安全対策英訳

（8 万 GT、11 万 GT、13 万 GT、16 万 GT、22 万 GT）

（岸壁　G 0）

1.1 Safety measures for arriving and departing

The criteria of arriving and departing of passenger vessels of 80,000GT, 110,000GT, 130,000GT, 160,000GT and 220,000GT are as follows:

1.1.1 Times of arriving and departing : Not restricted

1.1.2 Conditions of external force

① Wind Velocity :

Passenger vessel of 80,000GT ・・・Mean wind velocity shall be 9m/s or below
Passenger vessel of 110,000GT・・・Mean wind velocity shall be 9m/s or below
Passenger vessel of 130,000GT・・・Mean wind velocity shall be 9m/s or below
Passenger vessel of 160,000GT・・・Mean wind velocity shall be 11m/s or below
Passenger vessel of 220,000GT・・・Mean wind velocity shall be 12m/s or below

② Current : Not restricted

1.1.3 Other operational conditions

① Under keel allowance (UKC) :

10% of vessel draft or more (In the channels, it shall be 15% of vessel draft or more.) Water depth on a chart shall be referred and tidal effect shall not be added.

② Visibility :

2,000 meters or more (ECDIS should perform normally. If the shipmaster is entering the Port of Yatsushiro at nighttime for the first time, visibility of 3,000 m or more is required.)

(But, about 70,000GT order below, more than 4000 m)

③ Berthing/un-berthing angle : as parallel as possible

④ Berthing velocity :

Passenger vessel of 80,000GT ・・・ 15cm/s or below
Passenger vessel of 110,000GT ・・・ 17cm/s or below
Passenger vessel of 130,000GT ・・・ 14cm/s or below
Passenger vessel of 160,000GT ・・・ 12cm/s or below
Passenger vessel of 220,000GT ・・・ 10cm/s or below

⑤ Tug boat: Not restricted

⑥ Escort boat: One escort boat shall be deployed between southside of

Ootsukushima and the berth.

1.1.4 Passing each other in the waterway

So as to avoid ship encounter between large passenger vessels and other ships on the waterway of Yatsushiro Port, requests for cooperation shall be made in advance to allow sufficient distance for large passenger vessels from other ship. When a large passenger vessel passes the waterway, she shall make an escort boat lead her and request cooperation to other ships to avoid collision.

1.1.5 Precautions for safe berthing including control of berthing speed

During berthing, the vessels shall keep berthing speed as low as possible. It is preferable to make a body of a ship parallel to the quay so that vessels have more contact with fenders.

1.1.6 Precautions regarding berthing and un-berthing

The vessels shall move laterally as parallel as possible and pay full attention.

1.1.7 Safe distance between ships

Appropriate safe distance shall be kept between own ship and other ships on the quay.

1.1.8 Safety Measures for arriving and departing during night

When entering / leaving at night, take the following measures:

① Use the quay lighting to clearly see the outline of quay apron.

② Mooring vessel position shall be installed such as the signal lighting

③ ECDIS performs normally

④ Since it is hard to see shorelines of Kotsukushima Island and Ootsukushima Island, when altering course, measures to confirm positional relations with obstacles shall be ensured.

For example,

- When entering at night : Searching light of guard board, illuminating lamp, etc…
- When departing at night : As shown in **"Measures to clearly indicate obstacles near Otsukushima and Kotsukushima "** stated blow.

"Measures to clearly indicate obstacles near Otsukushima and Kotsukushima"

Since it is hard to see shorelines of the islands of Otsukushima and Kotsukushima at night, implementation of the measures shown in Table 1.2.1 is necessary to assist ships to visually confirm their positional relationships with these obstacles when altering ship's course at night.

The measures shown in Table 1.2.1 (installing lighting buoys to indicate obstacles) should be implemented based on suggested plan from the port authority.
Detailed plan to install lighting buoys should be decided only after sufficient discussions between related agencies and others. In the discussions, submarine topography of installation area, method of installation and collection, possibility of installing alternative facilities which have equivalent effect to lighting buoys and various other factors must be taken into consideration.

Information about installation of light buoys and alternative facilities must be known to ships and other users of this sea area in advance.

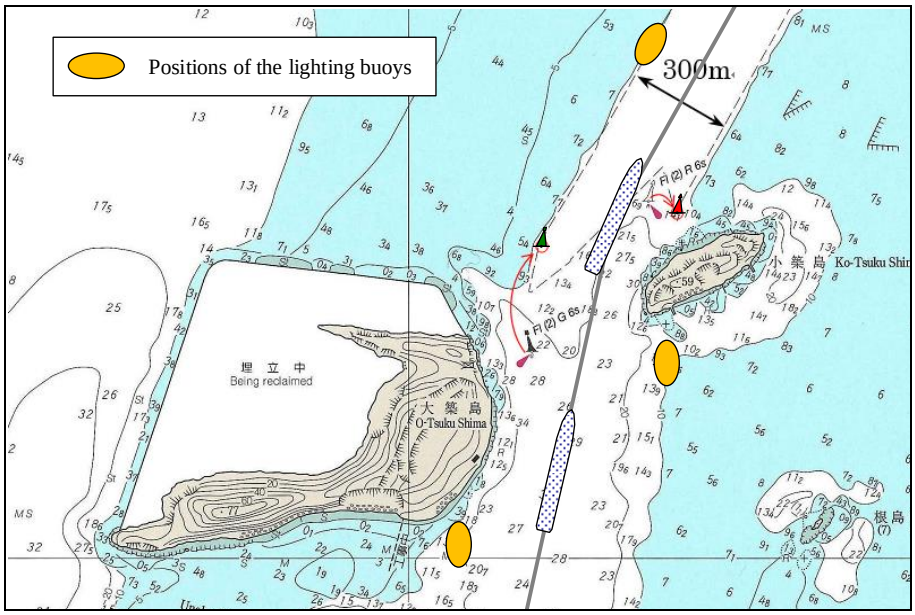
Table 1.2.1　Measures to clearly indicate obstacles near Otsukushima and Kotsukushima

(1) Install lighting buoys (effective luminous intensity must be 4 cd or more) at Otsukushima side and Kotsukushima side one each, so that the navigable waters between Otsukushima and Kotsukushima can be understood.

(2) Install one lighting buoy (effective luminous intensity must be 4 cd or more) near the intersection of the line extending from the ship's course for entering the Port of Yatsushiro (013 degrees) and the west edge line of the navigation channel so that the distance to the west edge line of the navigation channel can be understood when turning ship's course.

［Specifications of the lighting buoy that is to be stationed (example) ］

Character of light	One flashing every four seconds
Colour of light	Yellow
Luminous intensity of light	4 cd
Visibility	About 2.7 km



［A layout plan for the lighting buoy for the area near Otsukushima and Kotsukushima］

(example)

1.2 Publicity and request for cooperation

1.2.1 Notification of arriving and departing

Before arriving and departing port, adequate information shall be provided to agencies of maritime affairs.

1.2.2 Schedule coordination service

To avoid ship encounters in the channel and ensure safe passage, the port authority shall request the necessary cooperation to port users and coordinate the schedule of vessels as follows:

① Request for cooperation for safe navigation of large-sized passenger vessels

② Mutual adjustment for large-sized vessels by conducting regular berth meetings

③ Coordination of a system to maintain continuous contact with arriving and departing vessels in Yatsushiro Port via international VHF channel 16, etc.

1.2.3 Safety Management System to receive large-sized passenger vessels

To receive large-sized passenger vessels safely, agencies of maritime affairs necessary operation rules in advance on the occasions of the council for arriving and departing of large-sized passenger vessels to Yatsushiro Port.

1.3 Safety measures for mooring at berth

1.3.1 Mooring position and wind velocity

The recommended mooring position and allowable mean wind velocity for mooring of passenger vessels are shown as below. (Figure 1.3.1 ~ Figure 1.3.5)

【Head-in berthing (Starboard side alongside)】		Max mean velocity of wind
● Passenger vessel of 80,000GT	…	16m/s or below
● Passenger vessel of 110,000GT	…	16m/s or below
● Passenger vessel of 130,000GT	…	16m/s or below
● Passenger vessel of 160,000GT	…	20m/s or below
● Passenger vessel of 220,000GT	…	20m/s or below

【Head-out berthing (Port side alongside)】		Max mean velocity of wind
● Passenger vessel of 80,000GT	…	17m/s or below
● Passenger vessel of 110,000GT	…	16m/s or below
● Passenger vessel of 130,000GT	…	17m/s or below
● Passenger vessel of 160,000GT	…	20m/s or below
● Passenger vessel of 220,000GT	…	20m/s or below

*1 Other than vessels that studies these standards and arriving / departing … 15m/s or below

*2 Separate discussion is required depending on the vessel type and propulsion system.

1.3.2 Precautions for safe mooring

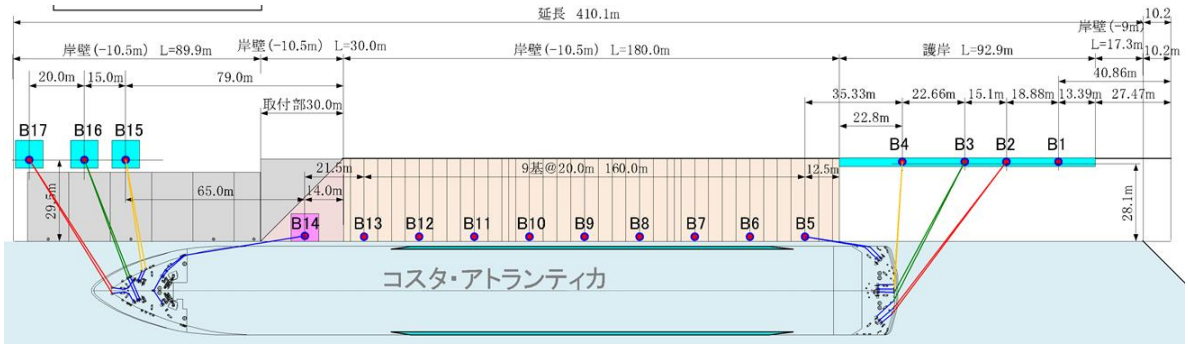
It is necessary to pay attention the following for safe mooring.

(1) Tension of mooring rope

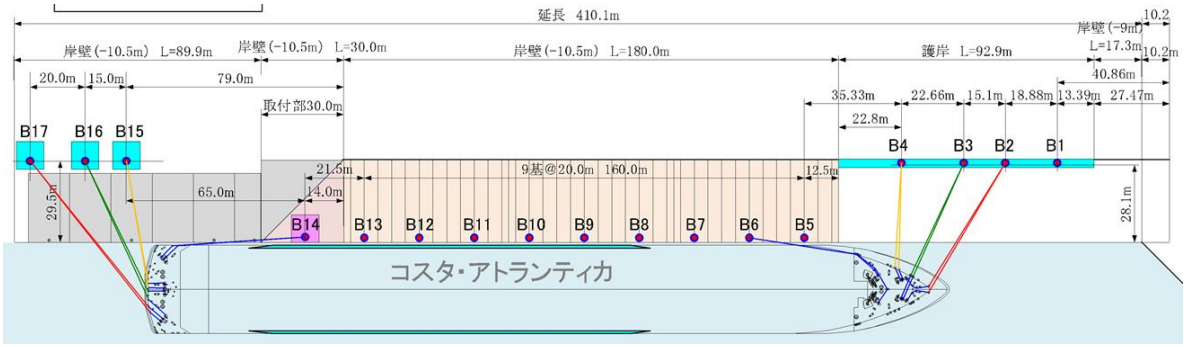
Tension of all ropes shall be kept as even as possible.

(2) Precaution for use of 70 tons mooring bollard

In light of the minimum breaking tension of a mooring rope, mooring winch's winding power of passenger vessels of 220,000GT is assumed about 70 tons. Therefore, when using a 70 tons mooring bollard, it is necessary to assume that only one rope is hanged on it at the same time. It is required to inform vessels to refrain from winding with excessive power.

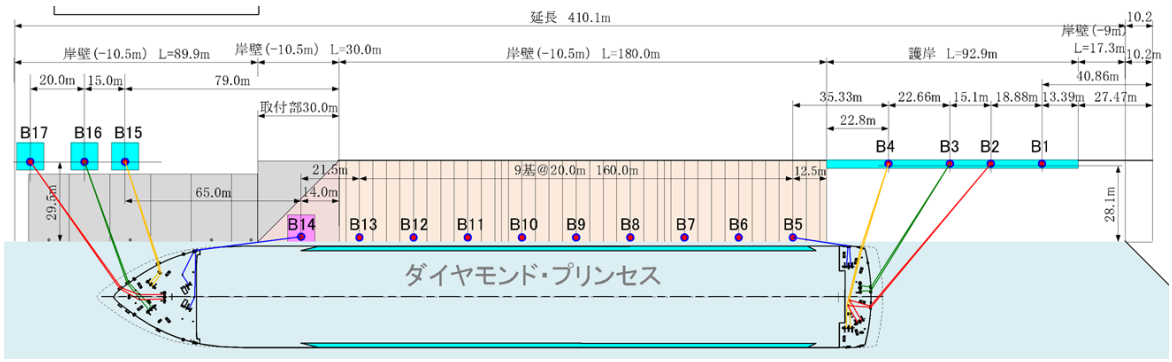


B17	B16	B15	B14	B5	B4	B3	B2
2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines

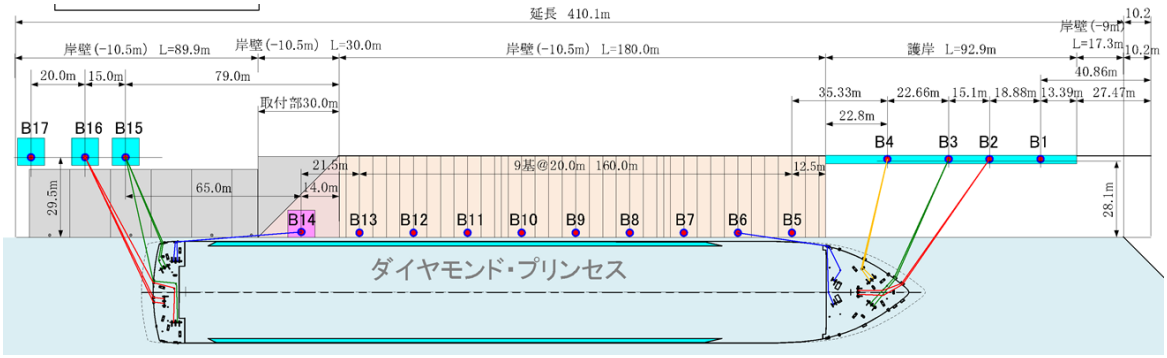


B17	B16	B15	B14	B5	B4	B3	B2
2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines

Figure 1.3.1　Recommended mooring position for passenger vessels of 80,000GT

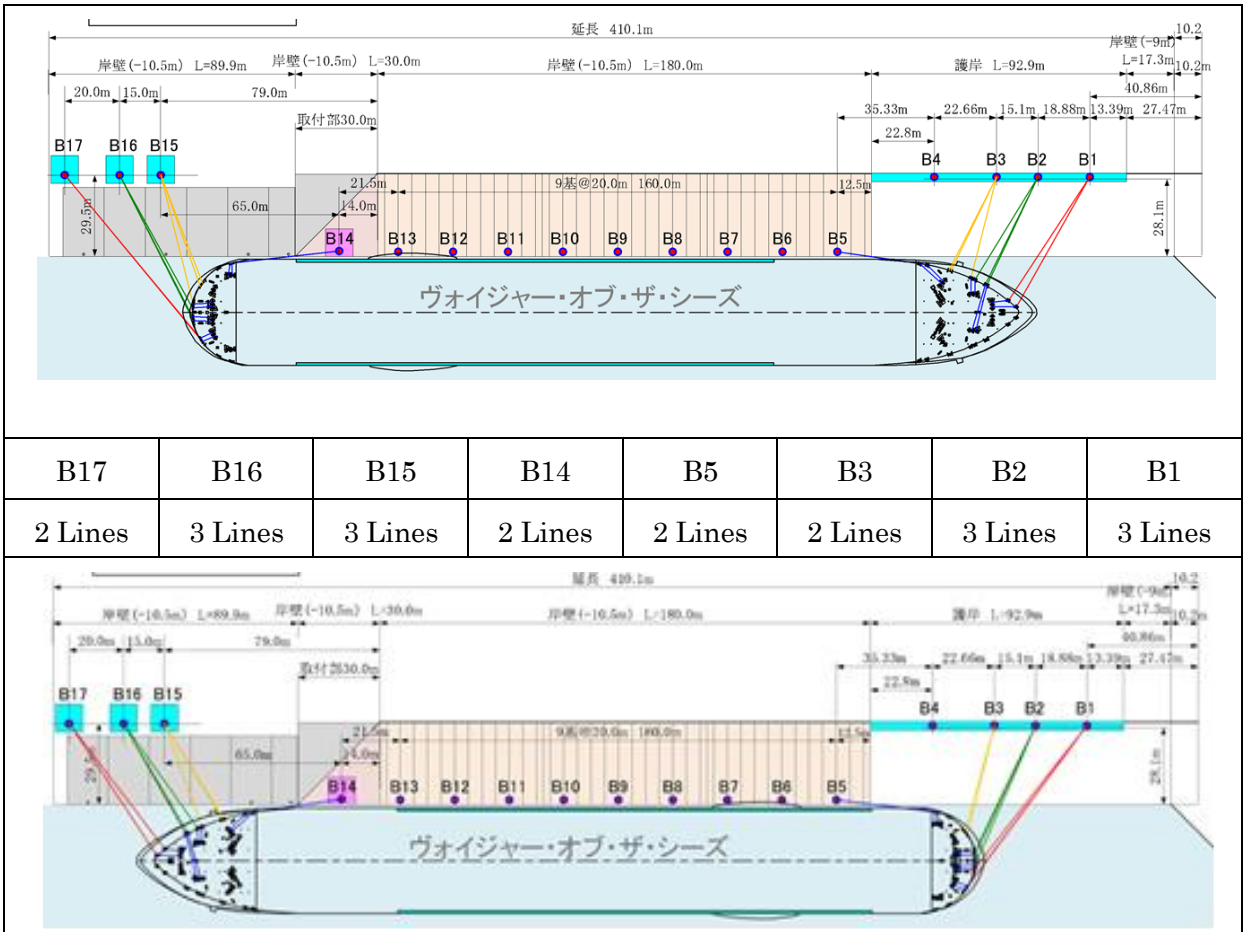


B17	B16	B15	B14	B5	B4	B3	B2
2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines



B17	B16	B15	B14	B5	B4	B3	B2
2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines	2 Lines

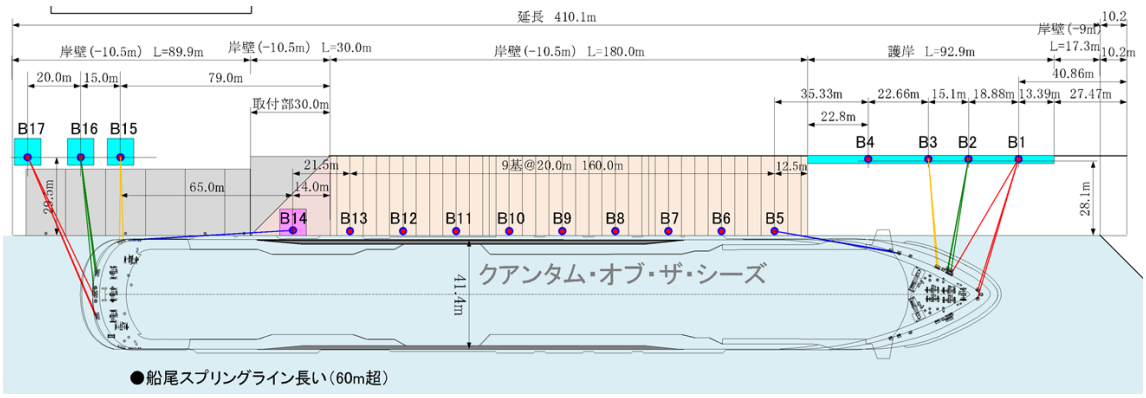
Figure 1.3.2　Recommended mooring position for passenger vessels of 110,000GT



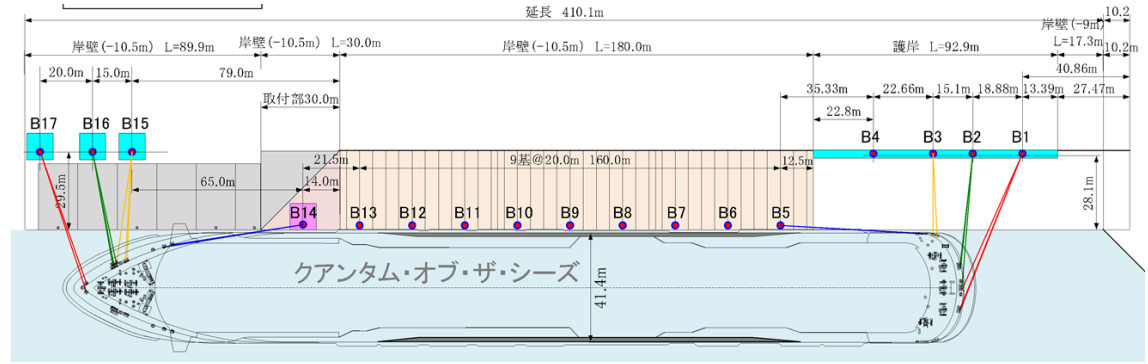
B17	B16	B15	B14	B5	B3	B2	B1
2 Lines	3 Lines	3 Lines	2 Lines	2 Lines	2 Lines	3 Lines	3 Lines

B17	B16	B15	B14	B5	B3	B2	B1
2 Lines	3 Lines	3 Lines	2 Lines	2 Lines	3 Lines	3 Lines	2 Lines

Figure 1.3.3　Recommended mooring position for passenger vessels of 130,000GT

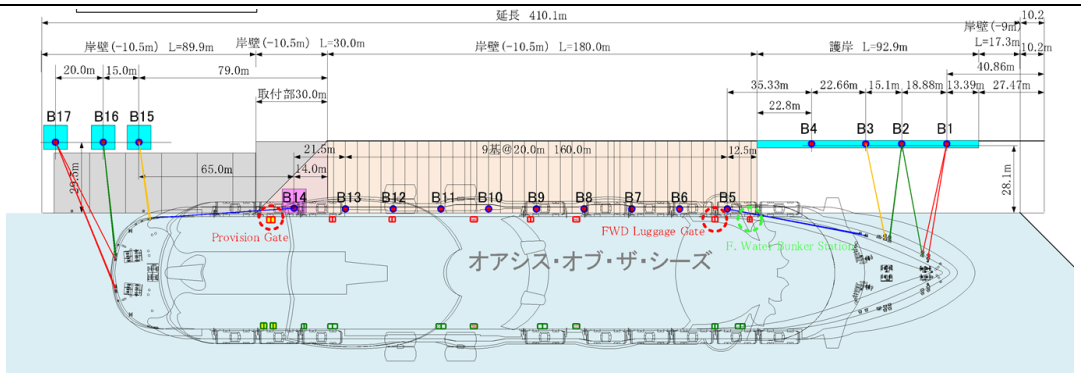


B17	B16	B15	B14	B5	B3	B2	B1
2 Lines	3 Lines	3 Lines	2 Lines	2 Lines	2 Lines	3 Lines	3 Lines

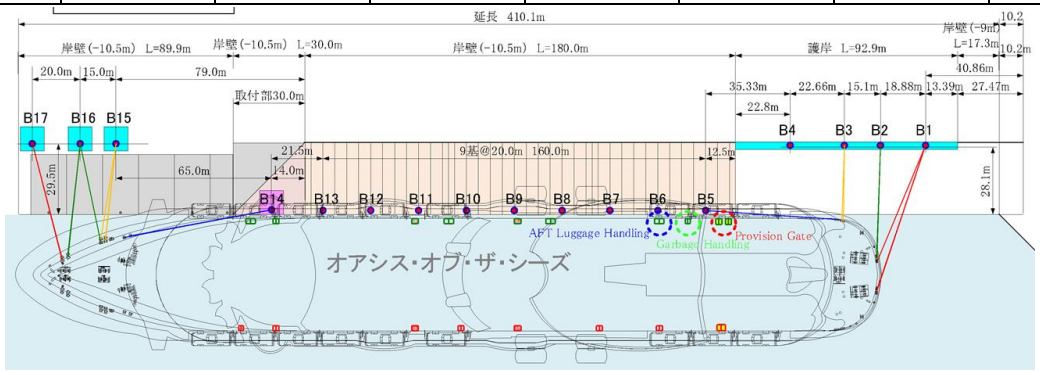


B17	B16	B15	B14	B5	B3	B2	B1
3 Lines	3 Lines	2 Lines	2 Lines	2 Lines	2 Lines	3 Lines	3 Lines

Figure 1.3.4　Recommended mooring position for passenger vessels of 160,000GT



B17	B16	B15	B14	B5	B3	B2	B1
2 Lines	3 Lines	3 Lines	2 Lines	2 Lines	2 Lines	3 Lines	3 Lines



B17	B16	B15	B14	B5	B3	B2	B1
3 Lines	3 Lines	2 Lines	2 Lines	2 Lines	2 Lines	3 Lines	3 Lines

Figure 1.3.5　Recommended mooring position for passenger vessels of 220,000GT

1.4 Management of wind velocity

Port authorities need to take appropriate measures in case that mean wind velocity are expected to exceed the wind velocity stated under Article 1.1 and 1.3.1 during the following situation:

(1) Before entering port

Port authorities need to tell passenger vessels not to enter the port under the following conditions:

① When it is expected that mean wind velocity will exceed the wind velocity of safety measures for arriving and departing (Article1.1) at the time of ship arrival.

② When it is expected that mean wind velocity will exceed the wind velocity of safety measures for mooring (Article1.3.1) at the time of being at berth..

③ When it is expected that mean wind velocity will exceed the wind velocity of safety measures for arriving and departing (Article1.1) at the time of ship departure.

(2) At berth

In case that mean wind velocity is expected to exceed the wind velocity of safety measures for mooring (Article1.3.1) when passenger vessels are at berth, port authorities need to tell them to leave the port promptly within the range of the wind velocity condition of the safety measures for arriving and departing (Article1.1).

(3) Before leaving port

In case that mean wind velocity is expected to exceed the wind velocity of safety measures for arriving and departing (Article1.1) at the time of ship departure, port authorities need to tell passenger vessels to leave the port promptly within the range of the wind velocity condition of the safety measures for arriving and departing (Article1.1).