuzu Saki.

# Facilities.

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| raciiiu        | <b>C</b> 3. |                           |            |                   |                             |   |
|----------------|-------------|---------------------------|------------|-------------------|-----------------------------|---|
| ]              | Name        | Position                  | Length (m) | Depth (Approx. m) | Capacity (D/W×vessel)       | Remarks                                 |
|                | No. 2 Quay  | 33° 32.4' N, 133° 33.2' E | 115        | 3~6               | $3,000 \times 1$            |   |
| 3.7            | No. 4 Quay  | 33° 32.4′ N, 133° 33.4′ E | 390        | 2.5 ~ 7           | 5,000 × 3                   | There is rough ground ahead.            |
| No. 1          | No. 5 Quay  | 33° 32.3′ N, 133° 33.6′ E | 172        | <i>5</i> ∼ 7.5    | 5,000 × 1                   | Aseismatic quay                         |
| Wharf          | No. 6 Quay  | 33° 32.5′ N, 133° 33.6′ E | 260        | 6~7               | 5,000 × 2                   |   |
|                | No. 7 Quay  | 33° 32.6′ N, 133° 33.6′ E | 260        | 5.5 ~ 7           | 5,000 × 2                   |   |
|                | No. 8 Quay  | 33° 32.7′ N, 133° 33.6′ E | 180        | 3.5 ~ 4           | $700 \times 3$              |   |
| No. 2<br>Wharf | No. 1 Quay  | 33° 33.2' N, 133° 33.6' E | 735        | 0.5 ~ 3           | _                           | Unsurveyed area at a part               |
|                | No. 1 Quay  | 33° 33.0' N, 133° 33.8' E | 242        | 2~3               | _                           | Unsurveyed area at a part               |
| 3.5. 2         | No. 2 Quay  | 33° 32.7′ N, 133° 33.8′ E | 110        | 2.5               | 300 × 1                     |   |
| No. 3<br>Wharf | No. 3 Quay  | 33° 32.6' N, 133° 33.8' E | 140        | $2.5 \sim 3.5$    | $300 \text{ t} \times 1$    | There is rough ground ahead.            |
|                | No. 4 Quay  | 33 32.0 N, 133 33.0 L     | 55         | 3                 | $750 \text{ t} \times 2$    | There is rough ground ahead.            |
| No. 4          | No. 1 Quay  | 33° 32.5′ N, 133° 34.2′ E | 167        | $4.5 \sim 5$      | 3,000 × 1                   | There is rough ground ahead.            |
| Wharf          | No. 2 Quay  | 33° 32.4′ N, 133° 34.2′ E | 180        | 3.5 ~ 4           | 300 × 1                     |   |
|                | No. 3 Quay  | 33° 32.4′ N, 133° 34.3′ E | 90         | _                 | 300 × 1                     |   |
| No. 5          | No. 1 Quay  | 33° 31.4′ N, 133° 33.9′ E | 130        | 6~6.5             | 5,000 × 1                   | There is rough ground marked on charts. |
| Wharf          | No. 2 Quay  | 33° 31.3′ N, 133° 33.9′ E | 140        | <b>4</b> ∼ 4.5    | 1,000 × 2                   | There is rough ground marked on charts. |
|                | No. 3 Quay  | 33° 31.1' N, 133° 33.9' E | 300        | $2.5 \sim 4$      | 700 × 5                     |   |
|                | No. 1 Quay  | 33° 30.7′ N, 133° 35.1′ E | 240        | 7.5 ~ 8           | _                           | Gantry Crane                            |
| )              | No. 2 Quay  | 33° 30.6′ N, 133° 35.1′ E | 240        | $12 \sim 12.5$    | 30,000 × 1                  | Gantry Crane                            |
| No. 7<br>Wharf | No. 3 Quay  | 33° 30.6′ N, 133° 35.4′ E | 280        | $12 \sim 12.5$    | 30,000 × 1                  | There is rough ground ahead.            |
|                | No. 4 Quay  | 33° 30.7′ N, 133° 35.5′ E | 190        | $11 \sim 11.5$    | $18,000 \times 1$           | Aseismatic quay                         |
|                | No. 8 Quay  | 33° 30.8' N, 133° 35.0' E | 180        | 7.5 ~ 8           | $12,000 \text{ t} \times 1$ |   |

Apart from the above table, there are private mooring facilities on each wharf.

# **Chapter 5 NANPO SHOTO AND OTHERS**

This chapter describes Izu Shoto, Nanpo Shoto (Ogasawara Gunto, Nishi-no-Shima and Kazan Retto) and other islands (Oki-no-Tori Shima and Minami-Tori Shima).

# Paragraph 1 IZU SHOTO

(Charts W81, W83)

**General information.** Izu Shoto extends about 300 M from O Shima at the N extremity to Sofu Gan at the S extremity. In this area lie islands such as Miyake Shima, Mikura Shima, Hachijo Shima, Ao-ga-Shima and Tori Shima and uncovered rocks on a nearly straight line in a N-S direction. In addition, To Shima, Nii Shima, Kozu Shima and Zeni Su lies in the area extending to the SSW about 60 M from O Shima.

These islands are mainly  $400 \sim 850$  m high and covered with trees but do not suit farming due to the volcanic sterile soil.

The coasts have less inlets and bends, most of which consist of cliffs of volcanic rocks. Even sandy beaches lying in places are subject to high waves, and many times it is difficult to take refuge and berth along side.

Along the coast of the islands, depths change very sharply and bottoms are foul. Strict caution is required when anchoring at night, as the coast may appear closer than it is.

# O Shima ~ Zeni Su (Chart W51)

20 **General information.** Between O Shima and Zeni Su lie To Shima, Udone Shima, Nii Shima, Shikine Shima and Kozu Shima.

These islands are fringed with many rocky reefs; depths along coasts are mostly deep but irregular. Islets and rocky reefs are scattered particularly in the waters around Nii Shima and Kozu Shima.

**Landmarks.** All the islands are prominent. Peaks and lighthouses in the E part of S coast of Honshu and Miyake Shima are also good landmarks.

**Caution:** Banks are scattered in places in this area. Omuro Dashi (34° 34' N, 139° 29' E; a rocky reef, minimum depth 28 m) on the E side of the water between O Shima and To Shima gathers many fishing vessels in the season.

According to reports of liner vessels, waves on Hyotan Se (34° 21' N, 139° 03' E) of W about 7 M from Shikine Shima grow particularly high in winds of 15 m/s or more; many fishing vessels gather around this reef in calm weather. So caution should be exercised.

**O Shima.** (34° 45' N, 139° 24' E) (Chart W1066) A island at the N extremity of Izu Shoto, known also as Izu-O Shima. It is the largest active volcano on Izu Shoto. Mihara Yama near the center of O Shima always emits steam.

The N and E sides of O Shima are bordered with steep cliffy or rocky beaches washed by breakers all the time. The S and W sides are mostly rocky beaches apart from some sandy beaches.

In areas N and S of O Shima, vessels run to and from Hanshin and Kyushu; the northern route is rather busier with domestic vessels. In the vicinity of O Shima, bottoms are mostly steep-to and there are no dangerous reefs.

The water W of the breakwater in Okata Ko (34° 47' N, 139° 23' E), about 8 m deep, gives a good holding ground and afford shelter to small vessels in southerly wind.

There are no other shelters except Habu Ko (34° 41' N, 139° 26' E).

40 Stationary nets are laid in places along the coast.

**Weather.** In O Shima, NE wind prevails in February, March and in autumn; SW wind is dominant in other seasons. Average atmospheric temperature is 6°C or more in winter, it is rather cool in summer due to developing sea and land eezes.

The most precipitation appears in the rainy season and the time of typhoons. The average monthly precipitation in September reaches about 430 mm.

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#### Landmarks.

| Landmark            | Position                  | Remarks   |
|---------------------|---------------------------|---|
| Mihara Yama         | 34° 44' N, 139° 24' E     | 758 m high, Miscellaous trees from the middle to the bottom is        |
|                     | ,                         | overgrown. Some volcanic plum is always observed.                     |
| Chi-ga-Saki         | 34° 47.9' N, 139° 21.6' E | 95 m high. It forms a steep cliff and looks like a remote island when |
| CIII-ga-Saki        | 34 47.9 IN, 139 21.0 E    | viewed from the NE and SW.  |
| V 1 C-1-            | 240 47 OLNE 1200 22 21 E  | A cape of black, high and steep cliffs surmounted by Izu-O Shima      |
| Kazehaya Saki       | 34° 47.9′ N, 139° 22.3′ E | Light. It is rather more pointed than Chi-ga-Saki is.                 |
| A comeniavous house | 34° 47.3' N, 139° 23.3' E | A 2-storied clubhouse with red roof on a hill (131 m high) behind     |
| A conspicuous house | 34 47.3 N, 139 23.3 E     | Okata Ko.   |
| Eutaga Vama         | 34° 43' N, 139° 25' E     | A mountain consisting of two peaks standing in E-W direction, 619     |
| Futago Yama         | 34 43 N, 139 23 E         | m high.   |
| T.1                 | 240 421NL 1200 251E       | A mountain, 231 m high. The E side is excavated. It is seen conical   |
| Take-no-Hira        | 34° 42' N, 139° 25' E     | and conspicuous from the E and SE.                                    |
|                     |                           | A cape at the SW end of O Shima. It is the most conspicuous mark      |
| Senba Saki          | 34° 42′ N, 139° 22′ E     | in the vicinity. A small hill covered with pine trees lies on it.     |
|                     | •                         | A rock protrudes at the end.  |

# To Shima ~ Kozu Shima (Charts W51, JP80)

General information. A group of islands, comprising To Shima, Udone Shima, Nii Shima, Shikine Shima and Kozu Shima, lies in an area of about 20 M, which extends to the SSW from a position SSW about 12 M of O Shima. Onbase Shima lies off W of Kozu Shima.

The islands consist mostly of mountains and are bordered with mostly steep cliffs or rocky beaches except Shikine Shima, which is flat and low. Many rocky reefs lie close off the coasts of these islands but waters outside 1 M offshore are deep with no dangerous reefs except Onbase Shima.

**Caution:** When a strong wind blows continuous from the W or NW, it is necessary to exercise caution to navigation because the waves get rough in the sea area from the vicinity of Hyotan Se to Shikine Shima ~ Kozu Shima.

**To Shima.** (34° 31' N, 139° 17' E) (Chart W1425) This is a volcanic island with a rather conical shaped peak, 508 m high.

The soil is volcanic rocks, of which surface has been weathered composing fertile black soil. Much vegetation especially for camellias grows all over the island. The island is bordered with steep cliffs and there are many huge piles of volcanic rocks everywhere on the beaches. Toshima Ko lies on the N coast.

**Udone Shima.** (34° 28' N, 139° 18' E) This is an uninhabited island thickly covered with trees, 209 m high; the view from the N and S is of a round shaped peak and conical shaped from E and W. This island is bordered with steep cliffs and fringed with many rocky islets.

**Nii Shima.** (34° 23' N, 139° 16' E) This island is long in a N-S direction, about 11 km long. It appears as two separated islands from a distance E and W due to the land shape with a mountain on each N and S, and low and flat area in the center.

There is Habushi Ura on the E side and Niijima Ko lie on the W side. The both side are sandy coasts. Most of other parts of the coast are steep cliffs; the S part is prominent with a white cliffs. When a strong wind blows from westerly, vessels for refuge may stay in Habushi Ura.

# Landmarks.

| Lanumai Ks.   |                           |   |
|---------------|---------------------------|---|
| Landmark      | Position                  | Remarks   |
| Nebu Misaki   | 34° 26' N, 139° 17' E     | A cape of rocky cliffs at the N end of Nii Shima, 175 m high.   |
| Miyazuka Yama | 34° 24' N, 139° 16' E     | 432 m high.   |
| Kando Hana    | 34° 20.0' N, 139° 16.3' E | A point of a terrace, about 90 m high, at the S end of Nii Shima. Nii Shima Light stands on it.  The shore, NNE about 0.5 M of the point, is prominent for a white cliff. |
| Jinai Shima   | 34° 22' N, 139° 14' E     | 77 m high. An island mostly bordered with rocky cliffs, covered with weeds.   |
| Haya Shima    | 34° 20' N, 139° 17' E     | 90 m high. An island with a flat peak. It is bordered with rocky cliffs.  |

| Nishi Ura {Kowaura Wan}  | 294  | O Yama {Kii Hanto}  | 308                      |
|--|--|---|--------------------------|
| Nishi Ura {Haha Shima}   | 343  | O Yama {Mera Hana}  | 150                      |
| Nishi Yama   | 61,332   | O Yama {Mikura Shima}   | 331                      |
| Nishiki Gyoko  | 294  | O Yama {Miyake Shima}   | 331                      |
| Nishiki Wan  | 294  | O Yama {Suga Shima}   | 287                      |
| Nishi-no-Shima   | 61,345   | O Yama {Su-no-Saki}   | 150                      |
| Nishiura Byochi  | 242  | Oarai Ko  |                          |
| No Shima {Hirota Wan}  | 89   | Oarai Misaki  | 119                      |
| No Shima {Mikawa Wan}  |  | Obama Hana  | 113                      |
| No Shima {Offing Nojima Saki}  | 80   | O-Berashi   | 302                      |
| No Shima {Shizugawa Wan}   |  | Oda Wan   | 78                       |
| Nobiru Wan   |  | Ofunado Wan   | 330                      |
| Noda Wan   | 73   | Ofunato Ko  | 87                       |
| Nojima Saki  | 47,127,150   | Ogasawara Gunto   | 338                      |
| Nokogiri Yama  |  | Ogatsu Ko   |                          |
| Noma Saki  |  | Ogatsu Wan  |                          |
| Nomi Hanto   |  | Oginohama Wan   |                          |
| Nomi Wan   |  | Ogoshi-ga-Hana  |                          |
| Nono Shima   | 102  | Oguchi Wan  |                          |
| Noroshi Saki   | 212  | Ohaka Dashi   |                          |
| Noroshi Yama   |  | Ohako Saki  |                          |
| Numa Kawa  |  | Ohara Gyoko   | 126                      |
| Nuno Saki  | 323  | Ohara Wan   |                          |
| Nuno Shima   | 312  | Ohora Yama  |                          |
| Nyudo-ga-Saki  | 127  | Oi Kawa   | 220                      |
| _  |  | Oinega Shima  | 126                      |
| 0  |  | Oishi   |                          |
| O Kawa   | 91   | Oiso Saki   | 93                       |
| O Mori   | 308  | Oiso Shima  | 89                       |
| O Ne {Entrance of Kesennuma Wan  | }90  | Oji Yama  | 302                      |
| O Ne {Kashima Nada}  | 111  | Ojime Hana  | 324                      |
| O Ne {Offing Ogatsu Wan }  |  | Okata Ko  | 327                      |
| O Ne {Offing Siriya Saki}  | 66   | Okage Yama  | 312                      |
| O Ne {S offing Todo-ga-Saki}   | 73   | Oki-no-Kayama Ne  | 152                      |
| O Saki {Kamaishi Wan}  | 80   | Oki-no-Kuro Shima   | 308                      |
| O Saki {Ofunato Ko}  | 88   | Oki-no-Nagamo Se  | 290                      |
| O Shima {Atsumi Wan}   |  | Oki-no-Shima {Atsumi Wan}   | 242                      |
|  |  | ORI no Simila (Misami Wan)  |                          |
| O Shima {E offing Kushimoto Ko}  |  |   | 53,323                   |
| O Shima {E offing Kushimoto Ko}<br>O Shima {Funakoshi Wan}                                 | 306  | Oki-no-Shima {Sukumo Wan} Oki-no-Shima {Tateyama Wan}   |                          |
|  | 306  | Oki-no-Shima {Sukumo Wan}   | 153                      |
| O Shima {Funakoshi Wan}  | 306<br>80<br>292   | Oki-no-Shima {Sukumo Wan}<br>Oki-no-Shima {Tateyama Wan}  | 153                      |
| O Shima {Funakoshi Wan}<br>O Shima {Fuseda Suido}  | 306<br>80<br>292<br>52,327                               | Oki-no-Shima {Sukumo Wan}<br>Oki-no-Shima {Tateyama Wan}<br>Oki-no-Shirakusa  | 153<br>127<br>325        |
| O Shima {Funakoshi Wan} O Shima {Fuseda Suido} O Shima {Izu Shoto}                         | 306<br>80<br>292<br>52,327<br>90                         | Oki-no-Shima {Sukumo Wan} Oki-no-Shima {Tateyama Wan} Oki-no-Shirakusa  | 153<br>127<br>325<br>349 |
| O Shima {Funakoshi Wan} O Shima {Fuseda Suido} O Shima {Izu Shoto} O Shima {Kesennuma Wan} | 306<br>80<br>292<br>52,327<br>90<br>295                  | Oki-no-Shima {Sukumo Wan} Oki-no-Shima {Tateyama Wan} Oki-no-Shirakusa Oki-no-So Oki-no-Tori Shima                            |                          |
| O Shima {Funakoshi Wan}  | 306<br>80<br>292<br>52,327<br>90<br>295<br>312           | Oki-no-Shima {Sukumo Wan} Oki-no-Shima {Tateyama Wan} Oki-no-Shirakusa Oki-no-So Oki-no-Tori Shima Oki-no-Yama                |                          |
| O Shima {Funakoshi Wan}  | 306<br>80<br>292<br>52,327<br>90<br>295<br>312<br>52,306 | Oki-no-Shima {Sukumo Wan} Oki-no-Shima {Tateyama Wan} Oki-no-Shirakusa Oki-no-So Oki-no-Tori Shima Oki-no-Yama Oki-no-Yashima |                          |