Decree No.: 07/ 2022 Amsterdam, 27 January 2022

Subject: Exemption regulations for ships transiting Zeesluis IJmuiden

The Director of the Central Nautical Management North Sea Canal Area, who is also the (State) Harbour Master, has adopted the above-mentioned exemption regulations:

The Director of the Public Body Central Nautical Management, on behalf of the Director-General of the Ministry of Infrastructure and Water Management, on the basis of the Mandate Decree, dated 19 March 2013, published in the Bulletin of Acts and Decrees No. 9184 on 11 April 2013, has adopted regulations for admission and transit and the granting of exemption for admission and transit of ships through Zeesluis IJmuiden

Legal framework

In accordance with article 9.02, paragraph 1, of the Inland Navigation Police Regulations (BPR), and Annex 3 of the State Inland Waterways Communication and Dimensions Regulation, a ship or convoy using the waterways mentioned in Annex 3 must comply with the maximum length, breadth or draught as prescribed in that Annex.

In accordance with article 9.02, paragraph 3, of the Inland Navigation Police Regulations (BPR), the competent authority may, on the basis of certain regulations and restrictions, grant exemption to ships that exceed the maximum dimensions mentioned in Annex 3 of the Dutch State Inland Waterways Communication and Dimensions Regulation.

Dimensions of Zeesluis IJmuiden

Length between the inside of the lock gates: 545 m

Length between the stop lines (lockage length): 500 m

Width between the lock walls: 70 m

Width between the floating fenders: 67 m

Nautical Guaranteed Depth (NGD) at the lock sills: NAP -17.25 m.

Minimum lockage level NAP ≤-1.65 m

Maximum lockage level NAP >+3.90 m

Chapter 1. Regulations (without exemption)

For Zeesluis IJmuiden, ships with the following dimensions are not required to apply for an exemption.

Ship Dimensions for Zeesluis IJmuiden

Minimum dimensions for inland ships: ≥ CEMT III Class (Length 67 m, breadth 8.20 m and draught 1.5 m), excluding service ships and government ships.

Maximum dimensions of seagoing ships, taking into account the so-called blocking factor* at the minimum lockage level of NAP -1.65 m:

Sea cruise ships:

Length 362 m, breadth according to the International Tonnage Certificate 47 m, draught 9,30 m (sea water 1,025 ton/m^3) / 9,60 m (fresh water 1,000 ton/m^3)

Container ships:

Length 398 m, breadth according to the International Tonnage Certificate 56,60 m, draught 13,75 m (sea water 1,025 ton/m^3) / 14,05 m (fresh water 1,000 ton/m^3)

Bulk carriers / tankers:

Length 330 m, breadth according to the International Tonnage Certificate 57 m, draught 13,75 m (sea water 1,025 ton/m^3) / 14,05 m (fresh water 1,000 ton/m^3)

Offshore ships:

Length 225 m, breadth according to the International Tonnage Certificate 63 m, draught 11,00 m (sea water 1,025 ton/m^3) / 11,30 m (fresh water 1,000 ton/m^3)

Ships the dimensions of which exceed the above-mentioned dimensions should apply for an exemption with Portoffice: www.portofamsterdam.com

*Blocking factor: The ratio of the wetted cross section of the lock to the wetted cross section of the ship.

Please note that different dimensions apply for the transit of the North Sea Canal. For transit of the North Sea Canal, a separate exemption must be applied for.

Compulsory pilotage requirement:

Ships with a length of 300 m or more and/or a breadth of 42 m or more, irrespective of their draught, are required to have two pilots on board.

Wind:

In accordance with Appendix 1, the transverse wind component may not be more than 5 Beaufort or 10.0 m/s.

Visibility At the time when an outgoing ship leaves its berth or at the time when an ingoing ship passes the IJM-C fairway buoy, the visibility at Zeesluis IJmuiden must be at least twice the ship's length plus 200 m for ships of which the bridge wings extend to the ship's sides. If the bridge wings do not extend to the ship's sides the visibility at Zeesluis IJmuiden at that time must be at least 1000 m.

Mooring sequence:

Due to the transverse forces occurring in Zeesluis IJmuiden during and after the opening of the lock gate, ships with lengths of more than 175 m or breadths of more than 28 m are not permitted to berth next to each other.

Mooring configuration:

In general:

Ships with a length of up to and including 125 m must moor with at least 1 head line, 1 forward spring line and 1 stern line.

Ships with a length ranging from 125 m to 175 m must moor with at least 1 head line, 1 forward spring line, 1 aft spring line and 1 stern line.

Due to the forces that occur, the head lines and stern lines must be placed as breast lines as much possible; the spring lines must be placed at least 30 m (i.e. approximately 3 bollards) away in a horizontal direction. The mooring lines must be tensioned up and put on the mooring winch brake well before the inner lock gate opens.

Ingoing ships with lengths of more than 175 m:

For ships with lengths of more than 175 m, irrespective of their loading condition, the mooring configuration must consist of at least the following: 2 head lines, 1 forward spring line, 1 aft spring line and 1 stern line.

Outgoing ships with lengths of more than 175 m:

For ships with lengths of more than 175 m, breadths of less than 40 m and draughts of less than 10.00 m (fresh water), the mooring configuration must consist of at least the following: 1 head line, 1 forward spring line, 1 aft spring line and 1 stern line.

If, in the category of ships with lengths of more than 175 m, the draught is more than 10.00 m (fresh water) the mooring configuration must consist of at least the following: 1 head line, 2 forward spring lines, 1 aft spring line and 2 stern lines.

For ships with breadths of more than 40 m, irrespective of the draught, the mooring configuration must consist of at least the following: 1 head line, 2 forward spring lines, 1 aft spring line and 1 stern line.

Tug assistance:

With due regard to any exceptions, the following applies: When entering Zeesluis IJmuiden, seagoing ships are required to make use of the assistance of a harbour tug as stern tug in accordance with the table given below:

For ships with lengths >175 m, assistance of a forward tug and an aft tug is compulsory.

Deadweight (DW) of the ship:

For ships with a DW of 10,000 tons - 50,000 tons, a static bollard pull of at least 20 tons is required

For ships with a DW of 50,000 tons - 100,000 tons: a static bollard pull of at least 30 tons is required

For ships with a DW ≥100.000 tonnes: a static bollard pull of at least 60 tons is required

When entering Zeesluis IJmuiden with seagoing ships with a deadweight of ≥100,000 tons (Aframax Class ships), assistance must be provided by a forward tug and an aft tug, whereby the aft tug should have a static bollard pull of at least 60 tons.

When leaving Zeesluis IJmuiden in a westerly direction with seagoing ships with a deadweight of ≥100,000 tons (Aframax Class ships and larger), assistance must be provided by an aft tug with a static bollard pull of at least 60 tons.

West going ships with a deadweight ≥100,000 tons (Aframax Class ships and larger) that are equipped with steel mooring lines, assistance must be provided by an aft tug with a static bollard pull of at least 60 tons.

Exceptions for tug assistance:

The requirement to make use of the assistance of tugs when entering and/or leaving the lock does not apply if ships are equipped with the following propulsion systems: controllable pitch propellers, azipods or fixed pods, conventional propulsion in combination with a good-working bow thruster and transverse stern thruster.

Chapter 2. Exemption regulations for transiting Zeesluis IJmuiden:

Early coordination with Portoffice is necessary if ships wish to transit Zeesluis IJmuiden with an exemption. Applications for exemptions must be timely submitted, because Portoffice will need to make further verifications when a ship's dimensions exceed the maximum dimensions. For example in the case of project cargoes where parts of the cargo may protrude outside the hull.

Maximum ship dimensions for the North Sea Canal:

Separate exemption regulations have been adopted for the transit of ships through the North Sea Canal; please consult the following Announcement to Shipping (*Basijn*): “Exemption regulations for transiting the North Sea Canal”.

Entry into force of the policy regulations:

The exemption regulations will enter into force one day after the publication of the Decree.

Amsterdam, 27 January 2022

The Director of the Central Nautical Management North Sea Canal Area, who is also the (State) Harbour Master,

J.H.M. Mateyo

Appendix 1: Compass rose

Appendix 2: Definitions

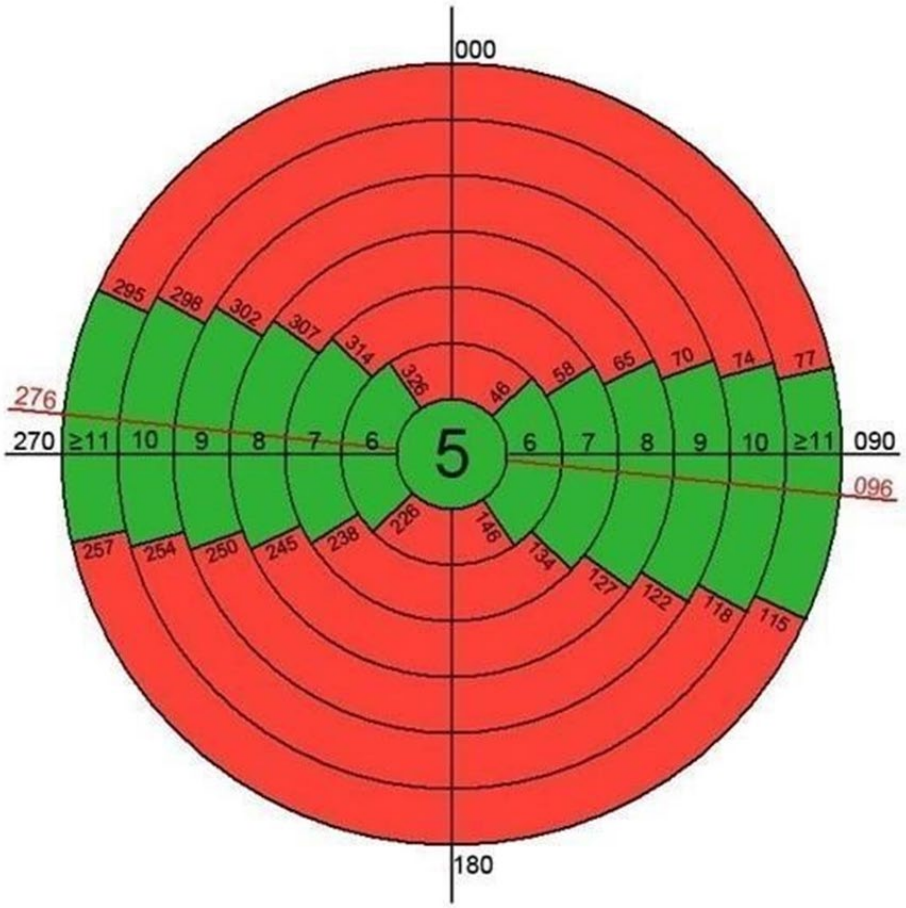
Appendix 3: Explanatory notes

Appendix 1: Compass rose

096-276: The direction of the axis of the Zeesluis IJmuiden (red line);

Transverse Wind Component from the listed wind directions ≤5 Beaufort or ≤10 m/s;
(green area)

Transverse Wind Component from the listed wind directions >5 Beaufort or >10 m/s; (red area)



Beaufort	m/s	km/u	knopen
5	08,0 - 10,7	29 - 38	17 - 21
6	10,8 - 13,8	39 - 49	22 - 27
7	13,9 - 17,1	50 - 61	28 - 33
8	17,2 - 20,7	62 - 74	34 - 40
9	20,8 - 24,4	75 - 88	41 - 47
10	24,5 - 28,4	89 - 102	48 - 55
11	28,5 - 32,6	103 - 117	56 - 63
12	>32,6	>117	>63

Dutch	English
km/u	kmh
Knopen	knots

Appendix 2.

Definitions: *Binnenvaartpolitiereglement - BPR* (Inland Navigation Police Regulations).

Deadweight: The deadweight of a ship is expressed in metric tons (1,000 kg). The deadweight is the difference between the water displacement of a seagoing ship when fully loaded and its weight when empty (i.e. without cargo, fuel, lubricating oil, ballast water, fresh water or drinking water in tanks, consumable stores, and without passengers or crew and their personal belongings).

Transverse wind component: The transverse wind component is the decomposed vector of the current wind direction and force in a direction of 90º to the direction of the axis of Zeesluis IJmuiden

Length: Length Over All, which means the extreme length of a ship.

Breadth according to the International Tonnage Certificate: The ship's breadth as referred to in the ship's international tonnage certificate 1969. This is the breadth of the ship's midships section measured over the outside of the ship's frames. In accordance with this definition, the ship's breadth according to the International Tonnage Certificate does not take into account the thickness of the ship's shell plating, including any installed sheer strakes, fendering, and wear plates. In practice, there is a difference of a few centimetres between the maximum breadth and the breadth according to the International Tonnage Certificate.

NAP: Normal Amsterdams Peil, the Dutch national chart datum. All water levels mentioned are relative to NAP.

Fresh water: Water weighing 1.000 kg/m^3.

Seawater: Water weighing 1.025 kg/m^3.

Appendix 3.

Explanation

The lockage process at IJmuiden is carried out by the Harbour Master's Division, on the instructions of the Director-General of Rijkswaterstaat. With regard to the lockage process at IJmuiden, working agreements have been made with Rijkswaterstaat Western Netherlands North (WNN). The following is based on these working agreements:

When assessing requests, including requests for an exemption for marginal ships, the risks for the waterway, the locks, other engineering structures, and other users of the waterway are assessed. The Central Nautical Management North Sea Canal Area (CNB) will only grant permission if the risks for the waterway, locks, other engineering structures and other users of the waterway are not higher than the risks during regular use.

During the lockage process, prevention of failures and the safety of personnel and ships must be taken into account. Prior to the lock passage of a ship granted exemption to pass through the lock, the Harbour Master's Division must have verified the ship's actual dimensions by consulting the Lloyd's Register database. At the first VHF contact with the ship, the ship's captain and/or the pilot are requested to confirm the ship's length and breadth.

All ships will have their draught inspected and ships with a draught exceeding the maximum permitted draught may be excluded from the lockage process. This inspection may be carried out by a certified draught surveyor, a patrol boat, an unmanned surface vehicle, or third-party equipment. The inspection is carried out by the so-called 'mobile' lock keeper of the Harbour Master's Division. The Harbour Master's Division bears the responsibility that ships can make a safe and efficient use of the locks and the waterways.

Draught readings of seagoing ships:

Prior to the lock passage of a ship, the Harbour Master's Division must have verified the ship's actual dimensions. The maximum draught as stated by the ship will be verified by the Harbour Master's Division in the *Noorderbuitenkanaal* by reading the ship's draught marks at three locations (bow, midships and stern) on either side of the ship. The permitted draught for lock passage is determined by means of the standard immersion formula which takes account of the ship's maximum draught and the specific gravity of the water at that location. If the ship is going to be shifted from the IJmuiden lightering facility (*IJ-palen*), the departure draught and specific gravity of the water may be provided by a certified draught surveyor. If the ship's dimensions - in particular the draught - exceed the regulations of the current Announcement (*Basijn*), the ship will be excluded from the lockage process.

The maximum draught of departing ships will be verified by Port Officers on board the patrol boats immediately after the ship has left its berth. There is no need to measure the specific gravity because departing ships go from fresh water to salt water. For this verification, the services of a certified draught surveyor may be used.

Tugs with a certain bollard pull are prescribed on the basis of a classification of ships. This is a classification according to deadweight (DWT), ship type (type of cargo) and ship design (bow or stern thrusters, variable pitch propellers). The regulation for tug use at the locks has been laid down in the current Announcement (*Basijn*); see Appendix 9. Par. 5.3.2 Exemptions (BPR) are granted by the Director of the Central Nautical Management North Sea Canal Area. Exemptions and permissions (BPR) may be granted verbally, but must be confirmed in writing as soon as possible. Copies of

decisions in individual cases will be sent to the District Head of Rijkswaterstaat Western Netherlands North (WNN).

Exemptions for lock passages (for example, for ships with diverging dimensions):

Exemptions for lock passages for ships with dimensions that diverge from the standard dimensions, and exemptions for special transports which may present a risk and/or require additional protective measures will be granted by the Director of the Central Nautical Management North Sea Canal Area (the Harbour Master's Division). The regulations and protective measures will be determined in consultation between the District Head of Rijkswaterstaat WNN (who is responsible for the technical management) and the Head of Operations. The exemption must be applied for at least 3 working days before the scheduled lock passage. Exceptions to this period may be made in cases of urgency.

Mooring configurations

Before Zeesluis IJmuiden was officially opened, tests were held with a number of seagoing ships ranging from 175 m (*Handysize*) to 300 m (*Capesize*) both in loaded and in ballast conditions. The purpose of these tests was:

- To gain insight into forces on the mooring lines of the above-mentioned ship types as a result of the current that occurs due to the exchange of sea water and fresh water in the lock during filling or emptying the lock chamber

- To gain insight the into various density currents in the lock;

- To calculate mooring line forces by scaling of measurement data to other (more extreme) density conditions;

- To determine the required number of tugs for each ship type;

- To determine a safe mooring configuration for each ship type;

- To test a safe procedure for entry, mooring and unmooring in the lock.

The forces that were measured were generally directed in a seaward direction and depended on the density difference between the water on the inside of the lock (North Sea Canal water) and the outside of the lock (water in the Outer Approach Channel). It was found that the greatest forces occurred during a strong easterly wind.

The results of the study were used to determine mooring configurations for various categories of ships. Procedures for mooring and unmooring by means of steel cables have been included.

Mooring line forces occur when the lock gate opens and that is why the lock operator must coordinate with the pilot on board the ship about the moment when the gate will be opened. This way, the crew can be warned in time to make sure that the winches are on the brake.

If mooring lines are timely slacked, it will reduce mooring line forces. This way, forces on the head line can be reduced by as much as 50%.

The mooring of other ships opposite of or next to the above-mentioned categories of seagoing ships must be avoided due to the transverse forces of the water that occur during and after the opening of the inner or outer lock gate. Salt intrusion

Filling or emptying the complete lock chamber takes about 45-60 minutes. For an ingoing ship scheduled to pass through Zeesluis IJmuiden, the outer lock gate can be opened approximately 10-15 minutes before the ship's arrival at the lock. This means that the gate can be opened when the ship passes Forteiland or the Junction Channel. Due to the early opening, the current that occurs due to the exchange of sea and fresh water in the lock chamber will have passed its maximum and its effect is now manageable. Also, if the gate closes as soon as the ship is inside the lock, the sea/fresh water exchange will stop. For an outgoing ship scheduled to pass through Zeesluis IJmuiden, the inner lock gate can be opened approximately 10-15 minutes before the ship's arrival at the lock. This means that the gate can be opened when the ship passes Velserpont (the ferry at Velsen).

After 3 or 6 months, or as early as necessary, the experiences and findings with the use of Zeesluis IJmuiden will be evaluated.