

No. 29496

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**FEDERAL REPUBLIC OF GERMANY  
and  
NETHERLANDS**

**Agreement concerning navigation arrangements in the Ems  
estuary (with annexes). Signed at The Hague on 22 De-  
cember 1986**

*Authentic texts: German and Dutch.*

*Registered by Germany on 28 January 1993.*

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**RÉPUBLIQUE FÉDÉRALE D'ALLEMAGNE  
et  
PAYS-BAS**

**Accord relatif à la réglementation de la navigation dans l'em-  
bouchure de l'Ems (avec annexes). Signé à La Haye le  
22 décembre 1986**

*Textes authentiques : allemand et néerlandais.*

*Enregistré par l'Allemagne le 28 janvier 1993.*

## [TRANSLATION — TRADUCTION]

AGREEMENT<sup>1</sup> BETWEEN THE GOVERNMENT OF THE FEDERAL REPUBLIC OF GERMANY AND THE GOVERNMENT OF THE KINGDOM OF THE NETHERLANDS CONCERNING NAVIGATION ARRANGEMENTS IN THE EMS ESTUARY

The Government of the Federal Republic of Germany and the Government of the Kingdom of the Netherlands,

Desiring to promote the safety and ease of shipping in the Ems Estuary, and

On the basis of the Treaty signed at The Hague on 8 April 1960 between the Federal Republic of Germany and the Kingdom of the Netherlands concerning arrangements for cooperation in the Ems Estuary (Ems-Dollard Treaty), together with its annexes and Final Protocol,<sup>2</sup>

Have, pursuant to the mandate contained in article 34, paragraph 1, of the said Treaty, agreed as follows:

*Article 1*

In derogation from, and in addition to, the International Regulations for the Prevention of Collisions at Sea, the traffic rules contained in annex A (“Navigation Arrangements Ems Estuary”) shall apply in the Ems Estuary as defined in Section 1 of annex B of the Ems-Dollard Treaty.

*Article 2*

1. Supplementary to the traffic rules referred to in article 1, the regulations contained in annex B shall apply to the transport of liquid petroleum gas (LPG) in the Ems Estuary to Emden.

2. The appropriate safety conditions for the transport of LPG to Emden shall in future be regulated in accordance with article 4 unless appropriate safety provisions have been incorporated into the domestic safety regulations. If the Contracting Parties have delegated the laying down of local regulations to the local authorities, the local authorities may, in accordance with article 5, paragraph 1, amend and supplement the traffic rules contained in annex B.

3. The first sentence of paragraph 2 shall apply *mutatis mutandis* to other gas tanker traffic.

*Article 3*

1. The Contracting Parties shall incorporate this Agreement into their national law and in so doing shall adopt a general clause regarding behaviour in traffic requiring that those involved in the traffic conduct themselves in such a way as to ensure the safety and ease of the traffic and that they observe such precautionary measures as are consistent with good seamanship. The national law of the Con-

<sup>1</sup> Came into force on 1 October 1989, i.e., one month after the date on which the Parties had notified each other (on 26 July and 1 September 1989) of the completion of the internal requirements, in accordance with article 7.

<sup>2</sup> United Nations, *Treaty Series*, vol. 509, p. 2.

tracting Parties may provide that in cases of imminent danger deviations from the common traffic rules are permissible where this is necessary, in light of the particular circumstances.

2. A provision is to be incorporated into the national law of the Contracting Parties to the effect that the competent authorities according to article 34, paragraph 2, of the Ems-Dollard Treaty may, in individual cases, grant exemption from the International Regulations for the Prevention of Collisions at Sea and from the provisions of the common traffic rules.

3. A provision is to be incorporated into the national law of the Contracting Parties to the effect that the shipmaster or any other person with responsibility for safety must observe the common traffic rules.

#### *Article 4*

1. If one of the Contracting Parties deems it necessary to amend this Agreement, it shall notify the other Contracting Party to that effect. The negotiations required to that end shall be conducted by a commission to which each of the Contracting Parties shall appoint three members.

2. The Contracting Parties undertake to incorporate the results of the said negotiations, to the extent necessary and in accordance with their domestic legislation, into their national law, unless either of the Contracting Parties, within a period of six months, raises an objection to the results agreed by the Commission.

3. The Contracting Parties shall also work together in the spirit of good-neighbourliness in respect of questions not specifically regulated in the Agreement that may arise in the Ems Estuary in connection with the traffic rules.

#### *Article 5*

1. The Contracting Parties may delegate to the local authorities the right to issue the local regulations provided for in the Navigation Arrangements Ems Estuary. This may specifically involve the determination of:

- (a) Roadsteads and the conditions for their use;
- (b) Areas of water within the fairway in which anchoring is allowed and outside the fairway in which anchoring is prohibited;
- (c) Places at which berthing and mooring are prohibited;
- (d) Anchorages and berths at which no vessels may lie without lights;
- (e) Segments of fairways in which it is permitted to proceed on the left;
- (f) Segments of fairways in which overtaking or passing in the opposite direction may be prohibited;
- (g) Areas of water in which water-skiing and windsurfing are permitted or prohibited;
- (h) Special rules governing the right of way;
- (i) Roadsteads and berths at which transshipping is permitted, and the relevant conditions;
- (j) Supplementary conditions imposed on vessels by the navigation police under the terms of article 21, paragraph 3, Navigation Arrangements Ems Estuary, including areas of water that may be navigated only in accordance with traffic-con-

trol measures within specified periods of time and given specified water levels or weather conditions;

(k) Measurements of vessels in connection with the registration requirements of the navigation police;

(l) Measurements of vessels for which approval by the navigation police is required because of their size.

The said local regulations may only be adopted with the mutual agreement of the local authorities.

2. The Contracting Parties shall notify each other of the locally competent authorities.

#### *Article 6*

This Agreement shall also apply to the *Land Berlin* unless the Government of the Federal Republic of Germany makes a declaration to the contrary to the Government of the Kingdom of the Netherlands within three months after the entry into force of the Agreement.

#### *Article 7*

This Agreement shall enter into force on the day on which both Contracting Parties have notified each other that the necessary domestic conditions for its entry into force have been fulfilled.

DONE at The Hague on 22 December 1986, in two originals, each in the German and Dutch languages, both texts being equally authentic.

For the Government  
of the Federal Republic of Germany:

OTTO VON DER GABLENTZ  
Dr W. DOLLINGER

For the Government  
of the Kingdom of the Netherlands:

HANS VAN DEN BROEK  
Dr NEELIE SMIT-KROES

## Annex A

### Navigation Arrangements Ems Estuary

#### General provisions

##### Article 1

##### Definitions

(1) The definitions contained in Rules 3, 21 and 32 of the International Regulations for Preventing Collisions at Sea, 1972 shall apply to the present Navigation Arrangements; in all other respects, for the purposes of the present Navigation Arrangements:

1. "International Regulations" means the International Regulations for Preventing Collisions at Sea, 1972;
2. "Fairway" means parts of areas of water that are bounded or indicated by navigational marks E.2.1 to E.2.3 in section I of Appendix 1 or, failing which, are intended for through traffic; fairways shall be deemed to be narrow channels within the meaning of the International Regulations;
3. "Roadsteads" means parts of areas of water that are intended for anchoring and are bounded by navigational marks E.6.1 and E.6.2 in section I of Appendix 1 or are designated by the competent authority;
4. "Floating installations" means floating structures that are normally not intended to be removed, in particular docks and landing stages; in the event of their conveyance, they shall be deemed to be vessels for the purposes of the present Navigation Arrangements and within the meaning of the International Regulations;
5. "Towed convoy" means a composite unit of one or more power-driven towing vessels (tugs), with one or more vessels towed astern or alongside having no propelling machinery or non-operational propelling machinery or having limited manoeuvrability;
6. "Pushed convoy" means a unit of rigidly connected vessels, at least one of which is positioned ahead of the power-driven vessel that propels the unit and is designated as the "pushing vessel";
7. "Privileged vessels" means vessels which by reason of their draught, length or other properties are obliged to keep to the deepest part of the fairway; they shall be deemed to be vessels constrained by their draught within the meaning of Rule 3 (h) of the International Regulations;
8. "Certain dangerous goods" means goods in class 1—divisions 1.1, 1.2, 1.3 and 1.5—and in class 5.2 for which the additional marking "explosive" is prescribed, whose total quantity per vessel exceeds 100 kg, goods in class 1.4 whose total quantity per vessel exceeds 1,000 kg, goods in class 2 for which the additional marking "poisonous" is prescribed, and goods carried as bulk cargo in classes 2 to 9 of the International Maritime Dangerous Goods Code (IMDG Code).

(2) For the purposes of the present Navigation Arrangements:

1. "By day" means the time from sunrise to sunset;
2. "By night" means the time from sunset to sunrise.

## Article 2

### Navigational marks

(1) For the purposes of the present Navigation Arrangements, navigational marks are optical and acoustic signs containing directions, prohibitions, warnings or information. The mandatory and prohibitory signs used within the scope of application of the present Navigation Arrangements are set out in Appendix 1 to the present Navigation Arrangements.

- (2) Orders given by mandatory and prohibitory signs must be complied with.
- (3) It is prohibited to damage navigational marks or impair their recognizability.

## Article 3

### Visual signs and signals and sound signals

(1) Unless specifically provided for in the following stipulations, vessels shall carry, exhibit or give visual signs and signals and sound signals only as provided for in Appendix 1 for the purposes specified therein. No visual signs and signals may be carried or exhibited and no sound signals may be given that might be confused with those prescribed or provided for.

(2) Rules 33 and 38 (g) of the International Regulations shall apply to equipment used for giving the sound signals prescribed in the present Navigation Arrangements. The efficiency and operational reliability of such sound-signalling appliances shall be guaranteed at all times. If their efficiency or operational reliability is discernibly impaired, the master of the vessel, owner and possessor shall arrange for appropriate repairs to be carried out without delay.

(3) Searchlights and lights other than those prescribed may be used only in such a way that they do not dazzle and cannot thereby endanger or interfere with navigation.

### Visual signs and signals of vessels

## Article 4

### General

(1) Rules 20 and 38 (c) to (f) and (h) of the International Regulations shall apply to the visual signs and signals prescribed in the present Navigation Arrangements. Visual signs and signals which, under the present Navigation Arrangements and in accordance with the International Regulations, have to be exhibited by vessels shall be permanently carried and be securely mounted during the time they are to be exhibited. They shall be displayed where they can best be seen. Notwithstanding the first sentence of the present paragraph, the first sentence of section 5 of Annex I to the International Regulations shall not apply with regard to the fitting of screens on sidelights of inland navigation craft if use is made of position lights which, with respect to the horizontal and vertical division of light, meet the requirements of sections 9 and 10 of Annex I to the International Regulations or the prescriptions of article 5 (3) without the fitting of screens. If use is made of sidelights fitted with screens, the first and second sentences of section 5 of Annex I to the International Regulations shall not apply with regard to matt black paint in the case of inland navigation craft.

(2) The minimum luminous range of all lights prescribed in the present Navigation Arrangements shall be two nautical miles.

(3) The balls, cones, diamonds and cylinders (shapes) prescribed in the present Navigation Arrangements and in the International Regulations may be replaced by appliances whose appearance from the distance is in all directions the same as that of the prescribed shapes.

(4) The flags and shapes which under the present Navigation Arrangements have to be carried shall, unless otherwise stipulated, be rectangular and at least 1 m high and 1 m wide. The colours may be neither faded nor tarnished. In place of the flags prescribed in the present Navigation Arrangements, shapes of the same size, form and colour may be carried. On vessels of less than 20 m in length it shall be possible to use flags and shapes having smaller measurements that are commensurate with the dimensions of the vessel.

#### Article 5

##### Visual signs and signals of vessels

(1) Notwithstanding section 2 (a) (i) of Annex I to the International Regulations, the masthead light may be placed at a minimum height of 6 m only, even if the breadth of the vessel exceeds 6 m.

(2) Notwithstanding Rule 23 (a) (ii) of the International Regulations, inland navigation craft of more than 50 m in length, but not more than 110 m in length, shall not be required to carry a second masthead light within the navigational routes between the landward boundary of the treaty area at Ems km 35.785 and the end of the Geise Dam at Ems km 48.4.

(3) For the purposes of carrying lights in accordance with the present Navigation Arrangements and with the International Regulations, position lights that are permitted by the competent authorities as bright lights or, if used as masthead lights, as strong lights, in accordance with the regulations adopted by the Central Commission for Rhine Navigation, may be used on inland navigation vessels.

(4) Notwithstanding section 2 (a) of Annex I to the International Regulations, inland navigation craft may carry the forward masthead light or, if applicable, the single masthead light at a minimum height of 5 m only above the hull and the after masthead light at a minimum height of 3 m only above the forward light.

#### Article 6

##### Visual signs and signals of small craft

(1) Notwithstanding Rule 25 (d) of the International Regulations, vessels of less than 12 m in length proceeding under sail and vessels under oars, if unable to carry the lights prescribed in Rule 25 (a) or (b) of the International Regulations, shall carry at least one white all-round light in accordance with item 1 of section II of Appendix 1.

(2) Vessels referred to in paragraph (1) above on which the lights hereinafter prescribed cannot be carried and power-driven vessels of less than 7 m in length on which the lights prescribed in Rule 23 (a) and (c) of the International Regulations cannot be carried may not navigate during the time when the exhibiting of lights is prescribed, except in an emergency. In such eventuality, an electric torch or a lantern showing a white light shall be kept permanently ready at hand and be exhibited in sufficient time to prevent collision.

(3) The competent authority may designate areas of water as anchoring and mooring places at which vessels of less than 12 m in length shall not be required to exhibit the visual signs and signals prescribed in Rule 30 (a), (b) or (c) of the International Regulations; Rule 30 (e) of the International Regulations shall remain unaffected.

### Article 7

#### Power-driven vessels in tow

A manoeuvrable power-driven vessel with operable machinery that is assisted (taken in tow) by one or more tugs shall when under way carry the visual signs and signals prescribed by the International Regulations for a power-driven vessel proceeding alone.

### Article 8

#### Vessels transporting certain dangerous goods

(1) Vessels which carry certain dangerous goods shall, in addition to the visual signs and signals prescribed by the International Regulations, carry by night one all-round red light, in accordance with item 2 of section II of Appendix 1, and by day the International Code flag "B". These visual signs and signals shall be carried even if the vessels are at anchor or berthed. The first and second sentences of the present paragraph shall not apply to vessels of war.

(2) Paragraph (1) above shall also apply to tankers which, after discharging certain dangerous goods, have not yet been cleaned and de-gassed, unless they are fully inerted.

### Article 9

#### Vessels restricted in their ability to manoeuvre engaged in dredging or underwater operations in the fairway

(1) A vessel restricted in her ability to manoeuvre engaged in dredging or underwater operations in the fairway and required to carry the visual signs and signals prescribed in Rule 27 (d) of the International Regulations shall carry the visual signs or signals prescribed in Rule 27 (d) (ii) on both sides if no obstruction exists on either side.

(2) Floating equipment used in the course of their work by vessels engaged in dredging or underwater operations shall by night carry one all-round white light and by day one square red shape, in accordance with item 3 of section II of Appendix 1.

### Article 10

#### Moored vessels, floating installations and poorly discernible vessels and objects

(1) Vessels and floating installations, and also vessels and objects within the meaning of Rule 24 (g) of the International Regulations, shall when moored:

1. If they are of less than 50 m in length, carry one all-round white light amidships on the fairway side or at the end extending furthest into the fairway, as far as possible at deck height, in accordance with sub-item 4.1 of section II of Appendix 1;
2. If they are of 50 m or more in length, carry one all-round white light both forward and aft on the fairway side, as far as possible at deck height, in accordance with sub-item 4.2 of section II of Appendix 1,

unless they are sufficiently and permanently discernable by other sources of light.



(2) Vessels attached to a mooring buoy, in accordance with E.7 of section I of Appendix 1, shall carry the visual signs and signals prescribed for anchored vessels in accordance with Rule 30 of the International Regulations.

#### Article 11

##### Public-service vessels

(1) Public-service vessels shall exhibit a continuous blue flashing light, in accordance with item 5 of section II of Appendix 1, if in the course of execution of police functions the safety and flow of traffic may be endangered.

(2) Customs vessels of the Federal Republic of Germany shall carry by night three all-round green lights in a vertical line and by day one square green flag in any position, in accordance with sub-item 6.1 of section II of Appendix I. Customs vessels of the Netherlands shall carry by day one blue flag bearing the inscription "DOUANE", in accordance with sub-item 6.2 of section II of Appendix 1.

##### Sound signals of vessels

#### Article 12

##### Signals to attract attention

Whenever the traffic situation so requires, in particular upon entry into other fairways and ports and upon departure from ports, locks, anchorages and berths, one prolonged blast shall be sounded as a signal to attract attention.

#### Article 13

##### Danger and warning signals

(1) Should a vessel endanger another vessel or herself be endangered by another vessel, she shall in sufficient time sound one prolonged blast and four short blasts twice in succession as a danger and warning signal.

(2) If, in the event of accidents, certain dangerous goods or radioactive substances are or threaten to be released from vessels or a risk of explosion exists, one short and one prolonged blast shall be sounded as a keep-clear signal. Once activated, the keep-clear signal shall be sounded automatically. It must be given at least five times in succession during every minute with an interval of two seconds between blasts. The keep-clear signal shall be sounded for as long as the traffic situation so requires. In the area of mooring and transshipping places, in accordance with articles 25 (1) and 26 (1), the keep-clear signal shall, in the cases referred to in the first sentence of the present paragraph, be sounded also by the person responsible for operating the transshipment facility.

#### Article 14

##### Fog signals of vessels

(1) In cases of restricted visibility, the following sound signals shall be given:

1. Vessels lying at the edge of the fairway in places not intended for mooring, or in the vicinity of sunken vessels or of other navigational obstacles, and vessels in service having limited manoeuvrability shall, notwithstanding Rule 35 (c), (g) and (h) of the International Regulations, give the following sound signals at least every minute:

- (a) On the starboard side of the fairway, that is the side lying to starboard in the case of incoming vessels: rapid ringing of the bell for five seconds followed by two groups of three separate strokes on the bell;
  - (b) On the port side of the fairway, that is the side lying to port in the case of incoming vessels: rapid ringing of the bell for five seconds followed by two groups of two separate strokes on the bell;
  - (c) In the middle of the fairway: rapid ringing of the bell for five seconds followed by two groups of four separate strokes on the bell;
2. Towed power-driven vessels under way shall, notwithstanding Rule 35 (a) and (b) of the International Regulations, sound one prolonged blast, one short blast and two prolonged blasts at least every two minutes. The towing vessels need not give the sound signal prescribed in Rule 35 (c) of the International Regulations;
  3. Vessels proceeding on the left in segments of the fairway within the meaning of article 15 (2) shall, notwithstanding Rule 35 of the International Regulations, sound one prolonged blast with two groups of two short blasts at least every minute.
    - (2) Vessels of less than 12 m in length shall not be required to give the sound signals prescribed in paragraph (1) but, if they do not, they shall make some other efficient sound signal at least every two minutes.

### **Navigating rules**

#### **Article 15**

##### **Requirement to proceed on the right; exceptions**

- (1) In the fairway, vessels shall in so far as is possible proceed on the right.
- (2) Within segments of the fairway designated by the competent authority, all or certain classes of vessels shall be permitted to proceed on the left. The competent authority may designate specific classes of vessels that have to continue on the left of the fairway having once elected to proceed on that side.
- (3) Vessels navigating outside the fairway shall do so in a manner that makes it clearly discernible that the fairway is not being used; vessels shall not be required to keep to a particular side or course.

#### **Article 16**

##### **Overtaking**

- (1) Overtaking shall be permitted only if, having regard to the traffic situation, the fairway affords sufficient passing space and, in particular, if there is no possibility of danger to oncoming traffic at any time during the overtaking manoeuvre. In the case of overtaking of or by vessels within the meaning of article 21 (1), the greatest possible lateral clearance shall be maintained.
- (2) In principle, a vessel shall overtake on the left. In so far as the circumstances of the case so require, a vessel may overtake on the right.
- (3) The overtaking vessel shall keep a look-out for traffic coming up astern and shall slacken her speed or maintain lateral clearance from the vessel ahead to the extent required in order to prevent any danger from her wake, and shall redirect her course to the right as soon as possible but without endangering or obstructing the overtaken vessel. The vessel ahead shall facilitate the overtaking operation to the extent possible.

(4) Overtaking shall be prohibited if the vessel ahead has not given the sound signal in accordance with Rule 34 (c) (ii) of the International Regulations.

(5) Overtaking at places, within routes and between certain vessels designated by the competent authority shall also be prohibited.

#### Article 17

##### Passing situations

(1) Notwithstanding Rule 18 (d) of the International Regulations, vessels other than those unable to manoeuvre shall keep out of the way of a privileged vessel.

(2) In the case of passing of or by vessels within the meaning of article 21 (1), the greatest possible lateral clearance shall be maintained.

(3) Passing at places, within routes and between certain vessels designated by the competent authority shall be prohibited.

(4) Notwithstanding Rule 14 of the International Regulations, vessels within segments of the fairway within the meaning of the first sentence of paragraph (2) of article 15 shall, by way of exception, be permitted to keep out of the way of an oncoming vessel by altering their course to port. Such manoeuvre shall be indicated to the oncoming vessel by one prolonged blast with two groups of two short blasts. The oncoming vessel shall reply with the same signal and shall pass the other vessel on the latter's starboard side. The second and third sentences of the present paragraph shall not apply to vessels of less than 12 m in length.

#### Article 18

##### Right of way

(1) Vessels proceeding in a fairway shall have right of way over vessels

1. Entering the fairway;
2. Crossing the fairway;
3. Turning in the fairway;
4. Leaving their anchorages or berths.

(2) Vessels in a fairway that is indicated over its entirety by navigational marks E.2.1 to E.2.3 in section I of Appendix 1 shall have right of way over vessels entering that fairway from a bifurcating or a joining channel.

(3) Should vessels approach from both sides a narrow place that does not afford sufficient space to permit simultaneous safe passing or a place within the fairway denoted by navigational mark A.2 in section I of Appendix 1, the vessel having right of way shall, in tidal waters, be the vessel proceeding with the current and, where the current is at a standstill, be the vessel previously proceeding against the current. The give-way vessel shall wait outside the narrow place until the other vessel has passed.

(4) Anyone required to give way shall let it be known in sufficient time by his navigating conduct that he will wait. He may proceed ahead only when he can ascertain that there will be no interference with traffic.

(5) The competent authority shall be empowered to lay down different rules governing the right of way for certain places, within routes and between certain vessels.

## Article 19

### Navigating speed

(1) The navigating speed shall be regulated so that the vessel conforms at all times to the traffic situation and the condition of the waterway, and can, if necessary, be stopped in sufficient time. In the fairway, mooring anchors must be ready to be dropped immediately. This shall not apply to vessels of less than 20 m in length. Where traffic is directed by means of navigational marks, the speed shall be regulated so that the vessel can be stopped immediately in the event of any temporary alteration to the optical or acoustic navigational signs.

(2) A maximum speed through the water of 8 km (4.3 nautical miles) per hour shall not be exceeded when proceeding outside the fairway, at a distance of less than 300 m from the water-line of the shore, past places with discernible bathing activities.

(3) Vessels shall slacken their speed in sufficient time to the extent necessary in order to prevent danger from wake or wash, particularly when proceeding past vessels unable to manoeuvre or aground, vessels restricted in their ability to manoeuvre within the meaning of Rule 3 (g), vessels and objects within the meaning of Rule 24 (g) of the International Regulations or floating installations, and at places indicated by navigational mark A.4 in section I of Appendix 1 or by International Code flag "A".

## Article 20

### Towing and pushing

Towed and pushed convoys may not contain more towed vessels or pushed barges than can safely be manoeuvred by the tugs or pushing vessels, having regard to the traffic situation and the condition of the waterway.

## Article 21

### Navigating restrictions and prohibitions

(1) Navigation in the Ems Estuary by the vessels specified below shall be subject to the requirements set out in paragraph (2):

1. Tankers, including pushed and towed convoys, carrying as bulk cargo the substances listed in Appendix 2;
2. Empty tankers, including pushed and towed convoys, after discharging the substances specified in sections 2 and 3 of Appendix 2—with the exception of residual quantities which cannot be pumped out by the discharge equipment in normal operating conditions—if the flashpoint of the most recently transported cargo was less than 35 °C and the tanks are not cleaned and de-gassed or fully inerted;
3. Empty tankers, including pushed and towed convoys, within the meaning of subparagraph 2 above, which last carried a cargo with a flashpoint of 35 °C or above but which had previously transported cargo with a lower flashpoint and subsequently had still not been cleaned and de-gassed and were not fully inerted;
4. Nuclear-powered vessels.

(2) The requirements for navigating in the Ems Estuary shall be as follows:

1. At the time of entry into the Ems Estuary or of departure from a mooring place, the prevailing visibility shall be greater than 1,000 m;

2. Permanent radiotelephone communication shall be maintained with the places designated by the competent authority, and shall be guaranteed even if radiotelephone contact is established with other places;
3. Radar equipment in perfect working order shall be in operation and, in conditions of restricted visibility, be constantly monitored by a competent person;
4. The use of autopilots shall be permissible only under the conditions determined by the competent authority;
5. The tank covers shall be kept closed.

Subparagraph 1 above shall not apply to tankers with a carrying capacity of up to 2,000 tons in conditions of visibility of more than 500 m if they transport exclusively, or after the last cleaning and de-gassing operation, petroleum products having a flashpoint of 35° C or above and are equipped with a gyroscopic compass or a tested and compensated magnetic compass.

(3) For vessels within the meaning of paragraph (1) above and empty tankers, including pushed and towed convoys, the competent authority may, following discharge of the substances specified in section 1 of Appendix 2, lay down additional conditions to be imposed by the navigation police for purposes of navigation in the Ems Estuary, particularly with regard to the engagement of tugs.

(4) Navigation by certain vessels or classes of vessels in areas of water designated by the competent authority shall be subject to prior registration with the competent authority in accordance with traffic-control measures.

(5) Navigation in areas of water during certain periods, at certain water levels or in weather conditions determined by the competent authority shall be prohibited. This shall not apply to classes of vessels designated by the competent authority.

## Article 22

### Water-skiing and windsurfing

(1) Water-skiing shall be prohibited within the fairway except in areas of water indicated by navigational mark C.2 in section I of Appendix 1 or designated by the competent authority. Water-skiing shall be permitted outside the fairway except in areas of water designated by the competent authority.

(2) Water-skiers and their towing boats shall keep out of the way of all other vessels. When passing vessels, water-skiers shall stay in the wake of their towing boats.

(3) Windsurfing on sailboards shall be prohibited:

1. Within the fairways with the exception of fairways designated by the competent authority;
2. Outside the fairway in areas of water designated by the competent authority.

(4) There shall be no water-skiing or windsurfing on sailboards in open areas of water by night, in conditions of restricted visibility, or during times determined by the competent authority.

### **Rules for lying at anchor**

#### **Article 23**

##### **Anchoring**

(1) Anchoring shall be prohibited within the fairway, except at roadsteads and in areas of water designated by the competent authority.

Anchoring shall be prohibited outside the fairway in the following areas of water:

1. At narrow places and on bends where visibility is impaired;
2. Within a radius of 300 m of vessels restricted in their ability to manoeuvre, wrecks and other obstructions to shipping and cable lines, and of places indicated by navigational mark E.5 in section I of Appendix 1;
3. At places and within areas of water designated by the competent authority;
4. In front of harbour entrances, landing places and sluices.

(2) Dredging of the anchor shall be prohibited. In the areas of water specified in point 2 of paragraph (1), use of the anchor for manoeuvring purposes shall also be prohibited.

(3) Paragraph (1) shall not apply to vessels referred to in Rule 3 (g) (i) and (ii) of the International Regulations.

(4) Vessels may anchor at roadsteads only if they are permitted to moor there in accordance with the designated purpose of the roadstead. The requirements shall be determined by the competent authority.

(5) An anchor watch shall be permanently maintained on vessels anchored in the vicinity of the fairway or at a roadstead, on vessels and objects within the meaning of Rule 24 (g) of the International Regulations, and on vessels which, in accordance with paragraph (4), are not subject to the anchorage prohibition. This shall not apply to vessels of less than 12 m in length in areas of water designated pursuant to article 6 (3).

#### **Article 24**

##### **Berthing and mooring**

(1) Berthing and mooring shall not interfere with shipping. If a vessel has begun a berthing manoeuvre, the other traffic shall take this fact into consideration and proceed with the necessary caution.

(2) It shall be prohibited to berth and moor:

1. At measuring posts and at fixed and floating navigational marks;
2. At places where anchoring is not permitted in accordance with article 23 (1) 1 and 4;
3. At places designated by the competent authority.

## Article 25

### Transshipping

(1) Outside ports and transshipment places, transshipping (including bunkering) shall be permitted solely at roadsteads and mooring places designated for such purpose by the competent authority and be subject to observance of the requirements laid down. Prior notification of the transshipment of certain dangerous goods shall be given in sufficient time to the competent authority.

(2) During transshipping, only one vessel involved in the transshipment may lie alongside a vessel carrying certain dangerous goods, on either side.

(3) Vessels not involved in the transshipment shall maintain a safe distance from vessels involved in the transshipment carrying certain dangerous goods or otherwise shall vacate their anchorage or berth.

(4) On completion of transshipping, the vessel shall leave the roadstead or mooring place without delay.

(5) All other prescriptions concerning the handling of dangerous goods shall remain unaffected.

## Article 26

### Anchoring, berthing, mooring and passing of or by vessels carrying certain dangerous goods

(1) Vessels carrying certain dangerous goods may anchor or moor solely at the roadsteads and mooring places designated by the competent authority, subject to observance of the requirements laid down.

(2) Should two or more vessels carrying certain dangerous goods be simultaneously lying in the area of the roadstead or mooring place, they shall maintain a safe distance, having regard to the local conditions.

(3) From vessels carrying certain dangerous goods, a safe distance, having regard in particular to the emission of sparks, shall be maintained by other vessels, with the exception of tugs, supply vessels and tank-cleaning vessels and also vessels involved in the transshipment. These vessels may enter the area of the roadstead or mooring place only if funnels and exhaust pipes are fitted with devices preventing the emission of sparks.

(4) No vessels may lie alongside moored tankers that have not been cleaned and de-gassed after discharging certain dangerous goods while the tanks are being filled with ballast water, and only tank-cleaning vessels required for cleaning and de-gassing purposes may lie alongside such tankers while those operations are being carried out.

(5) Moored vessels carrying certain dangerous goods and vessels lying in their vicinity must at all times be able to move away immediately.

### Other prescriptions

## Article 27

### Conduct in the event of accidents involving vessels and loss of objects

(1) In the event of danger of sinking, the vessel shall endeavour to move outside the fairway to the extent required to prevent any interference with shipping. Following a collision, the master of any vessel involved which is still able to float shall also be obliged to take such action.

(2) Should the waterway condition necessary for navigation or the safety and flow of traffic be interfered with by vessels that are sunken, stranded, grounded or adrift in the waterway, by floating installations, by vessels or objects within the meaning of Rule 24 (g) of the International Regulations or by other objects adrift or aground, the Knock central control station shall be notified without delay.

(3) The site of a sunken vessel shall be provisionally marked without delay by the master of the vessel. Following a collision, the master of any vessel involved which is still able to float shall also be obliged to take such action. He may continue the voyage only with the consent of the competent authorities as referred to in article 34, paragraph 2, of the Ems-Dollard Treaty.

(4) In the event of fire, or other incidents endangering the safety or flow of traffic, involving vessels or floating installations, or vessels and objects within the meaning of Rule 24 (g) of the International Regulations, the Knock central control station shall be notified thereof without delay.

(5) On vessels hearing the keep-clear signal, sounded in accordance with article 13 (2), all necessary measures to avert the impending danger shall be taken, and in particular:

1. All external openings not required for maintaining the vessel in operation shall be closed;
2. All auxiliary engines not required for ensuring the safety of the vessel, her crew and cargo shall be stopped;
3. Unprotected naked flames shall be extinguished and, in particular, smoking shall be prohibited, and
4. Equipment with incandescent parts or with parts that emit sparks shall be switched off.

#### **Article 28**

##### **Navigation police approval**

(1) Navigation police approval shall be required from the competent authority as referred to in article 34, paragraph 2, of the Ems-Dollard Treaty for:

1. The navigation of exceptionally large vessels exceeding the dimensions determined by the competent authority with regard to length, breadth and draught, and the navigation of air-cushion vessels;
2. The navigation of pushed and towed convoys that may obstruct shipping to an exceptional extent or that require particular consideration by shipping, the towing of floating installations, and the towing of vessels and objects within the meaning of Rule 24 (g) of the International Regulations;
3. The recovery of vessels, floating installations and objects if the safety and flow of traffic may thereby be interfered with, unless the recovery was ordered by the competent authority as referred to in article 34, paragraph 2, of the Ems-Dollard Treaty;
4. The testing and checking of the traction power of vessels and static tests that may interfere with the safety and flow of traffic;
5. Water sports events on the water;
6. Other events that may interfere with the safety and flow of traffic.

(2) The approval shall be applied for in sufficient time.

(3) The approval may be granted subject to conditions and requirements.



## Article 29

### Registration with the navigation police

(1) Vessels and pushed and towed convoys exceeding the dimensions and sizes determined by the competent authority shall register:

1. In sufficient time prior to navigation in the Ems Estuary, indicating the name, position, dimensions and port of destination, and
2. At the positions laid down, indicating the name, position, speed and time of passage.

The registration requirement set out in the first sentence of the present paragraph shall also be complied with in the event of any interruption and resumption of the voyage.

(2) Vessels within the meaning of article 21 (1) shall register 24 hours prior to navigating in the Ems Estuary and at the latest upon leaving the last port of departure. In all other respects, such vessels shall register in conformity with point 2 of the first sentence and the second sentence of paragraph (1).

(3) Registrations pursuant to the first sentence of paragraph (2) shall contain the following particulars:

1. Name and wireless call sign of the vessel;
2. Probable arrival at the first registration position laid down, the day being indicated with two numerals and the local time with four numerals;
3. Nationality of the vessel;
4. Length and draught of the vessel;
5. Port of departure and port of destination;
6. Types of cargo and details of certain dangerous goods, in accordance with Appendix 2, with an indication of the corresponding quantity;
7. In cases where chemicals or liquefied gases are transported as bulk cargo, an indication as to whether the vessel possesses a certificate of fitness in accordance with the IMO Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk or a certificate of fitness in accordance with the IMO Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk;
8. Statement as to whether there are any defects in the vessel or cargo;
9. Vessel owner or his representative.

(4) The registrations prescribed in paragraphs (1) and (2) shall be sent to the competent authority by the master or owner of the vessel or by their representative. Registrations pursuant to the first sentence of paragraph (2) shall be submitted in writing.

## Article 30

### Exemption for public-service vessels

Public-service vessels shall be exempt from the prescriptions of the present Navigation Arrangements in so far as is urgently required for the performance of sovereign tasks, in due consideration of public order and safety.

## Appendix 1

## Navigational marks and visual signs and signals of vessels

## Contents

## Section I—Navigational marks

- A. Prohibitory signs
- B. Mandatory signs
- C. Warning and informative signs
- D. Supplementary signs
- E. Fairway marking

## Section II—Visual signs and signals of vessels

## Section I

## Navigational marks

## A. Prohibitory signs

## A.1 No overtaking

(a) For all vessels



(b) For convoys



## A.2 No passing in narrow places

Narrow places where passing is prohibited and where the rules governing right of way, as set out in article 18, paragraph (3), have to be observed.



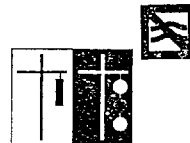
## A.3 Speed restriction

Prohibition on exceeding the indicated speed on the following route (example 12 km per hour).



## A.4 Avoidance of danger from wake or wash

Prohibition on proceeding on the route ahead or at this place at a speed likely to cause danger from wake or wash.



A.5 **No anchoring**

Prohibition on anchoring, and on allowing anchors, hawsers or chains to drag, at a distance of less than 300 m on either side of the line linking the signboards.

A.6 **No mooring**

Prohibition on mooring along the route ahead at the bank on which the signboard is displayed.

A.7 **No waiting**

Prohibition on waiting (anchoring or mooring) on the route ahead at the side of the waterway at which the sign is located.



## B. Mandatory signs

B.1 **True channel**

Obligation to keep a minimum distance from the location of the mark where the signboard is displayed along the route ahead (example: 40 m).

B.2 **Proceed in this direction**

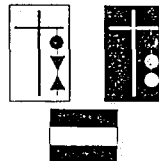
Obligation to navigate in the direction shown by the arrow.

B.3 **Sound horn**

Obligation to give at this place the sound signal shown on the supplementary signboard (example: one prolonged blast).

B.4 **Closure of entire waterway or of one section**

Obligation to stop in front of the visual sign owing to closure of the waterway or of one section.



## C. Warning and informative signs

## C.1 End of obligation or prohibition in one direction

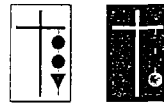


## C.2 Water-skiing

Areas of water within the fairway where water-skiing is permitted in accordance with article 22, paragraph (1).

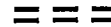


## C.3 Exceptional obstruction to shipping



## C.4 Closure of waterway

Two groups of three prolonged blasts.



## D. Supplementary signs

## D.1 For distance indication

Rectangular white signboard positioned above the navigational mark to be supplemented and indicating the distance over which the mark applies, measured from its location.



## D.2 For route indication

Triangular white signboard positioned alongside the navigational mark to be supplemented and pointing in the direction of the route along which the navigational mark applies, possibly with the length of the route indicated inside the triangle.



## D.3 For additional explanations or information

Rectangular white signboard positioned beneath the navigational sign to be supplemented and containing the necessary additional details or information.



## E. Fairway marking

E.1 **General**

## Principles

The fairway markings described below correspond to the international maritime buoyage system of the International Association of Lighthouse Authorities (IALA) for region A.

The system is applied to all fixed and floating navigational marks (other than lighthouses, sector lights, leading lights, lightships and large navigational buoys) serving to indicate the lateral limits of channels, danger spots, special areas and places, and new dangers.

The following light rhythms are used:

- Quick flashing light (Q):  
Continuous quick flashing; 50-60 flashes per minute;
- Very quick flashing light (VQ):  
Continuous very quick flashing; 100-120 flashes per minute;
- Long flash (Lfl):  
Light appearance of more than 2 seconds;
- Flashing light (Fl):  
Light appearance has a shorter duration than the interruption;
- Isophase light (Iso):  
Light appearance has the same duration as the interruption;
- Occulting light (Oc):  
Light appearance has a longer duration than the interruption.

Group flashing is also used, e.g., Q (6) + LFl, which corresponds to a group of 6 continuous quick flashes and one long flash.

---

E.2 Channel-edge marking  
(Lateral marks)

E.2.1 Starboard side of the fairway

Colour: Green

Shape (buoys): Conical, lighted, pillar (possibly not coloured), or bush stake with tied-down branches (not coloured)

Inscription (if any):

Consecutive odd numbers (beginning from seaward), possibly with a small letter affixed, possibly in combination with the (abbreviated) name of the fairway

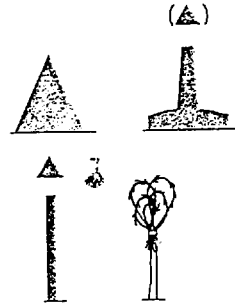
Topmark (if any):

Green cone, point upward; or downwards facing brush

Light (when fitted):

Colour: Green

Rhythm: Any, other than as described in E.2.3



E.2.2 Port side of the fairway

Colour: Red

Shape (buoys): Cylindrical, lighted, spar, pillar (possibly not coloured), or bush stake (not coloured)

Inscription (if any):

Consecutive even numbers (beginning from seaward), possibly with a small letter affixed, possibly in combination with the (abbreviated) name of the fairway

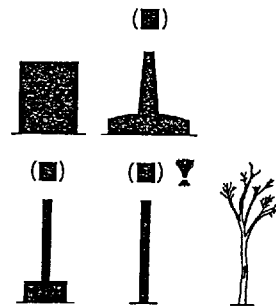
Topmark (if any):

Red cylinder; or upwards facing brush

Light (when fitted):

Colour: Red

Rhythm: Any, other than as described in E.2.3



E.2.3 Marking of bifurcating or joining channels

E.2.3.1 Indication by lateral marks

- (a) Starboard side of the through fairway/port side of the bifurcating or joining channel

Colour: Green with one red horizontal band

Shape (buoys): Conical, lighted or pillar

Inscription (if any):

The name (possibly abbreviated) and the first number of the bifurcating channel or last number of the joining channel, written beneath the consecutive odd number of the lateral marking of the through fairway and separated by a horizontal line

Topmark: Green cone, point upward; or downwards facing brush

Light (when fitted):

Colour: Green

Rhythm: Fl (2 + 1)



- (b) Port side of the through fairway/starboard side of the bifurcating or joining channel

Colour: Red with one green horizontal band

Shape (buoys): Cylindrical, lighted, spar or pillar

Inscription (if any):

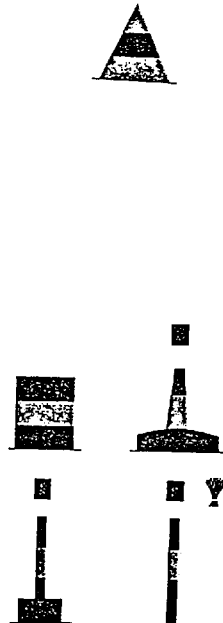
The name (possibly abbreviated) and the first number of the bifurcating channel or last number of the joining channel, written beneath the consecutive even number of the lateral marking of the through fairway and separated by a horizontal line

Topmark: Red cylinder or upwards facing brush

Lights (when fitted):

Colour: Red

Rhythm: Fl (2 + 1)



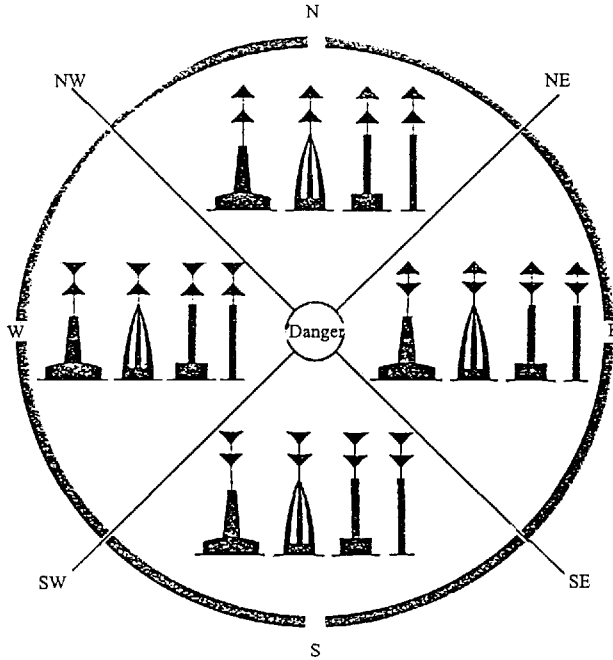
The positions on the starboard side of the through fairway/starboard side of the bifurcating or joining channel and the port side of the through fairway/port side of the bifurcating or joining channel may be indicated by lateral marks (marks E.2.1 or E.2.2). They will then carry an inscription, as described above, and also a topmark.

### E.2.3.2 Indication by cardinal marks

Bifurcating or joining channels may also be indicated by means of cardinal marks (marks E.3.1 to E.3.4).

### E.3 Danger marks

A general danger is usually indicated by means of one or more cardinal marks, which for the different quadrants show the reference to the location of the danger spot.





## E.3.1 North cardinal mark

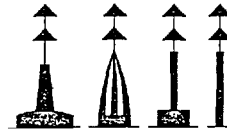
Colour: Black above yellow

Shape: Lighted, beacon, spar or pillar

Inscription (if any):

Indication of the reference, possibly abbreviated, and/or compass bearing

Topmark: Two black cones, one above the other, points upward



Light (when fitted):

Colour: White

Rhythm: VQ or Q

## E.3.2 East cardinal mark

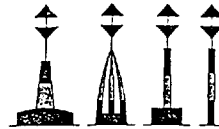
Colour: Black with one broad horizontal yellow band

Shape: Lighted, beacon, spar or pillar

Inscription (if any):

Indication of the reference, possibly abbreviated, and/or compass bearing

Topmark: Two black cones, one above the other, base to base



Light (when fitted):

Colour: White

Rhythm: VQ (3) or Q (3)

## E.3.3 South cardinal mark

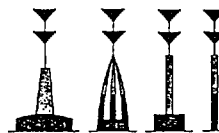
Colour: Yellow above black

Shape: Lighted, beacon, spar or pillar

Inscription (if any):

Indication of the reference, possibly abbreviated, and/or compass bearing

Topmark: Two black cones, one above the other, points downward



Light (when fitted):

Colour: White

Rhythm: VQ (6) + LFl or Q (6) + Lfl

## E.3.4 West cardinal mark

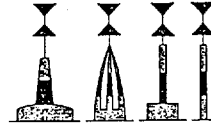
Colour: Yellow with one broad horizontal black band

Shape: Lighted, beacon, spar or pillar

Inscription (if any):

Indication of the reference, possibly abbreviated, and/or compass bearing

Topmark: Two black cones, one above the other, point to point



Light (when fitted):

Colour: White

Rhythm: VQ (9) or Q (9)

## E.3.5 Isolated danger marks

The danger can be passed on all sides

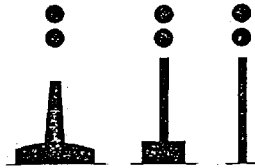
Colour: Black with one or more broad horizontal red bands

Shape: Lighted, spar or pillar

Inscription (if any):

Name of the danger

Topmark: Two black spheres, one above the other



Light (when fitted):

Colour: White

Rhythm: Fl (2)

## E.3.6 New dangers

Marking as for general or isolated dangers, but, if particular circumstances so warrant, at least one of the marks shall be duplicated and, where applicable, marked by a racon, coded "D".

## E.4 Mid-channel marking

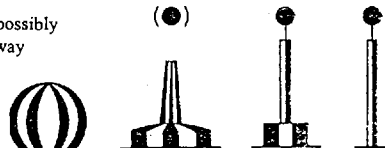
Colour: Red and white vertical stripes

Shape: Spherical, lighted, spar or pillar (possibly not coloured)

Inscription: Consecutive letters and/or numbers, possibly with the (abbreviated) name of the fairway

Topmark (if any):

Red sphere



Light (when fitted):

Colour: White

Rhythm: Iso, Oc, LFl every 10 seconds or Morse "A"

## E.5 Indication of special areas and places

The designated meaning shall be as indicated in marine charts or other nautical documents and possibly also shown by the inscription on the mark.

Colour: Yellow

Shape: Buoy of any shape, or pillar

Inscription (if any):  
The corresponding designation in black letters



Topmark (if any):  
Yellow "X" shape



Light (when fitted):

Colour: Yellow

Rhythm: Any, other than those used in E.3 and E.4

## E.6 Roadsteads

## E.6.1 Indication of general roadsteads

Colour: Yellow

Shape: Cask or lighted buoy

Inscription: Full or abbreviated name of the roadstead,  
written in black letters, and possibly a number

Topmark (if any):  
Yellow "X" shape



Light (when fitted):

Colour: Yellow

Rhythm: Any, other than those used in E.3 and E.4



If the roadstead borders either the starboard side or the port side of a fairway, that side of the roadstead shall be indicated by the corresponding channel-edge marking (mark E.2.1 or E.2.2), which shall additionally show the full or abbreviated name of the roadstead, and possibly a number, written beneath a horizontal line.

## E.6.2 Indication of roadsteads for vessels transporting certain dangerous goods

Colour: Yellow

Shape: Cask buoy

Inscription: Large black "P", possibly with a number



Topmark (if any):  
Yellow "X" shape

**E.7 Mooring buoy**

Buoy to which vessels may be attached

Colour: Yellow



Shape: Buoy of any shape

Inscription: The word "mooring", or an abbreviation of it, in black letters

**Section II****Visual signs and signals of vessels****Explanation**

The visual signs and signals appearing in this Section are given by way of illustration only; the written descriptions shall have regulatory force.

**Representation of the visual signs and signals**

Unbroken light of the stated colour, visible over the entire horizon (all-round light);



Unbroken light of the stated colour, visible over a limited arc of the horizon;



Unbroken light of the stated colour, visible over a limited arc of the horizon, in the direction away from the observer;



Flashing light of the stated colour, visible over the entire horizon; frequency: approximately 12 flashes per minute;




Light of the stated colour, moved upwards and downwards, and visible over the entire horizon;

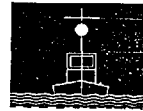


Flare with stars of the stated colour.



**1. Small craft**  
(Article 6 (1))

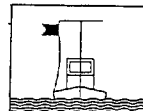
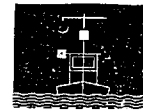
Vessels of less than 12 m in length proceeding under sail and vessels under oars that are unable to exhibit the lights prescribed in Rule 25 (a) or (b) of the International Regulations:

By night:  one all-round white light.

**2. Vessels transporting certain dangerous goods**  
(Article 8 (1))

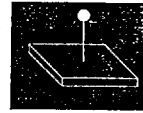
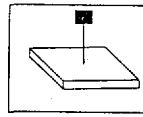
Vessels that carry certain dangerous goods, tankers that have not been de-gassed and tankers that are still not fully inerted:

By night:  one all-round red light;  
By day:  the International Code flag "B".



3. **Floating equipment**  
(Article 9 (2))

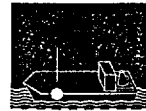
By night: one all-round white light;  
By day: one square red shape.



4. **Moored vessels, floating installations and vessels and objects within the meaning of Rule 24 (g) of the International Regulations**  
(Article 10)

4.1 If less than 50 m in length:

By night: one all-round white light amidships on the fairway side or at the end extending furthest into the fairway, as far as possible at deck height.



4.2 If 50 m or more in length:

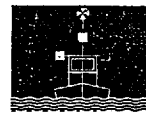
By night: one all-round white light both forward and aft on the fairway side, as far as possible at deck height.



5. **Police vessels**  
(Article 11 (1))

Police vessels in service and other vessels of the authority, when executing police functions, if the safety and flow of traffic may thereby be endangered:

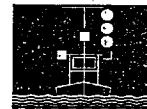
One continuous blue flashing light.



6. **Customs vessels**  
(Article 11 (2))

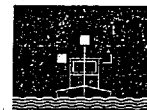
6.1 Customs vessels of the Federal Republic of Germany

By night: three all-round green lights in a vertical line;  
By day: one square green flag in any position.



6.2 Customs vessels of the Netherlands

By night: no special markings;  
By day: one blue flag bearing the inscription "DOUANE".



## Appendix 2

List of substances  
constituting particularly hazardous cargo subject to mandatory registration  
(Article 21 (1) and article 29 (2))

1. Liquefied gases	UN number	1. Liquefied gases	UN number
Acetaldehyde Acetaldehyd	1089	Methyl chloride Methylchlorid	1063
Ammonia, anhydrous, liquefied or Ammonia solutions Ammoniak, wasserfrei, verflüssigt oder Ammoniaklösungen	1005	Propane Propan	1978
Butadiene, inhibited Butadine, stab.	1010	Propylene Propylen	1077
Butane or Butane mixtures Butan oder Butanmischungen	1011	Sulphur dioxide, liquefied Schwefeldioxid, verflüssigt	1079
Butylene Butylen	1012	Vinyl chloride, inhibited Vinylchlorid, stab.	1086
Chlorine Chlor	1017	<b>2. Chemicals</b>	
Dimethylamine, anhydrous Dimethylamin, wasserfrei	1032	Absorbent A1 Absorbent A1	(1992)**
Ethyl chloride Äthylchlorid	1037	Absorbent A2 Absorbent A2	(1993)**
Ethane, refrigerated liquid Äthan, tiefgekühlt verflüssigt	1961	Absorbent A3 Absorbent A3	(1993)**
Ethylamine (Monoethylamine) Äthylamin	1036	Acetic acid, glacial or Acetic acid solution, more than 80% acid, by weight	2789
Ethylene, refrigerated liquid Äthylen, tiefgekühlt verflüssigt	1038	Essigsäure, Eisessig oder Essigsäurelösung, mit mehr als 80% Gewichts-% Säure	
Ethylene oxide Äthylenoxid	1040	Acetic anhydride Essigsäureanhydrid	1715
Methane, refrigerated liquid or Natural Gas, refrigerated liquid Methan, tiefgekühlt verflüssigt oder Erdgas, tiefgekühlt verflüssigt	1972	Acetone Aceton	1090*
Methyl acetylene and propadiene mixtures, stabilized Methylacetylen und Propadien- Mischungen, stab.	1060	Acetone cyanohydrin Acetoncyanhydrin	1541
Methyl bromide Methylbromid	1062	Acetonitrile Acetonitril	1648
		Acrylic acid, inhibited Acrylsäure, stab.	2218

2. Chemicals	UN number	2. Chemicals	UN number
Acrylonitrile, inhibited Acrylnitril, stab.	1093	Carbon disulphide Schwefelkohlenstoff	1131
Adiponitrile Adiponitril	2205	Carbon tetrachloride Tetrachlorkohlenstoff	1846
Alcohol, denatured Alkohol, vergällter	1986/1987**	Chlorobenzene Chlorbenzol	1134
Alcohol, industrial Alkohol, technischer	1986/1987**	Chloroform Chloroform	1888
Allyl alcohol Allylalkohol	1098	Chlorohydrines, crude Chlorohydrine, ungereinigt	—
Allyl chloride Allylchlorid	1100	Chloroprene, inhibited Chloropren, stab.	1991
Aminoethylethanolamine Aminoäthylenäthanolamin	—	Chlorosulphonic acid with or without sulphur trioxide Chlorosulfonsäure mit oder ohne Schwefel- trioxid	1754
Aniline Anilin	1547	Coal tar naphta Steinkohlenteernaphta	2553
Benzene Benzol	1114	Cresols (ortho-, meta-, para) Kresole (ortho-, meta-, para)	2076
Benzyl chloride Benzylchlorid	1738	Crotonaldehyde, inhibited Crotonaldehyd, stab.	1143
Isobutyl acrylate, inhibited Isobutylacrylat, stab.	2527	Cyclohexanone Cyclohexanon	1915
Butyl acrylate, inhibited Butylacrylat, stab.	2348	Cyclohexylamine Cyclohexylamin	2357
Butylalcohol Butanol	1120*	Di-(normal-Butyl) amine Di-(normal-Butyl) amin	2248
Butyl ether Butyläther	1149	1.1-Dichloroethane 1.1-Dichloräthan	2362
normal-Butyl methacrylate normal-Butylmethacrylat	2227	1.2-Dichloroethane 1.2-Dichloräthan (Äthylendichlorid)	1184
Isobutyraldehyde i-Butyraldehyd	2045	Dichlorethyl ether Dichloräthyläther	1916
n-Butyraldehyde n-Butyraldehyd	1129	Dichloromethane (Methylene chloride) Dichlormethan (Methylenchlorid)	1593*
Camphor oil Kampferöl	1130		
Carbolic acid Carbolöl	—		

2. Chemicals	UN number	2. Chemicals	UN number
1.1-Dichloropropane 1.1-Dichlorpropan	—**	Ethylene cyanohydrin Äthylencyanhydrin	—
1.2-Dichloropropane (Propylenedichloride)	1279	Ethylene diamine Äthylendiamin	1604
1.2-Dichlorpropan (Propylendichloride)		Ethylene dibromide Äthylendibromid	1605
1.3-Dichloropropane 1.3-Dichlorpropan	—	Ethylene glycol monoethyl ether acetate	1172
1.3-Dichloropropene 1.3-Dichlorpropen	2047	Äthylenglykolmonoäthyl- ätheracetat	
2.3-Dichloropropene 2.3-Dichlorpropen	2047**	Formaldehyde solutions (45% or less)	1198
Diethylamine Diäthylamin	1154	Formaldehyd-Lösungen (45% oder weniger) (Formalin)	
Diethylether (Ethyl ether) Diäthyläther (Äthyläther)	1155	Formic acid Ameisensäure	1779
Dimethylamine, solution Dimethylamin, Lösung	1160	Furfural Furfural (Furfurol)	1199
Dimethylethanolamine Dimethyläthanolamin	2051	Gascondensate Gaskondensat	(1993)**
N,N-Dimethylformamide N,N-Dimethylformamid	2265	Heptane, and its isomers Heptan und Isomere	1206*
1.4-Dioxane 1.4-Dioxan	1165	Hexane, and its isomers Hexan und Isomere	1208*
Diisopropylamine Diisopropylamin	1158	Isoprene, inhibited Isopren, stab.	1218
Epichlorohydrin Epichlorhydrin	2023	Lignite tars Braunkohlenteere	1999**
Ethyl acrylate, inhibited Äthylacrylat, stab.	1917	Mesityl oxide Mesityloxid	1229
Ethyl alcohol Äthylalkohol	1170*	Methylacrylate, inhibited Methylacrylat, stab.	1919
Ethyl benzene Äthylbenzol	1175*	Methylalcohol (Methanol) Methylalkohol (Methanol)	1230*
Ethylene chlorohydrin Äthylenchlorhydrin	1135	Methyl isocyanate or Methyl isocyanate solutions	2480**
Ethylmethacrylate, inhibited Äthylmethacrylat, stab.	2277	Methylisocyanat oder Methylisocyanat-Lösungen	



2. Chemicals	UN number	2. Chemicals	UN number
Methyl methacrylate, monomer, inhibited	1247	Phosphorstrichloride Phosphortrichlorid	1809**
Methylmethacrylat, monomer, stab.		Phosphorus, white, molten Phosphor, weiß, geschmolzen	2447
α-Methylstyrene α-Methylstyrol	2303	Phosphoric acid, liquid Phosphorsäure, flüssig	1805
Monoethylamine solutions (72% or less) Monoäthylamin-Lösungen (72% oder weniger)	2270	Propionic acid, solution containing not less than 80% acid Propionsäure, Lösung mit nicht weniger als 80% Säure	1848
Nerozene Nerozene	(1993)*	iso-Propylalcohol iso-Propylalkohol	1219*
Nitrobenzol Nitrobenzol	1662	iso-Propylamine iso-Propylamin	1221
Morpholine Morpholin	2054	n-Propylamine n-Propylamin	1277
Motor fuel anti-knock mixtures Motortreibstoff-Antiklopf- mischungen	1649	iso-Propylbenzene (Cumene) iso-Propylbenzol (Cumol)	1918*
Nitric acid (70% and over) Salpetersäure (70% und darüber)	2031/2032	Propylene oxide Propylenoxid	1280
1- or 2-Nitropropane 1- oder 2-Nitropropan	2608	Pyridine Pyridin	1282
Nitrotoluenes (ortho-, meta-, para) Nitrotoluole (ortho-, meta-, para)	1664	Pyrocondensate Pyrokondensat	(1992)**
Oleum Rauchende Schwefelsäure	1831	Sodium hydroxide, solution Natriumhydroxid, Lösung (Natronlauge)	1824*
Paraldehyde Paraldehyd	1264	Sulphuric acid Schwefelsäure	1830
Pentachloroethane Pentachloräthan	1669	Styrene monomer, inhibited Styrol monomer, stab.	2055
Phenol, molten Phenol, geschmolzen	2312	Turpentine Terpentin	1299*
Phenylisocyanate Phenylisocyanat	2487**	1.1.2.2-Tetrachloroethane 1.1.2.2-Tetrachloräthan	1702

2. Chemicals	UN name	2. Chemicals	UN name
Tetrachloroethylene (Perchloroethylene)	1897*	Triethylamine Triäthylamin	1296
Tetrachloräthylen (Perchloräthylen)		n- and iso-Valeraldehyde n- und iso-Valeraldehyd	2058
Tetrahydrofuran	2056	Vinyl acetate, inhibited Vinylacetat, stab.	1301
Toluene (Methylbenzol)	1294*	Vinyl ethyl ether, inhibited Vinyläthyläther, stab.	1302
Toluol (Methylbenzol)		Vinylidene chloride, inhibited Vinylidenchlorid, stab.	1303
Toluene diisocyanate Toluylendiisocyanat	2078	Vinyl toluenes, inhibited Vinyltoluole, stab.	2618
Trichloroethylene Trichloräthylen	1710	Xylenes (Dimethylbenzene) Xylole (Dimethylbenzol)	1307*
1.1.1-Trichloroethane 1.1.1-Trichloräthan	2831		

### 3. Petroleum and petroleum products

Notes:

The German names of the substances appear beneath the English names.

Substances which are listed in the International Maritime Organization (IMO) gas tanker or chemical tanker code but to which the code does not apply (chapter 7) are marked \*.

Substances not listed in the IMO gas tanker or chemical tanker code are marked \*\*.

## Annex B

### Rules, traffic regulations and measures pursuant to article 2 of the Agreement

#### 1. Small tankers of up to 1,000 grt

1.1 For navigation on the Ems, there shall be a prevailing visibility of more than 1,000 m.

1.2 There shall be at least one sea pilot on board.

1.3 Written registration shall be effected with the competent authority at least 24 hours prior to navigation on the Ems and at the latest after leaving the last port of departure.

1.4 Prior to navigation on the Ems, the following particulars shall be transmitted in due time via "Ems-Revier-Radio" on VHF channel 18 (by departing vessels, on VHF channel 21): name, position, dimensions and port of destination of the vessel.

1.5 In the course of navigation on the Ems, the vessel shall report when passing the following positions:

- Buoy H 1 (Hubertgat) or buoy 1 (West Ems) or the Riffgat buoy or East Ems buoy
- Buoy H 11 (Hubertgat) or buoy 11 (West Ems)  
(for arriving vessels only)
- Buoy 19 (Fisherbalje)  
(only vessels departing along the Hubertgat)

via "Ems-Revier-Radio" on VHF channel 18;

- Buoy 41

via "Ems-Revier-Radio" on VHF channel 20;

- Buoy 65  
(simultaneously with notification of arrival, in the case of vessels calling at the port of Emden)

via "Ems-Revier-Radio" on VHF channel 21;

- Gandersum

via "Ems-Revier-Radio" on channel 15;

- Entry into and departure from ports on the Ems, and when calling at and leaving roadsteads and mooring and transhipping places, on locally accessible VHF channels 18, 20 and 21.

At the time of such reporting, the following particulars shall be transmitted: name, position and speed of the vessel, and time of passage.

1.6 Permanent radiotelephone communication with the Knock central control station shall be guaranteed as follows:

- West Ems and Randzelgat, from buoy 1 to buoy 35,

- Hubertgat, from buoy H 1 to buoy  $\frac{15}{H 15/A 2}$
- Old Ems, from buoy  $\frac{H 13a}{Old Ems 1}$  to buoy  $\frac{33}{Old Ems 11}$

via "Ems-Revier-Radio" on VHF channel 18;

- From buoy 35 to buoy 57 via "Ems-Revier-Radio" on VHF channel 20;
- From buoy 57 to buoy 86 via "Ems-Revier-Radio" on VHF channel 21.

Instructions given by the competent authority shall be complied with immediately.

1.7 The tank covers shall be kept closed.

1.8 The helm shall be operated by a reliable and experienced steersman. The use of an autopilot shall be prohibited.

1.9 In conditions of visibility of less than 2,000 m, radar equipment in perfect working order shall be in operation and be constantly monitored by a competent person.

## 2. Tankers of 1,000 grt or more with a carrying capacity of up to 30,000 m<sup>3</sup>

2.1 Neither privileged vessels proceeding in the same direction nor vessels carrying dangerous goods as bulk cargo and proceeding in the same direction may be within a safety zone of two nautical miles ahead and two nautical miles astern of the tanker.

2.2 Vessels that do not come under 2.1 may overtake the tanker but on so doing shall maintain lateral clearance of at least 60 m from ship's side to ship's side. The same shall apply to a tanker overtaking vessels that do not come under 2.1.

2.3 Approaching vessels shall on passing maintain lateral clearance of at least 60 m from ship's side to ship's side.

2.4 Notwithstanding 2.2 and 2.3, vessels of more than 3,000 tdw and vessels carrying dangerous goods as bulk cargo may neither overtake nor pass the tanker on the route between fairway buoys 49 and 55 (Gatjebogen).

2.5 Tide-dependent vessels leaving or entering Delftzijl shall have priority over a tanker in the Gatjebogen, subject to agreement with the Knock central control station.

2.6 Navigation on the Ems may be undertaken only if there are, for operation from the bridge, two VHF radiotelephones in working order, equipped for communication with the central control station and with other vessels.

2.7 Tankers may enter and leave the Ems only via the Hubertgat channel.

## 3. Tankers with a carrying capacity of more than 30,000 m<sup>3</sup>

3.1 These regulations shall apply to tankers having a carrying capacity of more than 30,000 m<sup>3</sup>, with the proviso that a maximum of 30,000 m<sup>3</sup> ( $\pm$  15,000 t) of cargo may be carried on board.

3.2 Navigation on the Ems may be undertaken only if two sea pilots are on board for advisory purposes and it is guaranteed that the tanker will during such navigation be advised by a sea pilot from the shore radar unit at the Knock central control station.

3.3 On overtaking or passing, a minimum distance from the other vessel of three times the tanker's breadth but a lateral clearance of at least 90 m from ship's side to ship's side shall be maintained.

3.4 In the case of the passing or overtaking of tankers with a carrying capacity of more than 30,000 m<sup>3</sup>, the following rules shall also be observed:

- It shall be prohibited to pass or overtake a tanker with a carrying capacity of more than 30,000 m<sup>3</sup> between fairway buoys 47 and 57 (Gatjebogen). Tide-dependent vessels shall be granted right of way;
- Tide-dependent vessels and vessels of more than 3,000 tdw shall be prohibited from passing tankers with a carrying capacity of more than 30,000 m<sup>3</sup> between fairway buoys 57 and 69;
- No vessel shall be permitted to pass or overtake a tanker with a carrying capacity of more than 30,000 m<sup>3</sup> between buoys 68/69 and the entrance to the port of Emden.

The aforementioned prohibitions on passing and overtaking shall also apply to tankers having a carrying capacity of more than 30,000 m<sup>3</sup> in respect of the vessels referred to above.

3.5 The escort of at least two tugs of not less than 736 kW (1,000 hp) each shall be engaged on the route between fairway buoy 57 and the entrance to the port of Emden. The establishment of towing communications must be ensured at all times.

3.6 A maximum speed of 14 knots on the route between fairway buoys H 1 and 30 and of 12 knots on the route between fairway buoys 30 and 57 may not be exceeded.

3.7 Navigation on the Ems shall not be permitted if the wind force does not allow safe manoeuvring. The situation shall be assessed by the competent authority.

3.8 Navigation on the Ems may take place only if there are :

- Two radars,
- One Decca navigation system,
- One electronic speedometer (e.g. Doppler log), and
- One rotary speed indicator

on board in working order.

3.9 It shall not be permitted to enter or leave the Port of Emden during the first 3.5 hours of the tidal phase. Therefore, until some four hours after high water, it shall be necessary to obtain an agreement with arriving and departing tidal vessels and vessels of 3,000 tdw or more via the Knock central control station.

#### 4. General regulations

4.1 Navigation on the Ems may be undertaken by tankers if a police patrol vessel is available for escort purposes, as follows:

- In the case of tankers having a carrying capacity of between 2,500 m<sup>3</sup> and 10,000 m<sup>3</sup>, on the route from buoy 44 to Emden and vice versa;

- In the case of tankers having a carrying capacity of between 10,000 m<sup>3</sup> and 30,000 m<sup>3</sup>, on the route from buoy 15 to Emden and vice versa;
- In the case of tankers having a carrying capacity of more than 30,000 m<sup>3</sup>, on the route from the Hubertgat approach buoy to Emden and vice versa.

4.2 The rules set out above shall, with the exception of 4.1, apply also to the seaward navigation of tankers that have not been de-gassed.

4.3 The provisions concerning tankers under 1 shall apply additionally to tankers under 2.

4.4 The provisions concerning tankers under 1 and 2 shall apply additionally to tankers under 3.

4.5 The foregoing provisions shall apply to both daytime and night navigation.

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