

Tugboat for passenger vessel

1st April, 2009

Naikai Pilotage District

1. Vessel with no thruster

| DWT of vessel     | Tugboat  |   |
|-------------------|--|---|
|                   | Entering into port                                       | Leaving from port   |
| ~ 6,000           | 1 tug of 1,000 or more HP                                | 1 tug of 1,000 or more HP                                     |
| 6,000 ~ 30,000    | 2 tugs of 2,000 or more HP                               | 1 tug of 1,000 or more HP<br>1 tug of 1,500 or more HP        |
| 30,000 ~ 50,000   | 2 tugs of 2,500 or more HP                               | 2 tugs of 2,000 or more HP                                    |
| 50,000 ~ 75,000   | 3 tugs of 2,000 or more HP                               |   |
| 75,000 ~ 100,000  | 2 tugs of 2,500 or more HP<br>1 tugs of 3,000 or more HP | 2 tugs of 2,500 or more HP                                    |
| 100,000 ~ 150,000 | 2 tugs of 2,000 or more HP                               | 1 tug of 2,000 or more HP                                     |
|                   | 2 tugs of 2,500 or more HP                               | 2 tugs of 2,500 or more HP                                    |
| 150,000 ~ 200,000 | 4 tugs of 2,500 or more HP                               | 2 tugs of 2,500 or more HP<br>1 tug of 3,000 or more HP       |
| 200,000 ~ 250,000 | 5 tugs of 2,500 or more HP                               | 3 tugs of 3,000 or more HP (ballast condition)                |
| 250,000 ~         | 2 tugs of 2,500 or more HP                               | 4 tugs of 3,000 or more HP (more than 60% of full load draft) |
|                   | 3 tugs of 3,000 or more HP                               |   |

Note:

The number and power of tug may be decreased subject to sufficient manoeuvring areas in front of its berths and fair condition for manoeuver.

The tug in the table above means Z-type tug.

## 2. Vessel with thruster

| DWT of vessel   | Truster          | Remarks  |
|-----------------|------------------|--|
| 6,000 ~ 9,999   | 400 or more HP   | The number of tugboat for a vessel with thruster may be reduced by 1 from the number on table 1. |
| 10,000 ~ 24,999 | 800 or more HP   |  |
| 25,000 ~ 49,999 | 1,200 or more HP |  |
| 50,000 ~        | 2,000 or more HP |  |

### Note:

The standard above is the minimum requirement according to the following conditions.

- (1) Conditions of maneuvering area are favorable enough for a pilot to confirm safety adequately.
- (2) A main engine, a steering gears and a thruster of a vessel are available to use. The vessel has good maneuverability at the same time.
- (3) Tugboats are selected by its present valid HP which fulfills the standard above.
- (4) Wind velocity is 6 m/sec or less.
- (5) There are little tidal current.
- (6) Trim and draught of a vessel are normal condition.

There are some cases that the number and power of tugboat should be determined not by this standards, according to kind/type/condition of a vessel or weather/harbour conditions.