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Working Party on Inland Water Transport

Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation

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Item 7 of the provisional agenda

Recommendations on Harmonized Europe-Wide Technical Requirements for Inland

Navigation Vessels (Resolution No. 61)

Commission Directives 2012/48/EU and 2012/49/EU of 10 December 2012 amending Annexes to Directive 2006/87/EC of the European Parliament and of the Council laying down technical requirements for inland waterway vessels

Transmitted by the European Commission

The legislation reproduced in attachment can be downloaded from http://eur-lex.europa.eu/JOIndex.do?year=2013&serie=L&textfield2=6&Submit=Search&_submit=Search&ihmlang=en.

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⁽¹⁾ Text with EEA relevance

EN

Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.
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II

(Non-legislative acts)

DIRECTIVES

COMMISSION DIRECTIVE 2012/48/EU

of 10 December 2012

amending the Annexes to Directive 2006/87/EC of the European Parliament and of the Council laying down technical requirements for inland waterway vessels

THE EUROPEAN COMMISSION,

three classification societies in accordance with Article 10 of Directive 2006/87/EC the necessary amendments to Annex VII to Directive 2006/87/EC should be made.

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2006/87/EC of the European Parliament and of the Council of 12 December 2006 laying down technical requirements for inland waterway vessels and repealing Council Directive 82/714/EEC⁽¹⁾, and in particular the first sentence of Article 20(1) first subparagraph thereof,

(5) The measures provided for in this Directive are in accordance with the opinion of the Committee referred to in Article 7 of Council Directive 91/672/EEC of 16 December 1991 on the reciprocal recognition of national boatmasters' certificates for the carriage of goods and passengers by inland waterway⁽²⁾,

Whereas:

HAS ADOPTED THIS DIRECTIVE:

(1) Since the adoption of the Directive 2006/87/EC in December 2006, amendments to the Rhine Vessel Inspection Regulation have been agreed pursuant to Article 22 of the Revised Convention for Rhine Navigation. It is therefore necessary to amend Directive 2006/87/EC accordingly.

(2) It should be ensured that the Community inland navigation certificate and the vessel certificate delivered in accordance with the Rhine Vessel Inspection Regulation are issued on the basis of technical requirements which guarantee an equivalent level of safety.

(3) In order to avoid distortions of competition as well as different levels of safety, the amendments to Directive 2006/87/EC should enter into force as quickly as possible.

(4) Following the adoption of Commission Implementing Decisions 2012/64/EU⁽³⁾, 2012/65/EU⁽⁴⁾ and 2012/66/EU⁽⁵⁾ of 2 February 2012 on the approval of

Article 1

Directive 2006/87/EC is amended as follows:

(1) Annex II to Directive 2006/87/EC is amended in accordance with Annex I to this Directive.

(2) Annex VII to Directive 2006/87/EC is amended in accordance with Annex II to this Directive.

(3) Annex IX to Directive 2006/87/EC is amended in accordance with Annex III to this Directive.

Article 2

Member States which have inland waterways as referred to in Article 1(1) of Directive 2006/87/EC shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive at the latest on 1 December 2013. They shall forthwith inform the Commission thereof.

⁽¹⁾ OJ L 389, 30.12.2006, p. 1.

⁽²⁾ OJ L 33, 4.2.2012, p. 6.

⁽³⁾ OJ L 33, 4.2.2012, p. 7.

⁽⁴⁾ OJ L 33, 4.2.2012, p. 8.

⁽⁵⁾ OJ L 373, 31.12.1991, p. 29.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

Article 3

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Union*.

Article 4

This Directive is addressed to the Member States which have inland waterways as referred to in Article 1(1) of Directive 2006/87/EC.

Done at Brussels, 10 December 2012.

For the Commission
The President
José Manuel BARROSO

ANNEX I

Annex II to Directive 2006/87/EC is amended as follows:

(1) Article 1.01 is amended as follows:

(a) points 97, 97a and 97b are replaced by the following:

(97) "Classification society": a classification society that has been approved in accordance with the criteria and procedures of Annex VII

(97a) "Navigation lights": light from signal lamps to indicate vessels

(97b) "Light signals": light used to supplement visual or sound signals;

(b) the following points are added:

(106) "expert": a person recognized by the competent authority or by an authorized institution, having specialist knowledge in the relevant area on the basis of his or her professional training and experience, fully conversant with the relevant rules and regulations and the generally accepted technical rules (e.g. EN standards, relevant legislation, technical rules of other Member States of the European Union), and able to examine and give an expert assessment of the relevant systems and equipment;

(107) "competent person": a person who has acquired sufficient knowledge in the relevant area on the basis of his or her professional training and experience and is sufficiently conversant with the relevant rules and regulations and the generally accepted technical rules (e.g. EN standards, relevant legislation, technical rules of other Member States of the European Union) to be able to assess the operational safety of the relevant systems and equipment.

(2) In Article 2.01 paragraph 2, point (c) is replaced by the following:

(c) a nautical expert in possession of an inland waterways boatmaster's licence, which authorizes the holder to sail the vessel to be inspected.

(3) In Article 3.02 paragraph 1, the first paragraph of point (b), is replaced by the following:

(b) Where there is an inspection as referred to in Article 2.09, the minimum thickness of the bottom, bilge and side plates of vessels made from steel shall be no less than the higher of the values resulting from the following formulae:

(4) The heading of Article 6.09 is replaced by the following:

'Article 6.09

Acceptance test'

(5) In Article 7.05 paragraph 1 is replaced by the following:

'1. Navigation lights, their casings and accessories shall bear the approval mark prescribed by Council Directive 96/98/EC of 20 December 1996 on marine equipment (*).

(*) OJ L 46, 17.2.1997, p. 25.'

(6) In Article 7.06 paragraph 1 is replaced by the following:

'1. Radar navigation equipment and rate-of-turn indicators shall fulfil the requirements laid down in Annex IX Part I and Part II. Compliance with these requirements shall be determined by a type-approval issued by the competent authority. Inland Electronic Chart Display Information System (hereinafter referred to as "ECDIS") equipment which can be operated in navigation mode shall be regarded as radar navigation equipment.

The requirements concerning installation and operational testing of radar navigation systems and rate-of-turn indicators used in inland waterway vessels, laid down in Annex IX, Part III shall be met.

The register of radar navigation equipment and rate-of-turn indicators approved as laid down in Annex IX, or on the basis of type-approvals recognised to be equivalent, shall be published by the European Commission.'

(7) In Article 8.01, paragraph 2 is replaced by the following:

'2. Pressure vessels dedicated for the operation of the vessel shall be checked by an expert to verify that they are safe for operation:

- (a) before being put into service for the first time,
- (b) before being put back into service after any modification or repair, and
- (c) regularly, at least every five years.

The inspection shall involve an internal and an external inspection. Compressed-air vessels the interior of which cannot be properly inspected, or the condition of which cannot be clearly established during the internal inspection, are required to undergo additional non-destructive testing or a hydraulic pressure test.

An inspection certificate shall be issued, signed by the expert and showing the date of the inspection.

Other installations requiring regular inspection, particularly steam boilers, other pressure vessels and their accessories, and lifts, shall meet the regulations applying in one of the Member States of the Union.'

(8) In Article 10.02, paragraph 1 is replaced by the following:

'1. At least the following equipment in accordance with the applicable navigational authority regulations in force in the Member States shall be onboard:

- (a) radio-telephone equipment;
- (b) appliances and devices necessary for emitting visual and acoustic signals and for marking the vessel;
- (c) stand-alone back-up lights for the prescribed mooring lights.

The following receptacles must also be present:

- (a) a marked receptacle for domestic waste;
- (b) separate, marked receptacles, with sealing covers, made of steel or another sturdy, non-flammable material, of adequate size but holding at least 10 l, for the collection of
 - (aa) oily cleaning cloths;
 - (bb) hazardous or pollutant solid wastes;
 - (cc) hazardous or pollutant liquid wastes;

and, inasmuch as they may arise, for the collection of

 - (dd) slops;
 - (ee) other oily or greasy waste.'

(9) Article 10.03 is amended as follows:

(a) the first sentence of paragraph 1 is replaced by the following:

'1. There shall be at least one portable fire extinguisher in accordance with the European standards EN 3-7: 2007 and EN 3-8: 2007 at each of the following places:'

(b) paragraph 2 is replaced by the following:

'2. For the portable fire extinguishers required by paragraph 1, only powder type extinguishers with a content of at least 6 kg or other portable extinguishers with the same extinguishing capacity may be used. They shall be suitable for Class A, B, C fires.

By way of derogation on vessels with no liquefied gas installations, spray foam fire extinguishers using aqueous film-forming foam (AFFF-AR) frost proof to minus (-) 20 °C are permissible even if they are unsuitable for Class C fires. These fire extinguishers shall have a minimum capacity of 9 litres.

All extinguishers shall be suitable to extinguish fires in electrical systems of up to 1 000 V;

(c) paragraph 5 is replaced by the following:

'5. Portable fire extinguishers shall be checked at least every two years by a competent person. An inspection label shall be affixed to the fire extinguisher, signed by the competent person and showing the date of the inspection.'

(10) In Article 10.03a, paragraphs 6, 7 and 8 are replaced by the following:

'6. The systems shall be checked by an expert:

- (a) before being put into service for the first time,
- (b) before being put back into service after they have been triggered,
- (c) before being put back into service after any major modification or repair,
- (d) regularly, at least every two years.

Inspections as referred to in point (d) may also be carried out by a competent person from a competent firm specialising in fire extinguishing systems.

7. When carrying out the check in accordance with paragraph 6, the expert or competent person shall verify whether the systems meet the requirements of this paragraph.

The check shall at least include:

- (a) external inspection of the entire system;
- (b) functional testing of the safety systems and nozzles;
- (c) functional testing of the pressure tanks and pumping system.

8. An inspection certificate, signed by the expert or competent person, shall be issued, showing the date of inspection.'

(11) In Article 10.03b paragraph 9 points (b), (c) and (e) are replaced by the following:

'(b) The system shall be checked by an expert

- (aa) before being put into service for the first time;
- (bb) before being put back into service after it has been triggered;
- (cc) before being put back into service after any major modification or repair;
- (dd) regularly, at least every two years.

Inspections as referred to in point (dd) may also be carried out by a competent person from a competent firm specializing in fire extinguishing systems.

(c) In the inspection the expert or competent person shall check whether the system meets the requirements of this Article.'

'(e) An inspection certificate, signed by the expert or competent person, shall be issued, showing the date of inspection.'

(12) Article 11.02 is amended as follows:

(a) paragraph 4 is replaced by the following:

'4. The outer edges of decks and side decks shall be fitted with bulwarks that are at least 0,90 m high or with a continuous guard rail in accordance with European standard EN 711: 1995. Work stations where persons might fall more than 1 m, shall be fitted with bulwarks or coamings that are at least 0,90 m high or with a continuous guard rail in accordance with European standard EN 711: 1995. Where the guard rails of side decks are retractable,

(a) a continuous handrail 0,02 to 0,04 m in diameter shall additionally be secured to the coaming at a height of 0,7 to 1,1 m; and

(b) signs in accordance with Appendix I, Figure 10, at least 15 cm in diameter, shall be affixed in clearly visible positions at the point where the side deck begins.

Where there is no coaming, a fixed guard rail shall be installed instead;'

(b) the following paragraphs are inserted:

'4a. By way of derogation from paragraph 4, in the case of lighters and barges without accommodation, bulwarks or guard rails shall not be required where:

(a) foot rails have been fitted to the outer edges of the decks and side decks;

(b) handrails in accordance with paragraph 4(a) have been fitted to the coamings; and

(c) signs in accordance with Appendix I, Figure 10, at least 15 cm in diameter, have been affixed in clearly visible positions on deck.

4b. By way of derogation from paragraph 4, in the case of vessels with flush- or trunk-decks it shall not be required that guard rails be fitted directly on the outer edges of those decks, or on side decks where:

(a) the passageway runs over those flush decks, surrounded by fixed guard rails in accordance with EN 711: 1995; and

(b) signs in accordance with Appendix I, Figure 10, at least 15 cm in diameter, have been affixed in clearly visible positions at the transitions to areas unprotected by guard rails;'

(c) the following paragraph 6 is inserted:

'(6) Paragraphs 4, 4a and 4b are temporary requirements according to Article 1.06 and will be valid until 1 December 2016.'

(13) Article 11.04 is amended as follows:

(a) paragraph 2 is replaced by the following:

'2. Up to a height of 0,90 m above the side deck, the clear width of the side deck may be reduced to 0,50 m provided that the clear width above, between the outer edge of the hull and the inner edge of the hold, is not less than 0,65 m.'

(b) the following paragraph 4 is inserted:

'4. Paragraph 2 is a temporary requirement according to Article 1.06 and will be valid until 1 December 2016.'

(14) Article 11.12 is amended as follows:

(a) paragraphs 6 and 7 are replaced by the following:

'6. Cranes shall be inspected by an expert:

(a) before being put into service for the first time,

(b) before being put back into service after any major modification or repair,

(c) regularly, at least every 10 years.

In this inspection proof of adequate strength and stability shall be provided by calculations and an on-board load test.

Where a crane's safe working load does not exceed 2 000 kg the expert may decide that the proof by calculation may be fully or partly replaced by a test with a load 1,25 times the safe working load carried out over the full working range.

An inspection certificate shall be issued, signed by the expert and showing the date of the inspection.

7. Cranes shall be checked regularly and in any case at least every 12 months, by a competent person. During that inspection the safe working condition of the crane shall be determined by a visual check and an operating check.

An inspection certificate shall be issued, signed by the competent person and showing the date of the inspection.'

(b) paragraph 8 is deleted;

(c) paragraph 10 is replaced by the following:

'10. The crane manufacturer's operating instructions shall be kept on board. These shall include at least the following information:

(a) operating range and function of the controls;

(b) maximum permissible safe working load as a function of the reach;

(c) maximum permissible inclination of the crane;

(d) assembly and maintenance instructions;

(e) general technical data.'

(15) Article 14.13 is replaced by the following:

'Article 14.13.

Acceptance test

Liquefied gas installations shall be checked by an expert, in order to verify whether the installation conforms to the requirements of this Chapter:

(a) before being put into service for the first time,

(b) before being put back into service after any major modification or repair,

(c) on every renewal of the attestation referred to in Article 14.15.

An inspection certificate shall be issued, signed by the expert and showing the date of the inspection. A copy of the inspection certificate shall be submitted to the inspection body.'

(16) The heading of Article 14.14 is replaced by the following:

'Article 14.14

Test conditions'

(17) In Article 14.15, paragraph 3, the second subparagraph is replaced by the following:

'Exceptionally, where the owner of a vessel or his representative submits a reasoned request, the inspection body may extend the validity of the attestation for not more than three months without carrying out the acceptance test referred to in Article 14.13. Such extension shall be entered in the Community certificate.'

(18) In Article 15.02, paragraph 8 is replaced by the following:

'8. Bulkheads separating the engine rooms from passenger areas or crew and shipboard personnel accommodation shall have no doors.'

(19) Article 15.03 is amended as follows:

(a) paragraph 5 is replaced by the following:

'5. The heeling moment due to wind pressure (M_W) shall be calculated as follows:

$$M_W = p_W \cdot A_W \cdot (l_W + T/2) [\text{kNm}]$$

where:

p_W = the specific wind pressure of 0,25 kN/m²;

A_W = lateral plane of the vessel above the plane of draught according to the considered loading condition in [m²];

l_W = distance of the centre of gravity of the lateral plane A_W from the plane of draught according to the considered loading condition in [m].

In calculating the lateral plane, account shall be taken of the intended enclosure of the deck by awnings and similar mobile installations;'

(b) paragraph 9 (a) is replaced by the following:

'(a) For one-compartment status the bulkheads can be assumed to be intact if the distance between two adjacent bulkheads is greater than the damage length. Longitudinal bulkheads at a distance of less than 0/3 to the hull, measured perpendicular to the centre line from the shell plating at the maximum draft shall not be taken into account for calculation purposes. A bulkhead recess in a transverse bulkhead that is longer than 2,50 m, is considered a longitudinal bulkhead.'

(20) Article 15.06 is amended as follows:

(a) paragraph 1 is replaced by the following:

'1. Passenger rooms shall:

(a) on all decks, be located aft of the level of the collision bulkhead and, if they are below the bulkhead deck, forward of the level of the aft-peak bulkhead,

(b) be separated from the engine and boiler rooms in a gas-tight manner,

(c) be so arranged, that sight lines in accordance with Article 7.02 do not pass through them.

Deck areas which are enclosed by awnings or similar mobile installations not only above but also fully or partially to the side must satisfy the same requirements as enclosed passenger rooms².

(b) paragraph 15 is replaced by the following:

'15. Superstructures or their roofs consisting completely of panoramic panes and enclosures created by awnings or similar mobile installations and their substructures shall be so designed as to, and shall only be manufactured from materials which, in the event of an accident, reduce as much as possible the risks of injury to the persons on board.'

(21) Article 15.11 is amended as follows:

(a) paragraph 2(a) is replaced by the following:

'2. Partitions

(a) between rooms shall be designed in accordance with the following tables:

(aa) Table for partitions between rooms, in which no pressurised sprinkler systems according to Article 10.03a are installed

Rooms	Control centres	Stairwells	Muster areas	Lounges	Engine rooms	Galley	Store rooms
Control centres	—	A0	A0/B15 ⁽¹⁾	A30	A60	A60	A30/A60 ⁽²⁾
Stairwells		—	A0	A30	A60	A60	A30
Muster areas			—	A30/B15 ⁽²⁾	A60	A60	A30/A60 ⁽²⁾
Lounges				—/A0/B15 ⁽³⁾	A60	A60	A30
Engine rooms					A60/A0 ⁽⁴⁾	A60	A60
Galley						A0	A30/B15 ⁽⁵⁾
Store rooms							—

⁽¹⁾ Partitions between control centres and internal muster areas shall correspond to Type A0, but external muster areas only to Type B15.

⁽²⁾ Partitions between lounges and internal muster areas shall correspond to Type A30, but external muster areas only to Type B15.

⁽³⁾ Partitions between cabins, partitions between cabins and corridors and vertical partitions separating lounges according to paragraph 10 shall comply with Type B15, for rooms fitted with pressurised sprinkler systems B0. Partitions between cabins and saunas shall comply with Type A0, for rooms fitted with pressurised sprinkler systems B15.

⁽⁴⁾ Partitions between engine rooms according to Articles 15.07 and 15.10(6) shall comply with Type A60; in other cases they shall comply with Type A0.

⁽⁵⁾ Partitions between store rooms for the storage of flammable liquids and control centres and muster areas shall comply with Type A60, for rooms fitted with pressurised sprinkler systems A30.

⁽⁶⁾ B15 is sufficient for partitions between galleys, on the one hand, and cold-storage rooms and food store rooms, on the other.

(bb) Table for partitions between rooms, in which pressurised sprinkler systems according to Article 10.03a are installed

Rooms	Control centres	Stairwells	Muster areas	Lounges	Engine rooms	Galley	Store rooms
Control centres	—	A0	A0/B15 ⁽¹⁾	A0	A60	A30	A0/A30 ⁽²⁾
Stairwells		—	A0	A0	A60	A30	A0
Muster areas			—	A30/B15 ⁽²⁾	A60	A30	A0/A30 ⁽²⁾

Rooms	Control centres	Stairways	Muster areas	Lounges	Engine rooms	Galley	Store rooms
Lounges				-(B15/B 0 ⁽¹⁾)	A60	A30	A0
Engine rooms					A60/A0 ⁽⁴⁾	A60	A60
Galley						—	A0/B15 ⁽⁵⁾
Store rooms							—

⁽¹⁾ Partitions between control centres and internal muster areas shall correspond to Type A0, but external muster areas only to Type B15.

⁽²⁾ Partitions between lounges and internal muster areas shall correspond to Type A30, but external muster areas only to Type B15.

⁽³⁾ Partitions between cabins, partitions between cabins and corridors and vertical partitions separating lounges according to paragraph 10 shall comply with Type B15, for rooms fitted with pressurised sprinkler systems B0. Partitions between cabins and saunas shall comply with Type A0, for rooms fitted with pressurised sprinkler systems B15.

⁽⁴⁾ Partitions between engine rooms according to Articles 15.07 and 15.10(6) shall comply with Type A60; in other cases they shall comply with Type A0.

⁽⁵⁾ Partitions between store rooms for the storage of flammable liquids and control centres and muster areas shall comply with Type A60, for rooms fitted with pressurised sprinkler systems A30.

⁽⁶⁾ B15 is sufficient for partitions between galleys, on the one hand, and cold-storage rooms and food store rooms, on the other.

(b) paragraph 4 is replaced by the following:

'4. Lounge ceilings and wall claddings, including their substructures, shall, where these lounges do not have a pressurised sprinkler system in accordance with Article 10.03a, be manufactured from non-combustible materials with the exception of their surfaces, which shall be at least flame-retardant. The first sentence shall not apply to saunas.'

(c) the following paragraph 7a is inserted:

'7a. Awnings and similar mobile installations with which deck areas are fully or partially enclosed and their substructures shall be at least flame-retardant.'

(22) Article 22a.04 is replaced by the following:

'Article 22a.04

Buoyancy and stability

1. Paragraphs 2 to 10 shall apply to craft that are longer than 110 m, with the exception of passenger vessels.

2. The basic values for the stability calculation, the vessel's lightweight and the location of the centre of gravity shall be determined by means of an inclining experiment carried out in accordance with Annex I to IMO Resolution MSC 267 (85).

3. The applicant shall prove, by means of a calculation based on the method of lost buoyancy, that the buoyancy and stability of the vessel are appropriate in the event of flooding. All calculations shall be carried out with free sinkage and trim.

Sufficient buoyancy and stability of the vessel in the event of flooding shall be proven with a cargo corresponding to its maximum draught and evenly distributed among all the holds and with maximum supplies and fully fuelled.

For diversified cargo, the stability calculation shall be performed for the most unfavourable loading condition. This stability calculation shall be carried on board.

For this purpose, mathematical proof of sufficient stability shall be determined for the intermediate stages of flooding (25 %, 50 % and 75 % of flood build up, and, where appropriate, for the stage immediately prior to transverse equilibrium) and for the final stage of flooding, in the loading conditions specified above.

4. The following assumptions shall be taken into consideration for the damaged condition:

(a) Extent of side damage:

longitudinal extent: at least 0,10 l
transverse extent: 0,59 m
vertical extent: from the bottom upwards without limit.

(b) Extent of bottom damage:

longitudinal extent: at least 0,10 l
transverse extent: 3,00 m
vertical extent: from the base 0,39 m upwards, the sump excepted.

(c) Any bulkheads within the damaged area shall be assumed damaged, which means that the subdivision shall be chosen so that the vessel remains afloat after the flooding of two or more adjacent compartments in the longitudinal direction. For the main engine room only the one compartment standard need be taken into account, i.e. the end bulkheads of the engine room shall be assumed as not damaged.

For bottom damage, adjacent athwart ship compartments shall also be assumed as flooded.

(d) Permeability

Permeability shall be assumed to be 95 %.

If a calculation proves that the average permeability of a compartment is less than 95 %, the calculated value may be used instead.

The values used shall not be less than:

- engine and operation rooms: 85 %
- cargo holds: 70 %
- double bottoms, fuel tanks, ballast tanks, etc. depending on whether, according to their function, they have to be assumed as full or empty for the vessel floating at the maximum permissible draught: 0 or 95 %.

(e) The calculation of free surface effect in intermediate stages of flooding shall be based on the gross surface area of the damaged compartments.

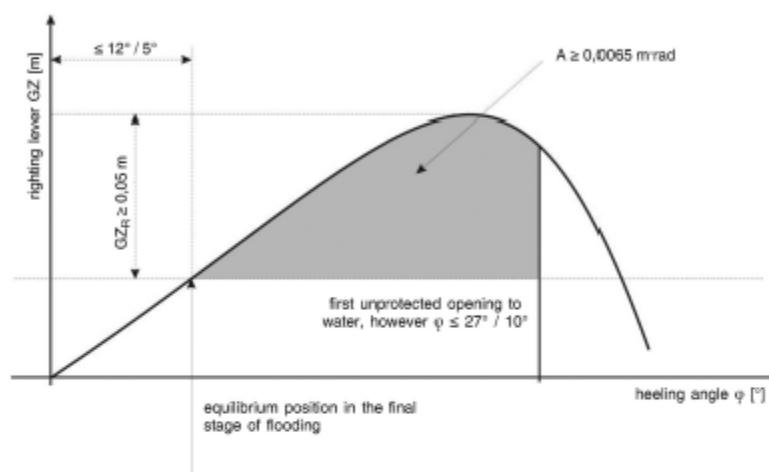
5. For all intermediate stages of flooding referred to in paragraph 3, the following criteria shall be met:

- (a) the heeling angle φ at the equilibrium position of the intermediate stage in question shall not exceed 15° (5° where containers are not secured);
- (b) beyond the heel in the equilibrium position of the intermediate stage in question, the positive part of the righting lever curve shall display a righting lever value of $GZ \geq 0,02$ m (0,03 m where containers are not secured) before the first unprotected opening becomes immersed or a heeling angle φ of 27° is reached (15° where containers are not secured);
- (c) non-watertight openings shall not be immersed before the heel in the equilibrium position of the intermediate stage in question has been reached.

6. During the final stage of flooding, the following criteria shall be met:

- (a) the lower edge of non-watertight openings (e.g., doors, windows, access hatches) shall be not less than 0,10 m above the damaged waterline;

- (b) the heeling angle φ at the equilibrium position shall not exceed 12° (5° where containers are not secured);
- (c) beyond the heel in the equilibrium position of the intermediate stage in question, the positive part of the righting lever curve shall display a righting lever value of $GZ \geq 0,05$ m and the area under the curve shall reach at least 0,0065 m.rad before the first unprotected opening becomes immersed or a heeling angle φ of 27° (10° where containers are not secured) is reached;



- (d) if non-watertight openings are immersed before the equilibrium position is reached, the rooms affording access shall be deemed flooded for the purposes of the damaged stability calculation.

7. If cross-flood openings to reduce asymmetrical flooding are provided, the following conditions shall be met:

- for the calculation of cross-flooding, IMO Resolution A.266 (VIII) shall be applied;
- they shall be self-acting;
- they shall not be equipped with shut-off devices;
- the total time allowed for equalisation shall not exceed 15 minutes.

8. If openings through which undamaged compartments may additionally become flooded are capable of being closed watertight, the shut-off devices shall bear the following readily legible instruction on both sides:

"Close immediately after passage".

9. The proof by calculation in accordance with paragraphs 3 to 7 shall be considered to have been provided if damaged stability calculations in accordance with Part 9 of the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (hereinafter referred to as "AND") are produced with a positive result.

10. Where necessary in order to meet the requirements in paragraph 3, the plane of maximum draught shall be re-established.

(23) In Article 22a.05 paragraph 2, point (c) is replaced by the following:

- '(c) are built as double-hull vessels in accordance with the ADN, where for dry cargo vessels sections 9.1.0.91 to 9.1.0.95, and for tank vessels paragraph 9.3.2.11.7 and sections 9.3.2.13 to 9.3.2.15 or paragraph 9.3.3.11.7 and sections 9.3.3.13 to 9.3.3.15 of Part 9 of the ADN shall apply.'

(24) In Article 24.02 paragraph 2, the table is replaced by the following:

(a) the following entry for Article 7.05 paragraph 1 is inserted:

Article and paragraph	Content	Deadline and comments
7.05(1)	Navigation lights, their casings, accessories and light sources	Navigation lights, their casings, accessories, and light sources that fulfill the requirements for colour and light intensity of navigation lights, and for the admission of signal lights for navigation on the Rhine, as of 30 November 2009 may still be used.'

(b) the following entries for Article 7.06(1) are inserted:

7.06(1)	Radar navigation equipment which has received an approval before 1.1.1990	Radar navigation equipment which has received an approval before 1.1.1990 may be installed and used until issue or renewal of the Community certificate after 31.12.2009, in any case at the latest until 31.12.2011, if there is a valid installation certificate pursuant to this Directive or Resolution CCNR 1989-II-35.
	Rate-of-turn indicators, which have received an approval before 1.1.1990	Rate-of-turn indicators, which have received an approval before 1.1.1990 and have been installed before 1.1.2000, may be installed and used until issue or renewal of the Community certificate after 1.1.2015, if there is a valid installation certificate pursuant to this Directive or Resolution CCNR 1989-II-35.
	Radar navigation equipment and rate-of-turn indicators which have received an approval after 1.1.1990	Radar navigation equipment and rate-of-turn indicators which have received an approval on or after 1.1.1990 pursuant to the minimum requirements and test conditions for radar installations used for navigation in inland waterway navigation on the Rhine and the minimum requirements and test conditions for rate-of-turn indicators used in inland waterway navigation on the Rhine may continue to be installed and operated if there is a valid installation certificate pursuant to this Directive or Resolution CCNR 1989-II-35.'

(c) the following entry for Article 10.02 paragraph 1 second sentence point b, is inserted:

Article and paragraph	Content	Deadline and comments
10.02(1) second sentence point b	Receptacles made of steel or another sturdy, non-flammable material and holding at least 10 l.	N.R.C., at the latest on renewal of the Community certificate'

(d) the entries for Articles 11.02, paragraph 4 and 11.04, paragraph 2 are replaced by the following:

Article and paragraph	Content	Deadline and comments
11.02(4), first sentence	Equipment of outer edges of decks, side decks and work stations	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2020
	Height of coamings	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2035

Article and paragraph	Content	Deadline and comments
11.04(1)	Clear width of side deck	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2035, for craft exceeding 7,30 m in width
Paragraph 2	Shipside guard rails on vessels of L < 55 m with only aft accommodation	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2020

(e) the entry for Article 11.12 is replaced by the following:

'11.12(2), (4), (5) and (9)	Manufacturer's plate, protection devices, certificates on board	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2015.'
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(f) the entries for Article 15.03, paragraphs 7 to 13 are replaced by the following:

Paragraphs 7 and 8	Damaged stability	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045
Paragraph 9	Damaged stability	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045
	Vertical extent of damage to the bottom of the boat	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045 N.R.C. applicable for vessels with watertight decks on a minimum distance of 0,50 m and less than 0,60 m of the bottom of vessels that obtained a Community certificate or other traffic licence before 31.12.2005
	Two-compartments status	N.R.C.
Paragraphs 10 to 13	Damaged stability	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045

(g) the entry for Article 15.06 paragraph 1 (a) is replaced by the following:

'Article 15.06(1), first subparagraph	Passenger area's under the bulkhead deck behind the collision bulkhead and in front of the aft peak bulkhead.	NRC, at the latest on renewal of Community certificate after 1.1.2045
Article 15.06(1), second subparagraph	Enclosures	N.R.C., at the latest on renewal of Community certificate'

(h) the entry for Article 15.06 paragraph 15 is replaced by the following:

'Paragraph 15	Requirements for enclosures within the superstructure that consist totally or partly of panoramic windows	NRC, at the latest on renewal of Community certificate after 1.1.2045
	Requirements for enclosures	N.R.C., at the latest on renewal of Community certificate'

(i) the following entry for text relating to Article 15.11 paragraph 7a is inserted:

Paragraph 7a	Enclosures	N.R.C., at the latest on issue or renewal of the Community certificate'
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(25) The table in Article 24.06 paragraph 5 is amended as follows:

(a) the following entry for Article 7.05 paragraph 1 is inserted:

Article and paragraph	Content	Deadline and comments	Valid for craft with vessel certificate or traffic licence before
7.05(1)	Navigation lights, their casings, accessories and light sources	Navigation lights, their casings, accessories, and light sources that fulfil the requirements for colour and light intensity of navigation lights and for the admission of signal lights for navigation on the Rhine as of 30 November 2009 may still be used.	1.12.2013'

(b) the following entry for Article 7.06 paragraph 1 is inserted:

7.06(1)	Radar navigation equipment which has received an approval before 1.1.1990	Radar navigation equipment which has received an approval before 1.1.1990 may be installed and used until issue or renewal of the Community certificate after 31.12.2009, in any case at the latest until 31.12.2011, if there is a valid installation certificate pursuant to this Directive or Resolution CCNR 1989-II-35.	1.12.2013
	Rate-of-turn indicators, which have received an approval before 1.1.1990	Rate-of-turn indicators, which have received an approval before 1.1.1990 and have been installed before 1.1.2000, may be installed and used until issue or renewal of the Community certificate after 1.1.2015, if there is a valid installation certificate pursuant to this Directive or Resolution CCNR 1989-II-35.	1.12.2013
	Radar navigation equipment and rate-of-turn indicators which have received an approval after 1.1.1990	Radar navigation equipment and rate-of-turn indicators which have received an approval after 1.1.1990 pursuant the minimum requirements and test conditions for radar installations used for navigation in inland waterway navigation on the Rhine and the minimum requirements and test conditions for rate-of-turn indicators used in inland waterway navigation on the Rhine may continue to be installed and operated if a valid installation certificate pursuant to this Directive or Resolution CCNR 1989-II-35 has been issued.	1.12.2013'

(c) the following entry for Article 10.02 paragraph 1 second sentence, point b is inserted:

Article and paragraph	Content	Deadline and comments	Valid for craft with vessel certificate or traffic licence before
'Article 10.02(1) second sentence point b	Receptacles made of steel or another sturdy, non-flammable material and holding at least 10 l.	N.R.C., at the latest on renewal of the Community certificate	1.12.2013'

(d) the following entries for Articles 11.02 paragraph 4 and 11.04, paragraph 2 are inserted:

Article and paragraph	Content	Deadline and comments	Valid for craft with vessel certificate or traffic licence before
'11.02(4), first sentence	Height of bulwarks and coamings, and shipside guard rails	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2020	1.12.2013
	Height of coamings	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2035	
11.04(2)	Shipside guard rails on vessels of L < 55 m with only aft accommodation	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2020	1.12.2013'

(e) the following entry for Article 11.12 is inserted:

'11.12(2),(4),(5) and (9)	Manufacturer's plate, protection devices, certificates on board	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2015.	1.12.2013'
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(f) the entries for Article 15.03(7) to (13) are replaced by the following:

'15.03(7) and (8)	Damaged stability	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045	1.12.2013
Paragraph 9	Damaged stability	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045	1.12.2013
	Vertical extent of damage to the bottom of the boat	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045 N.R.C. applicable for vessels with watertight decks on a minimum distance of 0,50 m and less than 0,60 m of the bottom of vessels that obtained a Community certificate or other traffic licence before 31.12.2005	1.12.2013

	Two-compartments status	N.R.C.	
paragraphs 10 to 13	Damaged stability	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045	1.12.2013'

(g) the entry for Article 15.06 paragraph 1 is replaced by the following:

'Article 15.06(1), first subparagraph	Passenger areas under the bulkhead deck and in front of the aft peak bulkhead.	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045	1.12.2013
Article 15.06(1), second subparagraph	Enclosures	N.R.C., at the latest on issue or renewal of the Community certificate	1.12.2013'

(h) the entry for Article 15.06 paragraph 15 is replaced by the following:

Paragraph 15	Requirements for enclosures within the superstructure that consist totally or partly of panoramic windows.	N.R.C., at the latest on issue or renewal of the Community certificate after 1.1.2045	1.12.2013
	Requirements for enclosures	N.R.C., at the latest on issue or renewal of the Community certificate	1.12.2013'

(i) the following entry for Article 15.11 paragraph 7a is inserted:

Paragraph 7a	Enclosures	N.R.C., at the latest on issue or renewal of the Community certificate	1.12.2013'
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(26) The table in Article 24a.02 paragraph 2 is amended as follows:

(a) the following entry for Article 7.05 paragraph 1 is inserted:

'7.05(1)	Navigation lights, their casings, accessories and light sources	Navigation lights, their casings, accessories, and light sources that fulfill — the requirements for colour and light intensity of navigation lights and for the admission of signal lights for navigation on the Rhine as of 30 November 2009 or — the respective requirements of a Member State as of 30 November 2009 may still be used.'
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(b) the following entry for Article 7.06 paragraph 1 is inserted:

'7.06(1)	Radar navigation systems and rate-of-turn indicators	Radar navigation systems and rate-of-turn indicators, which have been approved and installed pursuant to a Member State's regulations before 31 December 2012 may continue to be installed and operated until the issue or replacement of the Community certificate after 31 December 2018. These systems must be entered in the Community certificate under number 52.
		Radar navigation systems and rate-of-turn indicators, which have been approved since 1 January 1990 pursuant to the regulations concerning the minimum requirements and test conditions for navigation radar systems for navigation on the Rhine and of the regulations concerning the minimum requirements and test conditions for rate-of-turn indicators for navigation on the Rhine may continue to be installed and operated, provided that an installation certificate that is valid in accordance with this Directive or Resolution CCNR 1989-II-35, is available.'

(c) the entries for Articles 11.02 paragraph 4 and 11.04 paragraph 2 are replaced by the following:

Article and paragraph	Content	Deadline and comments
'11.02(4), first sentence	Equipment of outer edges of decks, side decks and work stations	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2020
	Height of bulwarks or coamings	NRC, NRC, at the latest on issue or renewal of the Community certificate after 1.1.2020
11.04(1)	Clear width of side deck	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2035, for craft exceeding 7,30 m in width
Paragraph 2	Shipside guard rails on vessels of L < 55 m with only aft accommodation	NRC, at the latest on issue or renewal of the Community certificate after 1.1.2020'

(27) In Appendix I to Annex II to Directive 2006/87/EC, the following entry is added:

Figure 10
Wear life jacket



Colour: blue/white

(28) Appendix II to Annex II of Directive 2006/87/EC is amended as follows:

(a) the list of contents is amended as follows:

(i) for No 4, the title is replaced by the following

'Application of transitional provisions'

(ii) for No 6, the title is replaced by the following 'Application of regulations in Chapter 15'

(iii) the following is added:

'No 26: experts/competent persons'

No 27: Recreational craft';

(b) the Administrative instruction No 4 is replaced by the following:

'ADMINISTRATIVE INSTRUCTION No 4

Application of Transitional provisions

(Chapters 15 to 22b, Chapter 24 and Chapter 24a of Annex II)

1. APPLICATION OF TRANSITIONAL PROVISIONS IN JOINING TOGETHER PARTS OF CRAFT

1.1. Principles

Where parts of different vessels are joined together, status quo protection shall be granted only for the parts which belong to the vessel which retains its Community certificate. Transitional provisions may therefore be invoked only for those parts. Other parts shall be treated as a newly built vessel.

1.2. Application of the transitional provisions in detail

1.2.1. Where parts of different vessels are joined together, transitional provisions may be invoked only for those parts which belong to the vessel which retains its Community certificate.

1.2.2. Parts which do not belong to the vessel which retains its vessel certificate shall be treated as a newly built craft.

1.2.3. After a vessel has had part of another vessel added to it, the former shall receive the European vessel identification number of the craft, which retains its Community certificate as the converted craft.

1.2.4. Where an existing Community certificate is retained or a new Community certificate is issued for a craft after a conversion, the year of construction of the oldest part of the craft shall additionally be entered in the Community certificate.

1.2.5. If a new fore section is attached to a craft, the engine for the bow thruster system installed in the fore section shall also comply with the current requirements.

1.2.6. If a new stern section is attached to a vessel, the engines installed in the stern section shall also comply with the current requirements.

1.3. Examples for illustration

1.3.1. A vessel is put together from two older vessels (vessel 1 year of construction 1968; vessel 2 year of construction 1972). The whole of vessel 1 apart from the fore section is used; of vessel 2, the fore section is used. The assembled vessel receives vessel 1's Community certificate. The fore section of the assembled vessel must now be fitted, inter alia, with anchor niches.

1.3.2. A vessel is put together from two older vessels (vessel 1 year of construction 1975; vessel 2 year of construction 1958, oldest component 1952). The whole of vessel 1 apart from the fore section is used; of vessel 2, the fore section is used. The assembled vessel receives vessel 1's Community certificate. The fore section of the assembled vessel must now be fitted, inter alia, with anchor niches. The oldest component from the original vessel 2, with year of construction 1952, is additionally entered in the Community certificate.

1.3.3. The stern section of a vessel of year of construction 2001 is attached to a vessel of year of construction 1988. The engine of the vessel of year of construction 1988 is to remain in the vessel. In this case, the engine has to be type approved. The engine would also have to be type approved if it was the engine in the 2001 stern section.

2. APPLICATION OF TRANSITIONAL PROVISIONS IN THE CASE OF A CHANGE IN THE TYPE OF CRAFT (INTENDED USE OF THE CRAFT)

2.1. Principles

2.1.1. In any decision on the application of transitional provisions in the case of change of the type of craft (vessel type; intended use of the vessel), as regards to Annex II to this Directive safety considerations shall be key.

2.1.2. It shall constitute a change in the type of craft if the safety requirements applying to the new type of craft are different from those for the old type; this is so if special provisions of Chapters 15 to 22b of Annex II are applicable to the new type which were not applicable to the old type.

2.1.3. In the case of a change in the type of craft, all special provisions and all requirements specific to this type of craft shall be complied with fully; transitional provisions may not be invoked for these requirements. This also applies to parts which are taken over from the existing craft and come under these special requirements.

2.1.4. The conversion of a tanker into a dry cargo vessel shall not constitute a change in the type of craft as defined in 2.1.2.

2.1.5. In the case of conversion of a cabin vessel into a day-trip vessel, all new parts shall comply fully with the current requirements.

2.2. Application of the transitional provisions in detail

2.2.1. Article 24.02(2) (NRC), resp. Article 24a.02(2) applies to the parts of the craft that are renewed; hence new parts of the craft cannot be subject to the transitional provisions.

2.2.2. For the parts of the craft that are not converted, the transitional provisions shall continue to be applicable with the exception of parts according to 2.1.3, second sentence.

2.2.3. If the dimensions of the craft are modified, the transitional provisions no longer apply to those parts of the craft that are connected with this modification (e.g. distance of collision bulkhead, freeboard and anchor).

2.2.4. In the case of a change in the type of craft, the special requirements of Annex II that only apply to the new type of craft shall be applicable. All parts and items of equipment that are affected by the conversion of the craft must satisfy the current requirements Part II and III of Annex II.

2.2.5. The craft shall then be granted a new or amended Community certificate and a note shall be made in fields 7 and 8 of the certificate both of the original construction and of the conversion.

2.3. Examples for illustration

2.3.1. A cargo vessel (year of construction 1996) is converted into a passenger vessel. Chapter 15 of Annex II then applies to the whole vessel, without invoking transitional provisions. If the fore section is not modified either according to the conversion plans or in accordance with Chapter 15, the vessel does not need to present any anchor niches in accordance with Article 3.03.

2.3.2. A tug (year of construction 1970) is converted into a pusher. The physical conversion consists solely of changing the deck equipment and installing a pushing device. All transitional provisions for a 1970 vessel remain applicable, except for the Chapters 5, 7 (in part), Article 10.01 and Article 16.01.

2.3.3. A motor tanker (year of construction 1970) is converted into a pusher. The physical conversion consists of separating off the fore section and the cargo section, as well as changing the deck equipment and installing a pushing device. All transitional provisions for a 1970 vessel remain applicable, except for the provisions of Chapters 5, 7 (in part), Article 10.01 and Article 16.01.

2.3.4. A motor tanker is converted into a motor cargo vessel. The motor cargo vessel must comply with current workplace safety requirements, particularly those referred to in Article 11.04 of Chapter 11 of Annex II.

3. APPLICATION OF TRANSITIONAL PROVISIONS IN THE CASE OF CONVERSION OF PASSENGER VESSELS

3.1. Application of the transitional provisions

3.1.1. Conversion measures that are necessary in order to comply with requirements of Chapter 15, no matter when they are carried out, shall not constitute conversion "C" within the meaning of Article 24.02(2), Article 24.03(1) or Article 24.06(5) of Annex II, resp. Article 24a.02, Article 24a.03.

3.1.2. In the case of conversion of a cabin vessel into a day-trip vessel, all new parts shall comply fully with the current requirements.

3.2. Examples for illustration

3.2.1. A passenger vessel (year of construction 1995) must have a second independent propulsion system installed by 1 January 2015 at the latest. If no other voluntary conversions are made on this passenger vessel, it is not necessary to carry out a stability calculation in accordance with the new requirements, but if there is an objective need for one, a stability calculation may be carried out in accordance with the original stability requirements of a Member State.

3.2.2. A passenger vessel (year of construction 1994, vessel certificate last renewed 2012) will be extended by 10 m in 2016. In addition, this craft must be given a second independent propulsion system. Also, a new stability calculation will be necessary, which must be carried out in accordance with Chapter 15 for the one-compartment status and the two-compartment status.

3.2.3. A passenger vessel (year of construction 1988) receives a more powerful propulsion system including propellers. This is such a major conversion that a stability calculation is required. This must be carried out in accordance with current requirements;

(c) the Administrative instruction No 6 is replaced by the following:

'ADMINISTRATIVE INSTRUCTION No 6

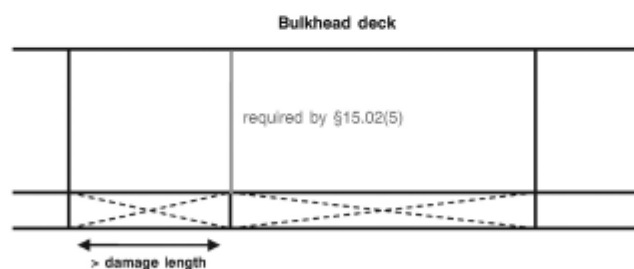
Application of Chapter 15 requirements Local subdivisions

Transitional requirements for enclosures made with awnings or similar mobile installations

(Article 15.02(5), 15.03(4), 15.03(9) of Annex II)

1. LOCAL SUBDIVISIONS (ARTICLE 15.02(5))

Under Article 15.02 paragraph 5 it is conceivable that local watertight subdivisions, such as transversally subdivided double bottom tanks of a greater length than the damage length to be considered, will not be included in the evaluation. In this case it might not be possible to take the transversal subdivision into account if it is not extended up to the bulkhead deck. This might lead to inappropriate subdivisions of bulkheads.



Interpretation of the requirement:

If a watertight compartment is longer than required by Article 15.03 paragraph 9 and it contains local subdivisions which form watertight sub compartments, and between which the minimum damage length can be contained, these can be taken into account in the damaged stability calculation.

2. TRANSITIONAL REQUIREMENTS FOR ENCLOSURES MADE WITH AWNINGS OR SIMILAR MOBILE INSTALLATIONS WITH REGARD TO STABILITY (ARTICLE 15.03 PARAGRAPH 5)

Enclosures made with awnings or similar mobile installations can cause problems with the stability of the vessel since, if of sufficient size to do so, they influence the heeling moment due to wind pressure.

Interpretation of the requirement:

In the case of passenger vessels for which a vessel certificate was issued for the first time before 1 January 2006, or for which Article 24.06 paragraph 2, second sentence, is invoked, after the erection of an enclosure made with awnings or similar mobile installations, a new stability calculation must be made according to this Directive, in so far as its lateral plane A_{wz} exceeds 5 % of the total lateral plane A_w to be taken into account in each case.

(d) in Administrative instruction No 7 Part 1 is replaced by the following:

PART 1

Authorized special anchors

Special anchors with a reduced mass, authorized by competent authorities according to Article 10.01 paragraph 5 are listed in the following table.

Anchor No	Accepted reduction of the anchormass (%)	Competent authority
1. HA-DU	30	Germany
2. D'Hone Spezial	30	Germany
3. Pool 1 (hol)	35	Germany
4. Pool 2 (mazzief)	40	Germany
5. De Biesbosch-Danforth	50	Germany
6. Vicinay-Danforth	50	France
7. Vicinay AC 14	25	France
8. Vicinay type 1	45	France
9. Vicinay type 2	45	France
10. Vicinay type 3	40	France
11. Stockes	35	France
12. D'Hone-Danforth	50	Germany
13. Schmitt HHP-anker	40	Netherlands
14. SHI high holding anchor, type ST (standard)	30	Netherlands
15. SHI high holding anchor, type FB (fully balanced)	30	Netherlands
16. Klinzmann anchor	30	Netherlands
17. HA-DU-POWER Anchor	50	Germany'

(e) in Administrative instruction No 11 point 4 after the explanation concerning item 2 of the Community certificate the following explanation of item 10 of the Community certificate is inserted:

'10. In respect of vessels allowed to navigate on the Rhine, i.e.

(a) those which comply fully with Annex II including the transitional provisions for Chapter 24; and

(b) those which make no use of the transitional provisions of Chapter 24a or the reductions provided for in Annex IV,

the following is to be added to the indent “— on Community waterways in zone(s)”:

(a) Rhine or

(b) zone R.’

In point 4 the explanation concerning item 43 of the Community certificate is amended as follows:

‘43. Portable fire extinguishers required by other safety regulations, e.g. European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN), are not included here.’;

(f) in Administrative instruction No 17 section 3 is replaced by the following:

‘3. ACCEPTANCE TEST

3.1. Fire alarm systems must be checked by an expert:

(a) before being put into service for the first time,

(b) before being put back into service after any major modification or repair,

(c) regularly, at least every two years.

In the case of engine rooms and boiler rooms these checks shall be made under various machine operation conditions and under changing ventilation conditions. Inspections as referred to in subsection (c) above may also be carried out by a competent person from a competent firm specializing in fire extinguishing systems.

3.2. An inspection certificate shall be issued, signed by the expert or competent person and showing the date of the inspection.’;

(g) in Administrative instruction No 18 section 4 is replaced by the following:

‘4. The requirements set out in points 2 and 3 shall also be deemed to have been met if, for each of the two parts, the stability requirements set out in Section 9.1.0.95.2 of the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) are met.’;

(h) in Administrative instruction No 21 section 8 is replaced by the following:

‘8. Acceptance test

8.1. The luminance of the LLL must be checked by an expert

(a) before being put into service for the first time,

(b) before being put back into service after any major modification or repair,

(c) regularly, at least every five years.

Checks as referred to in subsection (c) above may also be carried out by a competent person trained in safety guidance systems.

8.2. An inspection certificate shall be issued, signed by the expert or competent person and showing the date of the inspection.

8.3. If, after a single measurement, the luminance does not meet the requirements set out in this administrative instruction, measurements are to be taken at least 10 equidistant points. If over 30 % of the measurements do not meet the requirements set out in this administrative instruction, the safety guidance systems must be replaced. If 20 to 30 % of the measurements do not meet the requirements set out in this administrative instruction, the safety guidance systems are to be checked again within one year.’;

(i) in Administrative instruction No 24 section 4 is replaced by the following:

‘4. Calibration and inspection of gas leak detectors, replacement of parts with limited service life

4.1. Gas leak detectors shall be calibrated and inspected by an expert or a competent person as directed by the manufacturer:

- (a) before being put into service for the first time,
- (b) before being put back into service after any major modification or repair,
- (c) regularly.

A calibration and inspection certificate shall be issued, signed by the expert or competent person and showing the date of the inspection.

4.2. Parts of the gas warning equipment which have a limited service life must be duly replaced before expiry of their specified operational life.’

(j) the following administrative instructions No 26 and 27 are added:

ADMINISTRATIVE INSTRUCTION No 26

Experts and Competent Persons

(Article 1.01 paragraphs 106 and 107 of Annex II)

Experts

Experts are required to carry out acceptance tests which call for specialist knowledge either on account of the complexity of the systems or on account of the safety level required. The following persons or institutions are among those authorized to carry out such acceptance tests:

- classification societies which have the necessary in-house expertise or which bear responsibility, on the basis of their authorization, for calling in external persons or institutions and have the necessary quality control systems in place in respect of the selection of these persons or institutions;
- members of the inspection bodies or employees of the relevant authorities;
- officially approved persons or institutions with recognized expertise for the scope of inspection in the relevant subject area, whereby the vessel inspection bodies can also issue this approval in their capacity as public agencies, ideally on the basis of a quality assurance system. A person or institution is also deemed to be approved if the latter has passed an official selection procedure which specifically assesses the possession of the required expertise and experience.

Competent persons

Competent persons are required, for example, to conduct regular visual checks and operating checks on safety equipment. The following may be classed as competent persons:

- persons who, on the basis of their professional training and experience, have sufficient expertise to be able to assess specific situations and circumstances, e.g. ship's masters, safety officers in shipping companies, crew members with relevant experience;
- companies which have acquired sufficient specialist knowledge on the basis of their regular work, e.g. shipyards or installation firms;
- manufacturers of special-purpose systems (e.g. fire extinguishing systems, control equipment).

Terminology

German	English	French	Dutch
Sachverständiger	expert	expert	erkend deskundige
Sachkundiger	competent person	spécialiste	deskundige
Fachfirma	competent firm	société spécialisée	deskundig bedrijf

Acceptance tests

The table below summarizes the schedule of acceptance tests, including their frequency and the type of inspector required to conduct them. This table is for information purposes only.

Rule	Subject matter	Maximum test interval	Inspector
Article 6.03(5)	Hydraulic cylinders, pumps and motors	8 years	Competent firm
Article 6.09(3)	Motor-driven control equipment	3 years	Competent person
Article 8.01(2)	Pressure vessels	5 years	Expert
Article 10.03(5)	Portable fire extinguishers	2 years	Competent person
Article 10.03a(6)(d)	Built-in fire extinguishing systems	2 years	Competent person or competent firm
Article 10.03b(9)(b)(dd)	Built-in fire extinguishing systems	2 years	Competent person or competent firm
Article 10.04(3)	Inflatable launches	As specified by the manufacturer	
Article 10.05(3)	Life jackets	As specified by the manufacturer	
Article 11.12(6)	Cranes	10 years	Expert
Article 11.12(7)	Cranes	1 year	Competent person
Article 14.13	Liquefied gas installations	3 years	Expert
Article 15.09(9)	Life-saving appliances	As specified by the manufacturer	
Article 15.10(9)	Insulating resistance, earthing	before expiry of validity of the Community certificate	
Administrative instruction No 17	Fire alarm systems	2 years	Expert or competent person
Administrative instruction No 21	Safety guidance systems	5 years	Expert or competent person
Administrative instruction No 24	Gaswarning equipment	As specified by the manufacturer	Expert or competent person

ADMINISTRATIVE INSTRUCTION No 27**Recreational craft**

(Article 21.02(2) in conjunction with Article 7.02, Article 8.05(5), Article 8.08(2) and Article 8.10 of Annex II)

1. General

Recreational craft of up to 24 metres length, that are placed on the market, have to comply with the requirements of Directive 94/25/EC of the European Parliament and of the Council (*), as amended by Directive 2003/44/EC (**). According to Article 3 in conjunction with Article 2 of this Directive, recreational craft having a length of 20 metres or more shall carry a Community inland navigation certificate attesting the

craft's compliance with the technical requirements of Annex II. Since double inspection or certification for certain equipment, arrangements and installations of newly built recreational craft which can result from certain provisions in Article 21.02 of Annex II should be avoided, this Administrative Instruction gives information on those requirements listed in Article 21.02 that are already sufficiently covered under Directive 94/25/EC.

2. Requirements in Article 21.02 which are already covered under Directive 94/25/EC

For recreational craft subject to Directive 94/25/EC the inspection body shall as regards to the issuance of the Community inland navigation certificate (initial inspection) not require further inspection or certification of the following requirements of Article 21.02 (2), of Annex II provided that the craft presented for inspection has been placed on the market no more than 3 years before the date of presentation to the inspection body and no modifications to the craft have been carried out, and the Declaration of Conformity refers to the following harmonized standards or their equivalence:

- Article 7.02: EN ISO 11591:2000, (Unobstructed view)
- Article 8.05(5): EN ISO 10088:2001, (Fuel tanks and pipes)
- Article 8.08(2): EN ISO 15083:2003, (Bilge pumping)
- Article 8.10: EN ISO 14509, (Noise emission)

(*) OJ L 164, 30.6.1994, p. 15.

(**) OJ L 214, 26.8.2003, p. 18.

ANNEX II

Annex VII is amended as follows:

— the first two sentences of paragraph 1 of Part I are replaced by the following:

'The classification society shall be able to document extensive experience in assessing the design and construction of inland waterway vessels. The classification society shall have comprehensive rules and regulations for the design, construction and periodic inspection of inland waterway vessels, in particular for calculating stability in accordance with Part 9 of the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) as referred to in Article 22a.04 and Article 22a.05 of Annex II and which will be published at least in Dutch, English, French or German and shall be continuously updated and improved through research and development programmes.'

— the first sentence of paragraph 11 of Part I is replaced by the following:

'The classification society shall have prepared and implemented and shall maintain an effective internal quality system based on the relevant parts of internationally recognized quality standards and complying with the EN ISO/IEC 17020:2004, as interpreted by the IACS Quality System Certification Scheme Requirements.'

— paragraph 4 of Part II is replaced by the following:

'4. Before approving a classification society which has not been recognized within the framework of the Rhine Vessel Inspection Regulation by all the Member States of the Central Commission for Navigation on the Rhine, the Commission shall consult the Secretariat of the Central Commission.'

— Part III is replaced by the following:

'Part III

List of approved classification societies

On the basis of the criteria set out in Parts I and II, the following classification societies are currently approved under Article 10(1) of this Directive:

- (1) Bureau Veritas
- (2) Germanischer Lloyd
- (3) Lloyd's Register of Shipping
- (4) Polski Rejestr Statków SA
- (5) RINA SpA
- (6) Russian Maritime Register of Shipping

Until their approval under Parts I and II, classification societies which are recognized and approved and authorized by a Member State in accordance with Council Directive 94/57/EC of 22 November 1994 on common rules and standards for ship inspection and survey organisations and for the relevant activities of maritime administrations (*) are currently approved in accordance with Article 10 of this Directive only in respect of vessels which operate exclusively on waterways of that Member State.

(*) OJ L 319, 12.12.1994, p. 20'.

ANNEX III

Annex IX is replaced by the following:

ANNEX IX

RADAR EQUIPMENT AND RATE-OF-TURN INDICATORS USED ON BOARD INLAND WATERWAY VESSELS

CONTENTS

Definitions

PART I: Minimum requirements and test conditions for radar installations used for navigation on board inland waterway vessels

PART II: Minimum requirements and test conditions for rate-of-turn indicators used on board inland waterway vessels

PART III: Requirements for installation and performance tests for radar equipment and rate-of-turn indicators used on board inland waterway vessels

PART IV: Installation and performance certificate for radar equipment and rate-of-turn indicators used on board inland waterway vessels

PART V: Register of competent authorities, technical services, approved radar navigation equipment and rate-of-turn indicators and approved specialized firms

PART VI: Equivalent equipment

Definitions:

1. "Type test" means the test procedure as referred to in Part I Article 4 or Part II Article 1.03 which the technical service uses to test for compliance with the requirements according to this Annex. The type test forms an integral part of the type approval;
2. "Type approval" means the administrative procedure by which a Member State confirms that equipment complies with the requirements of this Annex.

For radar navigation equipment this procedure includes the provisions according to Articles 5 to 7 and 9. For rate-of-turn indicators the procedure includes the provisions according to Part II, Articles 1.04 to 1.06 and 1.08;
3. "Test certificate" means the document in which the type testing results are laid down;
4. "Applicant" or "manufacturer" means any legal or natural person under whose name, trademark or any other form of identification the equipment submitted for testing is manufactured or marketed and who is responsible for all matters as regards the type testing and type approval procedure in respect of the technical service and the approval authority;
5. "Technical service" means the institution, authority or organisation that does the type testing;
6. "Manufacturer's declaration" means the declaration by which a manufacturer gives the assurance that the equipment meets the prevailing minimum requirements and that is identical in every respect to the type submitted for testing;
7. "Declaration of conformity" according to Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (*) means the declaration according to Directive 1999/5/EC Annex II Paragraph 1, by which the manufacturer confirms that the products in question meet the applicable requirements of the Directive;
8. "Competent authority" means the official authority that issues the type approval.

(*) OJ L 91, 7.4.1999, p. 10

PART I

Minimum requirements and test conditions for radar installations used for navigation on board inland waterway vessels*Table of contents*

Article 1 — Scope
Article 2 — Purpose of the radar navigation equipment
Article 3 — Minimum requirements
Article 4 — Type tests
Article 5 — Application for a type test
Article 6 — Type-approval
Article 7 — Marking of the equipment and type approval number
Article 8 — Manufacturer's declaration
Article 9 — Modifications to type-approved equipment

Article 1

Scope

These provisions set out the minimum requirements for radar equipment used for navigation on board inland waterway vessels as well as the conditions for testing conformity with these minimum requirements.

Article 2

Purpose of the radar navigation equipment

The radar navigation equipment shall facilitate the navigation of the vessel by providing an intelligible radar picture of its position in relation to buoys shorelines and navigational structures, as well as permitting the reliable and timely recognition of other vessels and obstructions protruding above the water surface.

Article 3

Minimum requirements

1. With the exception of requirements on electromagnetic compatibility (Article 3.1.b of Directive 1999/5/EC) and of requirements on the effective use of the spectrum so as to avoid harmful interference arising from Article 3.2 of Directive 1999/5/EC, radar navigation equipment used in inland waterway vessels shall fulfil the requirements of European standard EN 302194-1: 2006.

2. Paragraph 1 applies to inland ECDIS equipment which can be operated in navigation mode. This equipment shall additionally fulfil the requirements of the Inland ECDIS standards in the version valid on the date of issue of the type approval.

Article 4

Type tests

1. Compliance with the minimum requirements as specified in Article 3(1) shall be established by means of a type test.
2. If the equipment passes the type test the testing establishment shall issue a test certificate. If the equipment fails to meet the minimum requirements, the applicant shall be notified in writing of the reasons for its rejection.

Article 5

Application for a type test

1. Applications for a type test of a radar navigation installation shall be submitted to a technical service.

The technical services shall be notified to the European Commission.

2. Each application shall be accompanied by the following documents:

- (a) detailed technical descriptions;
- (b) complete set of installation and service documents;
- (c) detailed operator's manuals;
- (d) short operator's manual; and
- (e) where applicable, evidence of previously completed tests.

3. In case it is not intended by the applicant to have the Declaration of Conformity pursuant to Directive 1999/5/EC established concurrently with the type-approval, a Declaration of Conformity shall be submitted together with the application for a type test.

Article 6

Type-approval

1. Type-approval shall be granted by the competent authority pursuant to the test certificate. The competent authority shall inform the European Commission of the equipment for which it has issued type approval. The relevant notice shall include the type-approval number assigned, as well as the type designation, the name of the manufacturer, the name of the holder of the type-approval and the date of the type approval.

2. Each competent authority or the technical service designated by the competent authority shall be entitled to select equipment from the production series at any time for inspection.

If this inspection reveals defects in the equipment, type-approval may be withdrawn.

The type-approval shall be withdrawn by the authority that issued it.

Article 7

Marking of the equipment and type approval number

1. Each component of the equipment shall be marked indelibly with

- (a) the name of the manufacturer,
- (b) the trade designation of the equipment,
- (c) the type of equipment and
- (d) the serial number.

2. The type-approval number assigned by the competent authority shall be affixed indelibly to the display unit in such a way that it remains clearly visible after the equipment has been installed.

Composition of a type-approval number: e-NN-NNN

e = European Union

NN = number for the country of type-approval, where

01	=	Germany	08	=	Czech Republic
02	=	France	09	=	Spain
03	=	Italy	11	=	United Kingdom
04	=	Netherlands	12	=	Austria
05	=	Sweden	13	=	Luxembourg
06	=	Belgium	14	=	Switzerland
07	=	Hungary	17	=	Finland

18	⇄	Denmark	27	⇄	Slovakia
19	⇄	Romania	29	⇄	Estonia
20	⇄	Poland	32	⇄	Latvia
21	⇄	Portugal	34	⇄	Bulgaria
23	⇄	Greece	36	⇄	Lithuania
24	⇄	Ireland	49	⇄	Cyprus
26	⇄	Slovenia	50	⇄	Malta

NNN = three-digit number, to be determined by the competent authority.

3. The type-approval number shall be used only in conjunction with the associated type-approval.

It shall be the responsibility of the applicant to produce and affix the type-approval number.

Article 8

Manufacturer's declaration

Each unit of equipment shall be accompanied by a manufacturer's declaration.

Article 9

Modifications to type-approved equipment

1. Any modification made to equipment already approved shall cause the type-approval to be withdrawn. Whenever modifications are planned, details shall be sent in writing to the competent technical service.

2. The competent authority shall decide following consultation with the technical service whether the type-approval still applies or whether an inspection or new type test is necessary.

If a new type test is granted, a new type-approval number shall be assigned.

PART II

Minimum requirements and test conditions for rate-of-turn indicators used on board inland waterway vessels

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Article 1.02 — Purpose of the rate-of-turn indicator

Article 1.03 — Type test

Article 1.04 — Application for a type test

Article 1.05 — Type-approval

Article 1.06 — Marking of the equipment and type approval number

Article 1.07 — Manufacturer's declaration

Article 1.08 — Modifications to type-approved equipment

CHAPTER 2

General minimum requirements for rate-of-turn indicators

Article 2.01 — Construction, design

Article 2.02 — Spurious emissions and electromagnetic compatibility

Article 2.03 — Operation

Article 2.04 — Operating instructions

Article 2.05 — Installation of the sensor

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Minimum operational requirements for rate-of-turn indicators

Article 3.01 — Operational readiness of the rate-of-turn indicator

Article 3.02 — Indication of the rate of turn

Article 3.03 — Measuring ranges

Article 3.04 — Accuracy of the indicated rate of turn

Article 3.05 — Sensitivity

Article 3.06 — Monitoring of operation

Article 3.07 — Insensitivity to other normal movements of the vessel

Article 3.08 — Insensitivity to magnetic fields

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CHAPTER 4

Minimum technical requirements for rate-of-turn indicators

Article 4.01 — Operation

Article 4.02 — Damping devices

Article 4.03 — Connection of additional equipment

CHAPTER 5

Test conditions and procedures for rate-of-turn indicators

Article 5.01 — Safety, load capacity and electromagnetic compatibility

Article 5.02 — Spurious emissions

Article 5.03 — Test procedure

Appendix: Maximum tolerances for indication errors of rate-of-turn indicators

CHAPTER 1

General

Article 1.01

Scope

These provisions set out the minimum requirements for rate-of-turn indicators used on board inland waterway vessels, as well as the conditions for testing conformity with these minimum requirements.

Article 1.02

Purpose of the rate-of-turn indicator

The rate-of-turn indicator is intended to facilitate radar navigation, and to measure and indicate the rate of turn of the vessel to port or starboard.

Article 1.03

Type test

1. Compliance with the minimum requirements for rate-of-turn indicators pursuant to Chapters 2 to 4 shall be established by means of a type test.

2. If the equipment passes the type test the technical service shall issue a test certificate. If the equipment fails to meet the minimum requirements, the applicant shall be notified in writing of the reasons for its rejection.

Article 1.04

Application for a type test

1. Applications for a type test of a rate-of-turn indicator shall be submitted to a technical service.

The technical services shall be notified to the European Commission.

2. Each application shall be accompanied by the following documents:

- (a) detailed technical descriptions;
- (b) complete set of installation and service documents;
- (c) operating instructions.

3. By means of tests, the applicant shall establish or have it established that the equipment meets the minimum requirements of these provisions.

The results of the test and the measurement reports shall be attached to the application.

These documents and the information obtained during testing shall be kept by the competent authority.

Article 1.05

Type approval

1. Type approval shall be granted by the competent authority pursuant to the test certificate.

The competent authority shall inform the European Commission of the equipment it has approved. The relevant notice shall include the type approval number assigned, as well as the type designation, the name of the manufacturer, the name of the holder of the type approval and the date of the type approval.

2. Each competent authority or the technical service designated by the competent authority shall be entitled to select equipment from the production series at any time for inspection.

If this inspection reveals defects in the equipment, type approval may be withdrawn.

The type-approval shall be withdrawn by the authority that issued it.

Article 1.06

Marking of the equipment and type approval number

1. Each component of the equipment shall be marked indelibly with

- (a) the name of the manufacturer,
- (b) the trade designation of the equipment,
- (c) the type of equipment and
- (d) the serial number.

2. The type-approval number assigned by the competent authority shall be affixed indelibly to the control unit in such a way that it remains clearly visible after the equipment has been installed.

Composition of a type-approval number: e-NN-NNN

e = European Union

NN = code for the country of type-approval,

01 = Germany	18 = Denmark
02 = France	19 = Romania
03 = Italy	20 = Poland
04 = Netherlands	21 = Portugal
05 = Sweden	23 = Greece
06 = Belgium	24 = Ireland
07 = Hungary	26 = Slovenia
08 = Czech Republic	27 = Slovakia
09 = Spain	29 = Estonia
11 = United Kingdom	32 = Latvia
12 = Austria	34 = Bulgaria
13 = Luxembourg	36 = Lithuania
14 = Switzerland	49 = Cyprus
17 = Finland	50 = Malta

NNN = three-digit number, to be determined by the competent authority.

3. The type-approval number shall be used only in conjunction with the associated type-approval.

It shall be the responsibility of the applicant to produce and affix the type-approval number.

Article 1.07

Manufacturer's declaration

Each unit of equipment shall be accompanied by a manufacturer's declaration.

Article 1.08

Modifications to type-approved equipment

1. Any modification made to equipment already approved shall cause the type-approval to be withdrawn.

Whenever modifications are planned, details shall be sent in writing to the competent technical service.

2. The competent authority shall decide following consultation with the technical service whether the type-approval still applies or whether an inspection or new type test is necessary.

If a new type test is granted, a new type approval number shall be assigned.

CHAPTER 2

General minimum requirements for rate-of-turn indicators

Article 2.01

Construction, design

1. Rate-of-turn indicators shall be suitable for operation on board inland waterway vessels.

2. The construction and design of the equipment shall be in accordance with current good engineering practice, both mechanically and electrically.

3. In the absence of any specific provision in Annex II or in this Annex, the requirements and test methods contained in European Standard EN 60945:2002 shall apply to power supply, safety, mutual interference of ship borne equipment, compass safe distance, resistance to climatic influences, mechanical strength, environmental influences, audible noise emission and equipment markings.

Additionally, the equipment shall satisfy all requirements of this Annex at ambient temperatures between 0 and 40 °C.

Article 2.02

Spurious emissions and electromagnetic compatibility

1. General requirements:

Rate-of-turn indicators shall meet the requirements of Directive 2004/108/EC (*) of the European Parliament and of the Council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC.

2. Spurious emissions:

In the frequency ranges of 156 to 165 MHz, 450 to 470 MHz and 1,53 to 1,544 GHz the field strength shall not exceed a value of 15 µV/m. These field strengths shall apply at a test distance of 3 metres from the equipment under test.

Article 2.03

Operation

1. The equipment shall not have more controls than are necessary for its correct operation.

The design, markings and manipulation of the controls shall be such as to permit their simple, unambiguous and fast operation. Their arrangement shall be such as to prevent operational mistakes as far as possible.

Controls that are not necessary for normal operation shall not be immediately accessible.

2. All controls and indicators shall be provided with symbols or markings in English. Symbols shall meet the requirements of European Standard EN 60417:1998.

All numerals and letters shall be at least 4 mm high. If it can be demonstrated that, for technical reasons, numerals and letters 4 mm high are not possible and if for the purposes of operation smaller numerals and letters are acceptable, a reduction to 3 mm shall be allowed.

3. The equipment shall be designed in such a way that operating mistakes cannot cause its failure.

4. Any functions over and above the minimum requirements, such as facilities for connection to other equipment, shall be provided in such a way that the equipment meets the minimum requirements under all conditions.

Article 2.04

Operating instructions

A detailed operator's manual shall be supplied with each unit. It shall be available in Dutch, English, French and German and shall contain at least the following information:

- (a) activation and operation;
- (b) maintenance and servicing;
- (c) general safety instructions.

Article 2.05

Installation of the sensor

The direction of installation in relation to the keel line shall be indicated on the rate-of-turn indicator's sensor unit. Installation instructions shall be provided to ensure maximum insensitivity to other normal movements of the vessel.

(*) OJ L 390, 31.12.2004, p. 24.

CHAPTER 3

Minimum operational requirements for rate-of-turn indicators

Article 3.01

Operational readiness of the rate-of-turn indicator

1. From a cold start, the rate-of-turn indicator shall be fully operational within 4 minutes and shall operate to within the required accuracy tolerances.
2. A warning signal shall indicate that the indicator is switched on. It shall be possible to observe and operate the rate-of-turn indicator simultaneously.
3. Cordless remote controls shall not be permitted.

Article 3.02

Indication of the rate of turn

1. The rate of turn shall be indicated on a linear graduated scale having the zero point situated in the middle. It shall be possible to read the direction and extent of the rate of turn with the necessary accuracy. Indicators other than needle indicators and bar-graphs shall not be permitted.

2. The indicator scale shall be at least 20 cm long and may be circular or rectilinear.

Rectilinear scales may be arranged horizontally only.

3. Solely digital indicators shall not be permitted.

Article 3.03

Measuring ranges

Rate-of-turn indicators may be provided with one or more measuring ranges. The following measuring ranges are recommended:

- 30 °/min
- 60 °/min
- 90 °/min
- 180 °/min
- 300 °/min.

Article 3.04

Accuracy of the indicated rate of turn

The indicated rate of turn shall not differ by more than 2 % from the measurable maximum value or by more than 10 % from the actual value, whichever is the greater (see Appendix).

Article 3.05

Sensitivity

The operating threshold shall be less than or equal to a change in angular speed equivalent to 1 % of the indicated value.

Article 3.06

Monitoring of operation

1. If the rate-of-turn indicator does not operate within the required accuracy range, this shall be indicated.
2. If a gyroscope is used, any critical fall in the rate of rotation of the gyroscope shall be signalled by an indicator. A critical fall in the rate of rotation of the gyroscope is one which lowers accuracy by 10 %.

Article 3.07

Insensitivity to normal movements of the vessel

1. Rolling of the vessel of up to 10° at a rate of turn of up to 4°/s shall not give rise to measurement errors in excess of the stipulated tolerances.
2. Impacts such as those that may occur during berthing shall not give rise to measurement errors in excess of the stipulated tolerances.

Article 3.08

Insensitivity to magnetic fields

The rate-of-turn indicator shall be insensitive to magnetic fields which typically occur on board the vessel.

Article 3.09

Slave indicators

Slave indicators shall comply with all requirements applicable to rate-of-turn indicators.

CHAPTER 4

Minimum technical requirements for rate-of-turn indicators

Article 4.01

Operation

1. All controls shall be so arranged that during their operation no information is concealed from view and radar navigation remains unimpaired.
2. All controls and indicators shall be provided with a dazzle-free source of lighting appropriate for all ambient lighting conditions and adjustable down to zero by means of an independent control.
3. Adjustment of controls shall be such that movements to the right or upwards have a positive effect on the variable and movements to the left or downwards a negative effect.
4. If push-buttons are used, it shall be possible to locate and operate them by touch. They shall also have clearly perceptible contact release. If pushbuttons have multiple functions, it must be apparent which hierarchical level is active.

Article 4.02

Damping devices

1. The sensor system shall be damped for critical values. The damping constant (63 % of the limit value) shall not exceed 0,4 s.
2. The indicator shall be damped for critical values.

Controls for increasing damping shall be permitted.

Under no circumstances may the damping constant exceed 5 s.

Article 4.03

Connection of additional equipment

1. If the rate-of-turn indicator can be connected to slave indicators or similar equipment, the rate-of-turn indication shall remain usable as an analogue electric signal. In addition, the rate-of-turn indicator may possess a digital interface in accordance with (2).

The rate of turn shall continue to be indicated with galvanic earth insulation and the equivalent to an analogue voltage of 20 mV°/min \pm 5 % and a maximum internal resistance of 100 Ω .

Polarity shall be positive when the vessel is turning to starboard and negative when it is turning to port.

The operating threshold shall not exceed 0,3°/min.

Zero error shall not exceed 1°/min at temperatures from 0 to 40 °C.

With the indicator switched on and the sensor not exposed to the effects of movement, the spurious voltage at the output signal measured with a 10 Hz pass-band low-pass filter shall not exceed 10 mV.

The rate-of-turn signal shall be received without additional damping beyond the limits referred to in Article 4.02 (1).

2. A digital interface shall be designed pursuant to European standards EN 61162-1: 2008, EN 61162-2: 1998 and EN 61162-3: 2008.

3. An external alarm switch shall be provided. The switch shall be installed as a galvanic insulation break-switch for the indicator.

The external alarm shall be triggered by contact closure:

- (a) if the rate-of-turn indicator is disconnected; or
- (b) if the rate-of-turn indicator is not in operation; or
- (c) if the operating control has reacted following an excessive error (Article 3.06).

CHAPTER 5

Test conditions and procedures for rate-of-turn indicators

Article 5.01

Safety, load capacity and electromagnetic compatibility

Power supply, safety, mutual interference of ship borne equipment, compass safe distance, resistance to climatic influences, mechanical strength, environmental impact, audible noise emission and electromagnetic compatibility shall be tested in accordance with European Standard EN 60945:2002.

Article 5.02

Spurious emissions

Spurious emissions shall be measured in accordance with European Standard EN 60945:2002 in the frequency range of 30 to 2000 MHz.

The requirements of Article 2.02 (2) shall be met.

Article 5.03

Test procedure

1. Rate-of-turn indicators shall be tested under nominal and boundary conditions. In this regard, the influence of the operating voltage and of the ambient temperature shall be tested as far as the prescribed limit value.

In addition, radio transmitters shall be used to set up the maximum magnetic fields in the vicinity of the indicators.

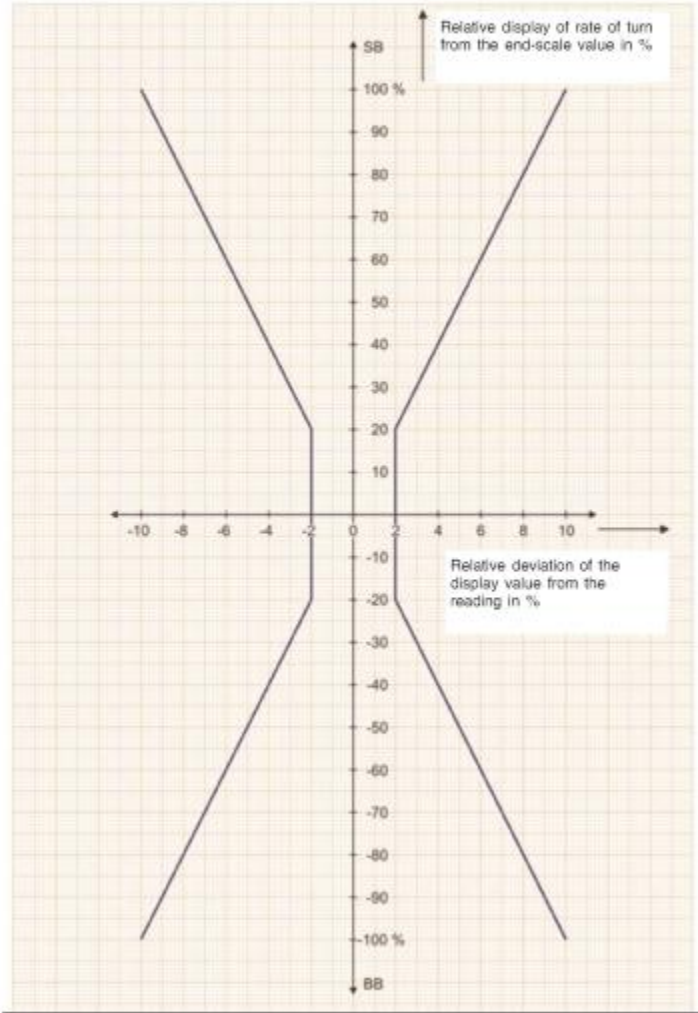
2. Under the conditions described in paragraph 1, indicator errors shall remain within the tolerances indicated in the Annex.

3. All minimum requirements of Chapters 2 to 4 shall be met.

Appendix

Figure 1

Maximum tolerances for indication errors of rate-of-turn indicators



PART III

Requirements for installation and performance tests for radar equipment and rate-of-turn indicators used on board inland waterway vessels*Table of contents*

Article 1 — General
Article 2 — Approved specialised firms
Article 3 — Requirements for on-board power supply
Article 4 — Installation of the radar antenna
Article 5 — Installation of the display unit and the control unit
Article 6 — Installation of the rate-of-turn indicator
Article 7 — Installation of the position sensor
Article 8 — Installation and performance test
Article 9 — Installation and performance certificate

Article 1

General

1. Installation and performance tests of radar navigation equipment and rate-of-turn indicator systems must take place according to the following provisions.
2. Only equipment approved with:
 - (a) a type approval according to
 - (aa) Part I Article 6; or
 - (bb) Part II Article 1.05; or
 - (b) approved with a type approval recognized as equivalent according to Part VI; and
 - (c) bearing a corresponding type approval number
 shall be authorized for installation.

Article 2

Approved specialised firms

1. The installation, replacement, repair or maintenance of radar navigation equipment and rate-of-turn indicators shall be carried out only by specialised firms approved by the competent authority.
The competent authorities responsible for approval shall be notified to the European Commission.
2. Approval may be withdrawn by the competent authority.
3. The competent authority shall immediately notify the European Commission of the specialised firms which it has approved.

Article 3

Requirements for on-board power supply

All power supply leads for radar navigation equipment and rate-of-turn indicators shall have their own separate safety devices and if possible be fail-safe.

Article 4

Installation of the radar antenna

1. The radar antenna shall be installed as close as possible to the fore-and-aft-line. There shall be no obstruction in the vicinity of the antenna causing false echoes or unwanted shadows; if necessary, the antenna shall be mounted on the fore-castle. The mounting and attachment of the radar antenna in its operational position shall be sufficiently stable to enable the radar navigation equipment to perform within the required accuracy limits.
2. After the angular error in the mounting has been corrected and the equipment has been switched on, the difference between hubber line and fore-and-aft-line shall not be greater than 1°.

Article 5

Installation of the display unit and the control unit

1. The display unit and control unit shall be installed in the wheelhouse in such a way that the evaluation of the radar image and the operation of the radar navigation equipment present no difficulty. The azimuthal orientation of the radar image shall be in accordance with the normal situation of the surroundings. Holders and adjustable consoles shall be constructed in a way that they can be fixed in each position free of vibration.
2. During radar navigation, artificial lighting shall not be reflected in the direction of the radar operator.
3. When the control unit is not part of the display unit, it shall be located in housing within 1 metre of the display unit. Cordless remote controls shall not be permitted.
4. If slave indicators are installed, they shall satisfy the requirements which apply to navigational radar equipment.

Article 6

Installation of the rate-of-turn indicator

1. The rate-of-turn indicator shall be located ahead of the helmsman and within their field of vision.
2. The sensor system shall be installed as far as possible amidships, horizontal and aligned with the ship's fore-and-aft line. The installation site shall as far as possible be free of vibration and be liable only to modest temperature variations. The indicator unit shall if possible be installed directly above the radar display.
3. If slave indicators are installed, they shall satisfy the requirements which apply to rate-of-turn indicators.

Article 7

Installation of the position sensor

For inland ECDIS equipment which is operated in navigation mode, the position sensor (e.g. DGPS antenna) must be installed in such a way as to ensure that it operates with the greatest possible degree of accuracy and is not adversely affected by superstructures and transmitting equipment on board ship.

Article 8

Installation and performance test

Before the equipment is switched on for the first time after installation, or after renewals or extensions of the Community certificate (except according to Article 2.09(2) of Annex II), as well as after each modification of the vessel likely to affect the operating conditions of the equipment, an installation and performance test shall be carried out by the competent authority or the technical service designated by the competent authority or by a firm authorized in accordance with Article 2. For this purpose, the following conditions shall be fulfilled:

- (a) the power supply shall have a separate safety device;
- (b) the operating voltage shall be within the tolerance;
- (c) the cabling and its installation shall satisfy the provisions of Annex II and, if applicable ADN;
- (d) the rate of antenna revolutions shall reach at least 24 rpm;
- (e) there shall be no obstruction in the vicinity of the antenna which impairs navigation;
- (f) the safety switch of the antenna, if provided, shall be in good working order;
- (g) the arrangement of display units, rate-of-turn indicators and control units shall be ergonomic and user-friendly;
- (h) the lubber line of the radar navigation equipment shall not deviate from the ship's fore-and-aft-line by more than 1°;

- (i) the accuracy of the range and azimuthal displays shall satisfy the requirements (measurements using known targets);
- (j) linearity in short ranges shall be correct (pushing and pulling);
- (k) the displayed minimum range shall be 15 metres or less;
- (l) the centre of the picture shall be visible and its diameter shall not exceed 1 mm;
- (m) false echoes caused by reflections and unwanted shadows on the lubber line shall not occur or shall not impair the safety of navigation;
- (n) sea-clutter and rain-clutter suppressors (STC and FTC preset) and the associated controls shall perform correctly;
- (o) the gain adjustment shall be in proper working order;
- (p) focus and picture definition shall be correct;
- (q) the ship's turning direction shall be as indicated on the rate-of-turn indicator and the zero position at dead ahead shall be correct;
- (r) the radar navigation equipment shall not be sensitive to transmissions by the ship's radio equipment or to interference from other on-board sources;
- (s) the radar navigation equipment or rate-of-turn indicator shall not interfere with other on-board equipment.

Furthermore, in the case of inland ECDIS equipment:

- (t) the statistical positional error affecting the chart shall not exceed 2 m;
- (u) the statistical phase angle error affecting the chart shall not exceed 1°;

Article 9

Installation and performance certificate

After successful completion of a test in accordance with Article 8, the competent authority, the technical service or the approved firm shall issue a certificate based on the model according to Part IV. This certificate shall be kept permanently on board.

If the test conditions have not been met, a list of defects shall be drawn up. Any existing certificate shall be withdrawn or sent to the competent authority by the technical service or the approved firm.

PART IV

(MODEL)

Installation and performance certificate for radar navigation installations and rate-of-turn indicators used on board inland waterway vessels

Vessel name/type:

European Vessel Identification Number:

Vessel owner:

Name:

Address:

Radar navigation equipment Number:

Item No	Type	Manufacturer	Type-approval number	Serial number

Rate-of-turn indicators Number:

Item No	Type	Manufacturer	Type-approval number	Serial number

It is hereby certified that the radar navigation equipment and rate-of-turn indicators of this vessel meet the requirements of Directive 2006/87/EC Annex IX Part III concerning installation and performance tests of radar navigation systems and rate-of-turn indicators used on board inland waterway vessels.

Approved specialised firm/technical service/Competent authority (*)

Name:

Address:

Stamp/Seal Place Date

Signature

(*) Cross out what is not applicable.

PART V

(MODEL)

1. Register of competent authorities for type approval of radar navigation equipment and rate-of-turn indicators

Country	Name	Address	Telephone number	E-mail address
Belgium				
Bulgaria				
Denmark				
Germany				
Estonia				
Finland				
France				
Greece				
Italy				
Ireland				
Latvia				
Lithuania				
Luxembourg				
Malta				
Netherlands				
Austria				
Poland				

Country	Name	Address	Telephone number	E-mail address
Portugal				
Romania				
Sweden				
Switzerland				
Spain				
Slovakia				
Slovenia				
Czech Republic				
Hungary				
United Kingdom				
Cyprus				

If no authority is given no competent authority was specified by the relevant country.

2. Register of approved radar navigation equipment and rate-of-turn indicators

Item No	Type	Manufacturer	Holder of type-approval	Date of type-approval	Competent authority	Type-approval No

3. Register of radar navigation equipment and rate-of-turn indicators approved on the basis of equivalent type-approvals

Item No	Type	Manufacturer	Holder of type-approval	Date of type-approval	Competent authority	Type-approval No

4. Register of specialized firms approved for the installation or replacement of radar navigation equipment and rate-of-turn indicators

Belgium

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Bulgaria

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Denmark

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Germany

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Estonia

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Finland

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

France

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Greece

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Italy

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Ireland

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Latvia

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Lithuania

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Luxembourg

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Malta

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Netherlands

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Austria

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Poland

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Portugal

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Romania

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Sweden

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Switzerland

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Spain

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Slovakia

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Slovenia

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Czech Republic

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Hungary

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

United Kingdom

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

Cyprus

Item No	Name	Address	Telephone number	E-mail address

If no approved firm is specified, no approval is granted for firms in this country.

5. Register of testing establishments specified for the type testing of radar navigation equipment and rate-of-turn indicators

Item No	Name	Address	Telephone number	E-mail address	State

PART VI

Equivalent equipment

- (1) Radar navigation equipment: type approvals based on Resolution 1989-II-33 of the Central Commission for the Navigation on the Rhine of 19 May 1989 last amended by Resolution 2008-II-11 of 27 November 2008 (*)
- (2) Rate of turn indicators: type approvals based on Resolution 1989-II-34 of the Central Commission for the Navigation on the Rhine of 19 May 1989 last amended by Resolution 2008-II-11 of 27 November 2008 (*)
- (3) Radar navigation equipment and Rate of turn indicators installed and functioning conform Resolution 1989-II-35 of the Central Commission for the Navigation on the Rhine of 19 May 1989 last amended by Resolution 2008-II-11 of 27 November 2008 (*)

(*) Requirements for the installation and functioning of radar navigation equipment and rate of turn indicators for the navigation on the Rhine.*

COMMISSION DIRECTIVE 2012/49/EU

of 10 December 2012

amending Annex II to Directive 2006/87/EC of the European Parliament and of the Council laying down technical requirements for inland waterway vessels

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

HAS ADOPTED THIS DIRECTIVE:

Having regard to the Treaty on the Functioning of the European Union,

Article 1

Directive 2006/87/EC is amended in accordance with the Annex to this Directive.

Having regard to Directive 2006/87/EC of the European Parliament and of the Council of 12 December 2006 laying down technical requirements for inland waterway vessels and repealing Council Directive 82/714/EEC⁽¹⁾, and in particular the first sentence of Article 20(1) first subparagraph thereof,

Article 2

Member States which have inland waterways as referred to in Article 1(1) of Directive 2006/87/EC shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive at the latest by 1 December 2013. They shall forthwith communicate to the Commission the text of those provisions.

Whereas:

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

(1) Since the adoption of the Directive 2006/87/EC, amendments to the Rhine Vessel Inspection Regulation have been agreed pursuant to Article 22 of the Revised Convention for Rhine Navigation.

Article 3

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Union*.

(2) It should be ensured that the Community inland navigation certificate and the vessel certificate delivered in accordance with Article 22 of the Revised Convention for Rhine Navigation are issued on the basis of technical requirements which guarantee an equivalent level of safety.

Article 4

This Directive is addressed to the Member States which have inland waterways as referred to in Article 1(1) of Directive 2006/87/EC.

(3) In order to avoid distortions of competition as well as different levels of safety, the amendments to Directive 2006/87/EC should enter into force as quickly as possible.

(4) Directive 2006/87/EC should therefore be amended accordingly.

Done at Brussels, 10 December 2012.

(5) The measures provided for in this Directive are in accordance with the opinion of the Committee referred to in Article 7 of Council Directive 91/672/EEC of 16 December 1991 on the reciprocal recognition of national boatmasters' certificates for the carriage of goods and passengers by inland waterway⁽²⁾,

For the Commission

The President

José Manuel BARROSO

⁽¹⁾ OJ L 389, 30.12.2006, p. 1.

⁽²⁾ OJ L 373, 31.12.1991, p. 29.

ANNEX

Annex II to Directive 2006/87/EC is amended as follows:

(1) the list of contents is amended as follows:

(a) the following Chapter 14a is inserted:

'CHAPTER 14a

ON-BOARD SEWAGE TREATMENT PLANTS FOR PASSENGER VESSELS

Article 14a.01 — Definitions

Article 14a.02 — General provisions

Article 14a.03 — Application for type approval

Article 14a.04 — Type approval procedure

Article 14a.05 — Amendment of type approvals

Article 14a.06 — Conformity

Article 14a.07 — Acceptance of equivalent approvals

Article 14a.08 — Checking of serial numbers

Article 14a.09 — Conformity of production

Article 14a.10 — Non-conformity with the type-approved on-board sewage treatment plant type

Article 14a.11 — Random sample measurement/Special test

Article 14a.12 — Competent authorities and technical services;

(b) the following entries are added:

'Appendix VI — On-board sewage treatment plants - Supplementary provisions and certificate models

Appendix VII — On-board sewage treatment plants - Test procedure';

(2) the following Chapter 14a is inserted:

'CHAPTER 14a

ON-BOARD SEWAGE TREATMENT PLANTS ON PASSENGER VESSELS

Article 14a.01

Definitions

For the purposes of this Chapter:

1. "on-board sewage treatment plant" means a sewage treatment plant of compact design for treating the quantities of domestic waste water accruing on board;
2. "type approval" means the decision whereby the competent authority confirms that an on-board sewage treatment plant satisfies the technical requirements of this Chapter;

3. "special test" means the procedure carried in accordance with Article 14a.11 whereby the competent authority ensures that the on-board sewage treatment plant operated in a craft satisfies the requirements of this Chapter;
4. "manufacturer" means the person or body who is responsible to the competent authority for all aspects of the type approval procedure and for ensuring conformity of production. This person or body does not have to be involved in all stages of the construction of the on-board sewage treatment plant. If the on-board sewage treatment plant is converted by modifications or retrofitting after its original manufacture for use on a craft for the purposes of this Chapter, the person or body having carried out the modifications or retrofitting is considered as the manufacturer;
5. "information document" means the document set out in Appendix VI, Part II that lists the information to be supplied by an applicant;
6. "information folder" means the complete set of data, drawings, photographs or other documents supplied by the applicant to the technical service or the competent authority as prescribed in the information document;
7. "information package" means the information folder plus any test reports or other documents that the technical service or the competent authority have added to the information folder in the course of their duties;
8. "type approval certificate" means the document drawn up in accordance with Appendix VI, Part III with which the competent authority certifies the type approval;
9. "on-board sewage treatment plant parameters record" means the document drawn up in accordance with Appendix VI, Part VIII which records all parameters, including components of and adjustments to the on-board sewage treatment plant having an effect on the level of sewage treatment, including modifications thereto;
10. "manufacturer's guide to checking the components and parameters relevant to sewage treatment" means the document compiled in accordance with Article 14a.11(4) for the purpose of implementing the special test;
11. "domestic waste water" means waste water from galleys, dining rooms, washrooms and laundries and faecal water;
12. "sewage sludge" means residues accruing from operation of a sewage treatment plant on board a craft.

Article 14a.02

General provisions

1. This Chapter applies to all on-board sewage treatment plants which are installed on passenger vessels.
2. (a) On-board sewage treatment plants shall comply with the limit values set out in Table 1 during the type test.

Table 1

Limit values to be observed in operation in the outflow of the on-board sewage treatment plant (test plant) during the type test

Parameter	Concentration	Sample
Biochemical oxygen demand (BOD ₅) ISO 5815-1 and 5815-2 (2003) ⁽¹⁾	20 mg/l	24h composite sample, homogenized
	25 mg/l	Random sample, homogenized
Chemical oxygen demand (COD) ⁽²⁾ ISO 6060 (1989) ⁽¹⁾	100 mg/l	24h composite sample, homogenized
	125 mg/l	Random sample, homogenized
Total organic carbon (TOC) EN 1484 (1997) ⁽¹⁾	35 mg/l	24h composite sample, homogenized
	45 mg/l	Random sample, homogenized

⁽¹⁾ Member States may implement equivalent procedures.

⁽²⁾ Instead of the chemical oxygen demand (COD) the total organic carbon (TOC) may also be referred to for the check.

(b) During operation the control values set out in Table 2 shall be observed.

Table 2

Control values to be observed in the outflow of the on-board sewage treatment plant during operation on board passenger vessels

Parameter	Concentration	Sample
Biochemical oxygen demand (BOD ₅) ISO 5815-1 and 5815-2 (2003) ⁽¹⁾	25 mg/l	Random sample, homogenised
Chemical oxygen demand (COD) ⁽²⁾ ISO 6060 (1989) ⁽¹⁾	125 mg/l	Random sample, homogenised
	150 mg/l	Random sample
Total organic carbon (TOC) EN 1484 (1997) ⁽¹⁾	45 mg/l	Random sample, homogenised

⁽¹⁾ Member States may implement equivalent procedures.

⁽²⁾ Instead of the chemical oxygen demand (COD) the total organic carbon (TOC) may also be referred to for the check.

(c) The respective values in Tables 1 and 2 must not be exceeded in the random sample.

3. Procedures using products containing chlorine are not admissible.

It is equally inadmissible to dilute domestic waste water so as to reduce the specific load and thereby also enable disposal.

4. Adequate arrangements shall be made for storage, preservation (if necessary), and discharge of the sewage sludge. This shall also include a management plan for the sewage sludge.

5. Compliance with the limit values set out in Table 1 in paragraph 2 shall be confirmed by a type test and determined by a type approval. The type approval shall be certified in a type approval certificate. The owner or their authorized representative shall include a copy of the type approval certificate with the application for inspection in accordance with Article 2.02. A copy of the type approval certificate and the on-board sewage treatment plant parameters record shall be carried on board.

6. After the on-board sewage treatment plant has been installed on board a performance test shall be carried out by the manufacturer before scheduled service begins. The on-board sewage treatment plant shall be entered in item 52 of the vessel certificate with the following plant particulars:

(a) name;

(b) type-approval number;

(c) serial number;

(d) year of construction.

7. Any significant modification to an on-board sewage treatment plant that has an effect on the sewage treatment shall always be followed by a special test in accordance with Article 14a.11(3).

8. The competent authority may make use of a technical service in order to fulfil the tasks as described in this Chapter.

9. The on-board sewage treatment plant shall be regularly maintained in accordance with the manufacturer's instructions in order to ensure that it is in perfect working order. A maintenance log corroborating such maintenance shall be carried on board.

Article 14a.03

Application for type approval

1. An application for type approval for an on-board sewage treatment plant type shall be submitted by the manufacturer to the competent authority. An information folder in accordance with Article 14a.01(6) and the draft of an on-board sewage treatment plant parameters record in accordance with Article 14a.01(9), as well as the draft of a manufacturer's guide to checking the components and parameters relevant to sewage treatment for that on-board sewage treatment plant type in accordance with Article 14a.01(10) shall be enclosed with the application. For the type test the manufacturer shall demonstrate a prototype of the on-board sewage treatment plant.

2. If, in a particular application for type approval for an on-board sewage treatment plant type, the competent authority finds that the application submitted with regard to the presented plant prototype is not representative of the characteristics of this type of on-board sewage treatment plant as described in Appendix VI, Part II, Addendum I another, if necessary additional, prototype, to be designated by the competent authority, shall be supplied for approval in accordance with paragraph 1.

3. No application for type approval for an on-board sewage treatment plant type may be submitted to more than one competent authority. A separate application shall be submitted for each on-board sewage treatment plant type to be approved.

Article 14a.04

Type approval procedure

1. The competent authority to which the application is submitted shall issue the type approval for the on-board sewage treatment plant type which corresponds to the descriptions in the information folder and satisfies the requirements of this Chapter. The fulfilling of these requirements will be examined in accordance with Appendix VII.

2. For each on-board sewage treatment plant type that it type-approves, the competent authority shall complete all relevant parts of the type approval certificate, the model for which is to be found in Appendix VI, Part III, and shall compile or verify the contents of the index to the information package. Type approval certificates shall be numbered in accordance with the method described in Appendix VI, Part IV. The completed type approval certificate and its appendices shall be delivered to the applicant.

3. If the on-board sewage treatment plant to be approved can only fulfil its function or only has specific properties in conjunction with other components of the craft in which it is to be installed and if for this reason compliance with one or more requirements can only be checked if the on-board sewage treatment plant to be approved is operated together with other real or simulated components of the craft, the scope of the type approval for this on-board sewage treatment plant shall be limited accordingly. In such cases, all restrictions on use and all installation requirements shall be detailed in the type approval certificate for that plant type.

4. Each competent authority shall send the following documents:

(a) the list of on-board sewage treatment plant types including the details as set out in Appendix VI, Part V, for which it has issued, denied or withdrawn approval in the period in question to the other competent authorities each time this list is amended;

(b) if requested to do so by another competent authority,

(i) a copy of the type approval certificate for the on-board sewage treatment plant type, with or without information package, for each type of on-board sewage treatment plant for which it has issued, denied or withdrawn an approval, and, if applicable;

(ii) the list of the on-board sewage treatment plants which have been manufactured in accordance with the type approvals issued, as laid down in Article 14a.06(3), which contains the details in accordance with Appendix VI, Part VI.

5. Each competent authority shall once a year, or additionally when requested to do so, send the Commission a copy of the data sheet as shown in Appendix VI, Part VII on the on-board sewage treatment plant types for which an approval has been issued since the last notification.

Article 14a.05

Amendment of type approvals

1. The competent authority which issued the type approval shall make the necessary arrangements to ensure that it is informed of any change in the particulars appearing in the information package.
2. The application for amendment or extension of a type approval shall be made exclusively to the competent authority which issued the original type approval.
3. Should characteristics of the on-board sewage treatment plant as described in the information package have been modified, the competent authority shall:
 - (a) issue revised pages of the information package as necessary, marking each revised page to show clearly the nature of the change and the date of re-issue. Whenever revised pages are issued, the index to the information package which is attached to the type approval certificate shall also be updated accordingly;
 - (b) issue a revised type approval certificate (with an extension number) if any information on it (excluding its annexes) has changed or if the minimum requirements of this Chapter have changed since the original approval date. The revised approval certificate shall clearly show the reason for its modification and the date of the re-issue.

Should the competent authority which issued the type approval find that new trials or tests are justified owing to a modification made to the information package, it shall notify the manufacturer of this fact and issue the documents specified above only after new trials or tests have been successfully completed.

Article 14a.06

Conformity

1. The manufacturer shall affix to each on-board sewage treatment plant manufactured in conformity with the type approval the markings as defined in Appendix VI, Part I, including the type approval number.
2. Should the type approval contain limitations of usage in accordance with Article 14a.04(3), the manufacturer shall enclose detailed information on these limitations and all installation requirements with each unit manufactured.
3. If requested by the competent authority which issued the type approval, the manufacturer shall provide a list of the serial numbers of all on-board sewage treatment plants which have been manufactured in accordance with the requirements set out in this Chapter since the last report, or since the point at which these provisions first came into force, within 45 days after the end of each calendar year, and immediately after each additional date specified by the competent authority. The list shall set out the correlations between the serial numbers, the corresponding on-board sewage treatment plant types and the type approval numbers. Furthermore, the list shall also include particular information for those cases where the manufacturer discontinues production of a type-approved on-board sewage treatment plant type. Should the competent authority not demand the regular provision of such a list from the manufacturer, the manufacturer shall retain the data recorded for a period of at least 40 years.

Article 14a.07

Acceptance of equivalent approvals

Member States can recognize type approvals for on-board sewage treatment systems based on different standards for the use on their national waterways. These type approvals should be notified to the Commission.

Article 14a.08

Checking of serial numbers

1. The competent authority issuing a type approval shall ensure – if necessary working in conjunction with the other competent authorities – that the serial numbers of the on-board sewage treatment plants manufactured in conformity with the requirements of this Chapter are registered and checked.
2. An additional check of the serial numbers may take place in conjunction with the check on conformity of production as laid down in Article 14a.09.

3. In relation to the checking of the serial numbers, the manufacturer or their authorized representatives located in the Member States shall, if requested, promptly supply the competent authority with all necessary information relating to their direct purchasers as well as the serial numbers of those on-board sewage treatment plants which have been reported as manufactured in accordance with Article 14a.06(3).

4. Should a manufacturer be unable to comply with the requirements set out in Article 14a.06 when requested to do so by the competent authority, the approval for the on-board sewage treatment plant type concerned may be withdrawn. In such a case the notification procedure specified in Article 14a.10(4) shall be used.

Article 14a.09

Conformity of production

1. The competent authority issuing a type approval shall ascertain in advance – if necessary working in conjunction with the other competent authorities – that suitable arrangements have been made to ensure effective checking of conformity of production in respect of the requirements of Appendix VI, Part I.

2. The competent authority which has issued a type approval shall ascertain – if necessary working in conjunction with the other competent authorities – that the arrangements specified in paragraph 1 in respect of the provisions of Appendix VI, Part I continue to be sufficient and that every on-board sewage treatment plant provided with a type approval number in accordance with the requirements of this Chapter continues to correspond to the description in the type approval certificate and its annexes for the type-approved on-board sewage treatment plant type.

3. The competent authority may recognize comparable tests by other competent authorities as equivalent to the provisions of paragraphs 1 and 2.

Article 14a.10

Non-conformity with the type-approved on-board sewage treatment plant type

1. Non-conformity with the type-approved on-board sewage treatment plant type shall be deemed to exist when there are deviations from the characteristics in the type approval certificate or, as the case may be, from the information package which have not been approved in accordance with Article 14a.05(3) by the competent authority which issued the type approval.

2. Should the competent authority which has issued a type approval find that on-board sewage treatment plants do not conform with the on-board sewage treatment plant type for which it issued the approval, it shall take the necessary measures to ensure that on-board sewage treatment plants in production again conform with the type-approved on-board sewage treatment plant type. The competent authority which found the non-conformity shall notify the other competent authorities and the Commission of the measures taken, which may extend to withdrawal of the type approval.

3. If a competent authority is able to demonstrate that on-board sewage treatment plants provided with a type approval number do not conform with the type-approved on-board sewage treatment plant type, it may require the competent authority which issued the type approval to have the on-board sewage treatment plant type that is in production checked for conformity with the type-approved on-board sewage treatment plant type. Such action shall be taken within six months of the date of the request.

4. The competent authorities shall notify each other and the Commission within one month of any withdrawal of a type approval and of the reasons for such withdrawal.

Article 14a.11

Random sample measurement/Special test

1. No later than three months after the commissioning of the passenger vessel or, in the case of retrofitting of the on-board sewage treatment plant, after it has been installed and the appropriate performance test has been carried out, the competent authority shall take a random sample during operation of the passenger vessel in order to check the values set out in Article 14a.02(2), Table 2.

At irregular intervals the competent authority shall carry out functionality checks on the on-board sewage treatment plant by means of random sample measurements to check the values set out in Article 14a.02(2), Table 2.

Should the competent authority find that the values of the random sample measurements do not conform with the values set out in Article 14a.02(2), Table 2, it may demand:

- (a) that the defects in the on-board sewage treatment plant be remedied so as to ensure that it runs properly;
- (b) that the on-board sewage treatment plant be made to conform with the type approval again; or
- (c) that a special test be carried out in accordance with paragraph 3.

Once the non-conformities have been remedied and the on-board sewage treatment plant has been made to conform with the type approval again, the competent authority may carry out new random sample measurements.

If the defects are not remedied or the conformity of the on-board sewage treatment plant with the specifications of the type approval is not restored, the competent authority shall seal the on-board sewage treatment plant and inform the inspection body to make an entry to that effect in item 5.2 of the vessel certificate.

2. The random samples shall be measured in accordance with the specifications of Article 14a.02(2), Table 2.

3. Should the competent authority find any discrepancies in the on-board sewage treatment plant indicating a deviation from the type approval, the competent authority shall carry out a special test to determine the present state of the on-board sewage treatment plant in relation to the components specified in the on-board sewage treatment plant parameters record, the calibration and the setting of the parameters of the on-board sewage treatment plant.

Should the competent authority come to the conclusion that the on-board sewage treatment plant is not in conformity with the type-approved on-board sewage treatment plant type, it may take the following actions:

- (a) demand that:
 - (i) the conformity of the on-board sewage treatment plant be restored; or
 - (ii) the type approval in accordance with Article 14a.05 be amended accordingly; or
- (b) order measurement in accordance with the test specification as set out in Appendix VII.

If conformity is not restored or the type approval is not amended accordingly, or if it becomes apparent from the measurements made in accordance with point (b) that the limit values laid down in Article 14a.02(2), Table 1 are not complied with, the competent authority shall seal the on-board sewage treatment plant and inform the inspection body to make an entry to that effect in item 5.2 of the vessel certificate.

4. The tests in accordance with paragraph 3 shall be carried out on the basis of the manufacturer's guide to checking the components and parameters of the on-board sewage treatment plant relevant to sewage treatment. This guide, which shall be compiled by the manufacturer and approved by a competent authority, shall specify the treatment-relevant components as well as settings, dimensioning criteria and parameters to be applied in order to ensure that the values set out in Article 14a.02(2), Tables 1 and 2 are continuously maintained. It shall include at least the following information:

- (a) a specification of the on-board sewage treatment plant type with a process description and an indication of whether waste-water storage tanks are to be installed upstream of the on-board sewage treatment plant;
- (b) a list of the components specific to sewage treatment;
- (c) the design and dimensioning criteria, dimensioning specifications and regulations applied;
- (d) a schematic representation of the on-board sewage treatment plant with identifying features of the approved treatment-relevant components (e.g. part numbers on the components).

5. An on-board sewage treatment plant that has been shut down may be brought back into service only after a special test in accordance with paragraph 3, first subparagraph.

Article 14a.12

Competent authorities and technical services

Member States shall notify the Commission of the names and addresses of the competent authorities and technical services responsible for carrying out the functions outlined in this Chapter. The technical services shall satisfy the European standard on general requirements for the competence of testing and calibration laboratories (EN ISO/IEC 17025: 2005 - 8), taking the following conditions into account:

- (a) manufacturers of on-board sewage treatment plants cannot be recognized as technical services;
 - (b) for the purposes of this Chapter a technical service may, with the agreement of the competent authority, make use of facilities external to its own laboratory;
- (3) Article 15.14(1) is replaced by the following:

'1. Passenger vessels shall be equipped with collection tanks for domestic waste water in accordance with paragraph 2 of this Article or appropriate on-board sewage treatment plants in accordance with Chapter 14a;

- (4) in the table of Article 24.02(2) the following entries relating to Chapter 14a are inserted after the entries for Chapter 12:

	CHAPTER 14a	
'Article 14a.02(2), Tables 1 and 2 and paragraph 5	Limit/control values and type approvals	<p>NRC, as long as</p> <ul style="list-style-type: none"> (a) the limit and control values do not exceed the values according to Article 14a.02 by more than the factor 2; (b) the on-board sewage treatment plant has a manufacturer's or expert's certificate confirming that it can cope with the typical loading patterns on board the craft; and (c) a system of sewage sludge management is in place for it which is appropriate to the conditions of operating a sewage treatment plant aboard a passenger vessel;

- (5) in the table of Article 24.06(5) the following entries relating to Chapter 14a are inserted after the entries for Chapter 11:

	CHAPTER 14a		
'Article 14a.02(2), Tables 1 and 2 and paragraph 5	Limit/control values and type approvals	<p>NRC, as long as</p> <ul style="list-style-type: none"> (a) the limit and control values do not exceed the values according to Article 14a.02 by more than the factor 2; (b) the on-board sewage treatment plant has a manufacturer's or expert's certificate confirming that it can cope with the typical loading patterns on board the craft; and (c) a system of sewage sludge management is in place for it which is appropriate to the conditions of operating a sewage treatment plant aboard a passenger vessel; 	1.12.2013'

(6) in the table of Article 24a.02(2) the following entries relating to Chapter 14a are inserted after the entry for Chapter 12:

	CHAPTER 14a	
'Article 14a.02(2), Tables 1 and 2 and paragraph 5	Limit/control values and type approvals	<p>NRC, as long as</p> <p>(a) the limit and control values do not exceed the values according to Article 14a.02 by more than the factor 2;</p> <p>(b) the on-board sewage treatment plant has a manufacturer's or expert's certificate confirming that it can cope with the typical loading patterns on board the craft; and</p> <p>(c) a system of sewage sludge management is in place for it which is appropriate to the conditions of operating a sewage treatment plant aboard a passenger vessel;</p>

(7) the following appendices VI to VII are added:

'Appendix VI

On-board sewage treatment plants - Supplementary provisions and certificate models

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PART I

Supplementary provisions

1. Marking of on-board sewage treatment plants

1.1 The type-tested on-board sewage treatment plant must bear the following information (marking):

1.1.1 manufacturer's trademark or trade name;

1.1.2 on-board sewage treatment plant type and serial number of the plant;

1.1.3 number of the type approval in accordance with Part IV of this Appendix;

1.1.4 year of construction of the on-board sewage treatment plant.

1.2 The marking in accordance with point 1.1 must be durable, clearly legible and indelible throughout the working life of the on-board sewage treatment plant. If adhesive labels or plates are used, they must be affixed so as to stay on throughout the working life of the on-board sewage treatment plant and in such a way that they cannot be removed without being destroyed or rendered indecipherable.

1.3 The marking must be affixed to a part of the on-board sewage treatment plant necessary for normal operation of the on-board sewage treatment plant and not normally requiring replacement during the working life of the on-board sewage treatment plant.

1.3.1 The marking must be affixed in such a way that it is clearly visible after the on-board sewage treatment plant has been fitted with all the auxiliary equipment necessary for its operation.

1.3.2 If necessary, the on-board sewage treatment plant must bear an additional removable plate made of a durable material which must contain all the information in referred to in point 1.1 and which shall be affixed in such a way that that information is clearly legible and easily accessible after the on-board sewage treatment plant has been installed in a craft.

1.4 All parts of the on-board sewage treatment plant which may have an effect on the treatment of sewage must be clearly marked and identified.

1.5 The exact location of the marking referred to in point 1.1 shall be indicated in Section I of the type approval certificate.

2. Testing

The procedure for testing an on-board sewage treatment plant is laid down in Appendix VII.

3. Evaluation of conformity of production

3.1 With regard to the verification of the existence of satisfactory arrangements and procedures for ensuring effective control of production conformity before granting type approval, the competent authority must accept the manufacturer's registration to harmonized standard EN ISO 9001:2008 (whose scope covers the production of the on-board sewage treatment plants concerned) or an equivalent accreditation standard as satisfying the requirements. The manufacturer must provide details of the registration and undertake to inform the competent authority of any revisions to its validity or scope. Appropriate production inspections shall be carried out in order to ensure that the requirements of Article 14a.02(2) to (5) are consistently being fulfilled.

3.2 The holder of the type approval must:

3.2.1 ensure that procedures are in place for the effective control of the quality of the product;

- 3.2.2 have access to the testing equipment necessary for checking conformity with each type-approved type;
- 3.2.3 ensure that the results of the tests are recorded and that these records and the relevant documentation remain available for a period to be agreed with the competent authority;
- 3.2.4 analyze closely the results of each type of test, in order to verify and ensure the consistency of the on-board sewage treatment plant's characteristics, making allowance for normal variations in series production;
- 3.2.5 ensure that any samples from on-board sewage treatment plants or test pieces revealing apparent non-conformity in the type of test in question give rise to further sampling and testing, all necessary measures being taken to restore conformity of production.
- 3.3 The competent authority which has granted type approval may at any time verify the conformity control methods applied at each production works.
- 3.3.1 The test and production documentation shall be made available to the tester at each test.
- 3.3.2 If the quality of the tests appears unsatisfactory, the following procedure shall be applied:
- 3.3.2.1 one on-board sewage treatment plant shall be taken from the series and tested by means of random sample measurements in the normal load condition of the Appendix VII after one day operation. The treated sewage must according to the test methods in Appendix VII not exceed the values set out in Article 14a.02(2), Table 2;
- 3.3.2.2 should any on-board sewage treatment plant taken from the series fail to satisfy the requirements laid down in point 3.3.2.1 the manufacturer may ask for random sample measurements to be carried out on a number of on-board sewage treatment plants of the same specification taken from the series. This new sample must include the on-board sewage treatment plant originally taken. The manufacturer shall determine the scope n of the series in consultation with the competent authority. The on-board sewage treatment plants shall undergo testing by means of random sample measurement with the exception of the plant originally taken. The arithmetical mean (\bar{x}) of the results obtained with the random sample of the on-board sewage treatment plant must then be determined. The series production shall be regarded as conforming with requirements if the following condition is fulfilled:

$$\bar{x} + k \cdot S_t \leq L$$

where:

k is a statistical factor which is dependent on n and is given in the following table:

n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
k	0,973	0,613	0,489	0,421	0,376	0,342	0,317	0,296	0,279	0,265	0,253	0,242	0,233	0,224	0,216	0,210	0,203	0,198

$$\text{if } n \geq 20, k = \frac{0,860}{\sqrt{n}}$$

$$S_t = \sqrt{\sum_{i=1}^n \frac{(x_i - \bar{x})^2}{n-1}}, \text{ where } x_i \text{ is any individual result obtained from the random sample } n;$$

L is the admissible limit value set out in Article 14a.02(2) Table 2 for each pollutant studied;

- 3.3.3 if the values as set out in Article 14a.02(2), Table 2 are not complied with, a new test shall be carried out according to point 3.3.2.1 and, in case that tests has no positive results, in accordance with point 3.3.2.2 a full test is carried out, following the test procedure provided in Appendix VII. The limit values as set out in Article 14a.02(2), Table 1 may not be exceeded for either the composite sample or the random sample.
- 3.3.4 The competent authority must carry out the tests on on-board sewage treatment plants which are partially or fully functional according to the information supplied by the manufacturer.
- 3.3.5 The normal frequency of tests of conformity of production which the competent authority is entitled to conduct shall be one per year. In case of non-compliance with the requirements of point 3.3.2 the competent authority shall ensure that all necessary steps are taken to restore production conformity without delay.

PART II

(MODEL)

Information document No

relating to type approval of on-board sewage treatment plants intended for installation in inland waterway vessels

On-board sewage treatment plant type:

0. General

0.1 Make (manufacturer's company name):

0.2 Manufacturer's designation for the on-board sewage treatment plant type:

0.3 Manufacturer's type code corresponding to the information given on the on-board sewage treatment plant: ..

0.4 Manufacturer's name and address:

Name and address of manufacturer's authorised representative, if any:

0.5 Position, coding and method of attachment of the on-board sewage treatment plant's serial number:

0.6 Position and method of attachment of the type approval number:

0.7 Address(es) of production works:

Annexes:

1. Main characteristics of the on-board sewage treatment plant type
2. Design and dimensioning criteria, dimensioning specifications and regulations applied
3. Schematic diagram of the on-board treatment plant with parts list
4. Schematic diagram of the test plant with parts list
5. Electrical wiring diagrams (P/I diagram)

6. Statement that all specifications regarding the mechanical, electrical and technical safety of sewage treatment plants and specifications concerning ship safety have been observed
7. Characteristics of any parts of the vessel that are connected with the on-board sewage treatment plant
8. Manufacturer's guide to checking the components and parameters of the on-board sewage treatment plant relevant to sewage treatment in accordance with Article 14a.01(10)
9. Photographs of the on-board sewage treatment plant
10. Operating concepts ⁽¹⁾
- 10.1. Instructions for manual operation of the on-board sewage treatment plant
- 10.2. Notes on excess sludge management (discharge intervals)
- 10.3. Notes on maintenance and repair
- 10.4. Notes on action necessary in the case of stand-by operation of the on-board sewage treatment plant
- 10.5. Notes on action necessary in the case of emergency operation of the on-board sewage treatment plant
- 10.6. Notes on run-down, standstill and restart operation of the on-board sewage treatment plant
- 10.7. Notes on requirements for pre-treatment of galley waste water
11. Other appendices (list here)

Date, signature of on-board sewage treatment plant manufacturer

⁽¹⁾ Operating phases

The following operating phases shall be defined for testing:

- (a) Stand-by operation is when the on-board sewage treatment plant is running but has not been fed with sewage for more than a day. An on-board sewage treatment plant may be in stand-by operation when, for example, the passenger vessel is not in service for an extended period and sits idle at its mooring.
- (b) Emergency operation is when individual subassemblies of an on-board sewage treatment plant have malfunctioned, so that the sewage cannot be treated as intended.
- (c) Run-down, standstill and restart operation is when an on-board sewage treatment plant is taken out of service for an extended period (winter mooring) and the power supply is switched off, or when the on-board sewage treatment plant is started up again at the beginning of the season.

Addendum

Main characteristics of the on-board sewage treatment plant type
(MODEL)

1. **Description of the on-board sewage treatment plant**
 - 1.1 Manufacturer:
 - 1.2 Serial number of the plant:
 - 1.3 Mode of treatment: biological or mechanical/chemical (*)
 - 1.4 Upstream waste water storage tank? Yes, ... m³/No⁴
2. **Design and dimensioning criteria (including any special installation instructions or restrictions on use)**
 - 2.1
 - 2.2
3. **Dimensioning of the on-board sewage treatment plant**
 - 3.1 Maximum daily volumetric flow rate of sewage Q_d (m³/d):
 - 3.2 Daily BOD₅ pollution load (kg/d):

PART III

Type approval certificate

(MODEL)

Seal of the competent authority

Type approval No: Extension No:

Notification of issuance/extension/refusal/withdrawal⁽¹⁾ of type approval for an on-board sewage treatment plant type in accordance with Directive 2006/87/EC

Reason for extension, if applicable:

Section I

0. General

0.1 Make (manufacturer's company name):

0.2 Manufacturer's designation for the on-board sewage treatment plant type:

0.3 Manufacturer's type code corresponding to the information affixed to the on-board treatment plant:

Position:

Method of attachment:

0.4 Manufacturer's name and address:

Name and address of manufacturer's authorized representative, if any:

0.5 Position, coding and method of attachment of the serial number of the on-board sewage treatment plant: ...

0.6 Position and method of attachment of the type approval number:

0.7 Address(es) of production works:

Section II

1. Any restrictions on use:

⁽¹⁾ Specify as appropriate.

1.1 Particularities to be observed when installing the on-board sewage treatment plant in a craft:

1.1.1

1.1.2

2. Technical service responsible for carrying out the tests ⁽¹⁾

3. Date of test report:

4. Number of test report:

5. The undersigned hereby certifies the accuracy of the manufacturer information in the annexed information document for the above mentioned on-board sewage treatment plant in accordance with Annex VII of Directive 2006/87/EC and the validity of the annexed test results in relation to the on-board sewage treatment plant type. The sample(s) has (have) been selected by the manufacturer with the agreement of the competent authority and submitted by the manufacturer as the design type of the on-board sewage treatment plant:

The type approval is issued/extended/refused/withdrawn ⁽²⁾:

Place:

Date:

Signature:

Appendices:

Information folder

Test results (see Annex 1)

⁽¹⁾ In case tests are made by the competent authority mark "not relevant".

⁽²⁾ Specify as appropriate.

Addendum

Test results for type approval

(MODEL)

0. General

0.1 Make (manufacturer's company name):

0.2 Manufacturer's designation for the on-board sewage treatment plant type:

1. Information on the implementation of the test(s) ⁽¹⁾.

1.1 Inflow values

1.1.1 Daily volumetric flow rate of sewage Qd (m³/d):

1.1.2 Daily BOD₅ pollution load (kg/d):

1.2 Purification efficiency

1.2.1 Evaluation of outflow values

Evaluation of outflow values BOD₅ (mg/l)

Location:	Sample type	Number of tests that meet the limit-values	Min	Max		Mean
				Value	Phase	
Inflow	24h composite samples	— ⁽¹⁾				
Outflow	24h composite samples					
Inflow	Random samples	—				
Outflow	Random samples					

⁽¹⁾ No limit values exist for the inflow.

Evaluation of outflow values COD (mg/l)

Location:	Sample type	Number of tests that meet the limit-values	Min	Max		Mean
				Value	Phase	
Inflow	24h composite samples	—				
Outflow	24h composite samples					
Inflow	Random samples	—				
Outflow	Random samples					

Evaluation of outflow values TOC (mg/l)

Location:	Sample type	Number of tests that meet the limit-values	Min	Max		Mean
				Value	Phase	
Inflow	24h composite samples	—				

⁽¹⁾ In case of more test cycles indicate for each cycle.

Location:	Sample type	Number of tests that meet the limit-values	Min	Max		Mean
				Value	Phase	
Outflow	24h composite samples					
Inflow	Random samples	—				
Outflow	Random samples					

Evaluation of outflow values SRF (mg/l)

Location:	Sample type	Number of tests that meet the limit-values	Min	Max		Mean
				Value	Phase	
Inflow	24h composite samples	—				
Outflow	24h composite samples					
Inflow	Random samples	—				
Outflow	Random samples					

1.2.2 Purification efficiency (elimination efficiency) (%)

Parameter	Sample type	Min	Max	Mean
BOD ₅	24h composite samples			
BOD ₅	Random samples			
COD	24h composite samples			
COD	Random samples			
TOC	24h composite samples			
TOC	Random samples			
SRF	24h composite samples			
SRF	Random samples			

1.3 Further parameters measured

1.3.1 Additional inflow and outflow parameters:

Parameter	Inflow	Outflow
pH		
Conductivity		
Temperature of liquid phases		

1.3.2 The following operating parameters are — when available — to be recorded during sampling:

Concentration of dissolved oxygen in the bioreactor

Dry matter content in the bioreactor

Temperature in the bioreactor

Ambient temperature

1.3.3 Further operating parameters according to the manufacturer's operating instructions

.....

.....

.....

.....

1.4 Competent authority or technical service:

Place, date: Signature:

PART IV

Type-approvals numbering system

1. System

The number shall consist of four sections separated by the “*” character.

Section 1

The small letter “e” followed by the distinguishing number of the State issuing the type-approval:

1 for Germany	18 for Denmark
2 for France	19 for Romania
3 for Italy	20 for Poland
4 for the Netherlands	21 for Portugal
5 for Sweden	23 for Greece
6 for Belgium	24 for Ireland
7 for Hungary	26 for Slovenia
8 for the Czech Republic	27 for Slovakia
9 for Spain	29 for Estonia
11 for the United Kingdom	32 for Latvia
12 for Austria	34 for Bulgaria
13 for Luxembourg	36 for Lithuania
14 for Switzerland	49 for Cyprus
17 for Finland	50 for Malta

Section 2

The indication of the requirement level. The requirements regarding purification efficiency are likely to be stepped up in the future. The different requirement levels are denoted by Roman numerals, starting at level I.

Section 3

A four-digit sequential number (with leading zeroes as applicable) to denote the base type-approval number. The sequence shall start from 0001.

Section 4

A two-digit sequential number (with leading zero if applicable) to denote the extension. The sequence shall start from 01 for each number.

2. Examples

(a) Third type-approval (with as yet no extension) issued by the Netherlands corresponding to level I:

e 4*1*0003*00

(b) Second extension to the fourth type-approval issued by Germany corresponding to level II:

e 1*II* 0004*02

PART V
Summary of type approvals for on-board sewage treatment plant types
(MODEL)

Seal of the competent authority

List No.

Period from to

1	2	3	4	5	6	7
Make ⁽¹⁾	Manufacturer's designation	Type approval number	Date of type approval	Extension/refusal/ withdrawal ⁽²⁾	Reason for extension/refusal/ withdrawal	Date of extension/refusal/ withdrawal ⁽²⁾

⁽¹⁾ Relevant type-approval certificate.
⁽²⁾ Specify as appropriate.

PART VI

(MODEL)

Summary of on-board sewage treatment plants manufactured

Seal of the competent authority

List No:

For the period from: to:

The following information is supplied relating to on-board sewage treatment plant types and type approval numbers of on-board sewage treatment plants manufactured within the above period in accordance with the provisions of Directive 2006/87/EC:

Make (manufacturer's company name):

Manufacturer's designation for the on-board sewage treatment plant type:

Type approval number:

Date of issue:

Date of first issue (in the case of extensions):

Serial number of the on-board sewage treatment plant:

... 001	... 001	... 001
... 002	... 002	... 002
-	-	-
-	-	-
-	-	-
... m	... p	... q

PART VII
Data sheet for on-board sewage treatment plants with type approval
(MODEL)

Seal of the competent authority															
					On-board sewage treatment plant characteristics				Purification efficiency						
No	Date of type approval	Type approval number	Make	On-board sewage treatment plant type	Daily vol. flow rate of sewage Q ₃ (m ³ /d)	Daily BOD ₅ pollution load (kg/d)				BOD ₅		COD		TOC	
										24 h composite sample	Random-sample	24 h composite sample	Random-sample	24 h composite sample	Random-sample

PART VIII

On-board sewage treatment plant parameters record for special test

(MODEL)

1. General

1.1 Particulars of the on-board sewage treatment plant

1.1.1 Make:

1.1.2 Manufacturer's designation:

1.1.3 Type approval number:

1.1.4 Serial number of the on-board sewage treatment plant:

1.2 Documentation

The on-board sewage treatment plant shall be tested and the test results recorded on separate sheets which shall be individually numbered, signed by the inspector and attached to this record.

1.3 Testing

Testing shall be carried out on the basis of the manufacturer's guide to checking the components and parameters of the on-board treatment plant relevant to sewage treatment in accordance with Article 14a.01(10). In justified individual cases inspectors may at their own discretion dispense with checking certain plant components or parameters.

During the test at least one random sample shall be taken. The results of the random sample measurement shall be compared with the control values set out in Article 14a.02(2), Table 2.

1.4 This test report, together with the attached records, comprises a total of⁽¹⁾..... pages.

2. Parameters

This is to certify that the on-board sewage treatment plant tested does not diverge to an inadmissible extent from the parameters and control values for operation specified in Article 14a.02(2), Table 2 are not exceeded.

Name and address of inspection body:

Name of inspector:

Place and date:

Signature:

Test recognised by competent authority:

Place and date:

Signature:

Seal of the competent authority

⁽¹⁾ To include by tester.

Name and address of inspection body:

.....

Name of inspector:

Place and date:

Signature:

Test recognized by competent authority:

.....

Place and date:

Signature:

Seal of the competent authority

Name and address of inspection body:

.....

Name of inspector:

Place and date:

Signature:

Test recognized by competent authority:

.....

Place and date:

Signature:

Seal of the competent authority

Addendum

Appendix to the on-board sewage treatment plant parameters record
(MODEL)

Name of vessel: Unique European Vessel Identification Number:

Manufacturer: Plant type:

(Make/trademark/manufacturer's trade name)

(Manufacturer's designation)

Type approval No: Year of construction of on-board sewage treatment plant:

Serial number of on-board sewage treatment plant: Site of installation:

(Serial number)

The on-board sewage treatment plant and its treatment-relevant components were identified from the data plate. The test was carried out on the basis of the manufacturer's guide to checking the plant components and parameters relevant to sewage treatment.

(A) Component testing

Additional treatment-relevant components which are listed in the manufacturer's guide to checking the plant components and parameters relevant to sewage treatment or Part II Annex 4 are to be entered here.

Component	Identified component number	Conformity (1)		
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> n/a

(1) Specify as appropriate.

(B) Results of random sample measurement:

Parameter	Value obtained	Conformity (1)	
BOD ₅		<input type="checkbox"/> Yes	<input type="checkbox"/> No
COD		<input type="checkbox"/> Yes	<input type="checkbox"/> No
TOC		<input type="checkbox"/> Yes	<input type="checkbox"/> No

(1) Place a cross in the appropriate box.

(C) Comments:

.....

(The following deviating settings, modifications or alterations to the installed on-board sewage treatment plant were found.)

.....

.....

.....

.....

.....

.....

Name of inspector:

Place and date:

Signature:

PART IX

Equivalent type-approvals

Type approvals in Resolution 2010-II-27 of the Central Commission for the Navigation on the Rhine of 9 December 2010

Appendix VII

On-board sewage treatment plant

Test procedure

1 GENERAL

1.1 Basics

The test specification shall be used to verify the suitability of on-board sewage treatment plants on passenger vessels.

In this procedure, the process and treatment technology used shall be examined and approved by means of a test plant. Conformity of the test plant with the treatment plants in service later is assured by applying identical design and dimensioning criteria.

1.2 Responsibility and test location

The test plant for a range of on-board sewage treatment plant types shall be tested by a technical service. The test conditions at the test site are the responsibility of the technical service and must correspond to the conditions specified here.

1.3 Documents to be submitted

The test shall be carried out on the basis of the information document in accordance with Appendix VI, Part II.

1.4 Plant dimensioning specifications

The on-board sewage treatment plants shall be dimensioned and designed such that the limit values specified in Article 14a.02(2), Tables 1 and 2 in their outflow are not exceeded in the course of their operation.

2 MEASURES PREPARATORY TO TESTING

2.1 General

Prior to commencement of the test the manufacturer shall supply the technical service with structural and process specifications of the test plant, to include a complete set of drawings and supporting calculations in accordance with Appendix VI, Part II, and shall provide full information on the on-board sewage treatment plant's requirements in terms of installation, operation and maintenance. The manufacturer shall supply the technical service with information on the mechanical, electrical and technical safety of the on-board sewage treatment plant to be tested.

2.2 Installation and putting into service

For the purpose of the test, the manufacturer shall install the test plant in such a way as to correspond to the intended installation conditions on board passenger vessels. Prior to testing the manufacturer must assemble the on-board sewage treatment plant and put it into service. Start-up must be in accordance with the manufacturer's operating instructions and shall be checked by the technical service.

2.3 Run-in phase

The manufacturer shall notify the technical service of the nominal duration of the run-in phase up to normal operation in weeks. The manufacturer shall specify the point where the run-in phase is deemed to be complete and testing may commence.

2.4 Inflow characteristics

Domestic raw sewage shall be used for testing the test plant. The inflow characteristics as regards pollutant concentrations shall be obtained from the on-board sewage treatment plant manufacturer's dimensioning documentation in accordance with Appendix VI, Part II by forming the quotient for the flow rate of organic substances in the form of a BOD5 load in kg/d and the design flow rate of sewage Qd in m³/d. The inflow characteristics shall be set accordingly by the inspection body.

Formula 1

Calculation of the inflow characteristics

$$C_{BOD_5, \text{mean}} = \frac{BOD_5}{Q_d} \left[\frac{\text{kg BOD}_5 / \text{d}}{\text{m}^3 / \text{d}} \right]$$

Should application of formula 1 result in a lower average BOD_5 concentration of less than $C_{BOD_5, \text{mean}} = 500 \text{ mg/l}$, at least a mean BOD_5 concentration in the inflow water of $C_{BOD_5, \text{min}} = 500 \text{ mg/l}$ shall be set.

The technical service must not break up the inflowing raw sewage in a comminatory. Removal of sand (e.g. by screening out) is permissible.

3. TEST PROCEDURE

3.1 Loading phases and hydraulic feeding

The test period shall comprise 30 test days. The test plant shall be fed on the test field with domestic waste water in accordance with the loading specified in Table 1. Various loading phases shall be covered, with the test sequence taking account of normal loading phases and special loading phases such as overload, underload and stand-by operation. The duration of each loading phase (number of test days) is set out in Table 1. The mean daily hydraulic load for each loading phase shall be set in accordance with Table 1. The mean pollutant concentration, to be set in accordance with point 2.4, shall be kept constant.

Table 1

Load settings for each loading phase

Phase	Number of test days	Daily hydraulic load	Pollutant concentration
Normal load	20 days	Q_d	C_{BOD_5} in accordance with 2.4
Overload	3 days	$1,25 Q_d$	C_{BOD_5} in accordance with 2.4
Underload	3 days	$0,5 Q_d$	C_{BOD_5} in accordance with 2.4
Stand-by	4 days	Day 1 and day 2: $Q_d = 0$ Day 3 and day 4: Q_d	C_{BOD_5} in accordance with 2.4

The special load phases overload, underload and stand-by operation shall be carried out consecutively without interruption; the normal load phase shall be divided into several part phases. The test shall start and end with a normal load phase, of at least five days' duration in each case.

Daily hydraulic feeding hydrographs shall be set, depending on the specified operation of the on-board sewage treatment plant. The daily hydraulic feeding hydrograph shall be selected in accordance with the plant operation concept for the on-board sewage treatment plant. A distinction shall be made according to whether the on-board treatment plant is to be operated with or without an upstream sewage storage tank. The feeding hydrographs (daily hydrographs) are shown in Figure 1 and Figure 2.

Throughout the entire test period the hourly inflow must remain constant. The mean hourly volumetric flow rate of sewage $Q_{h, \text{mean}}$ is equivalent to $1/24$ of the daily hydraulic load according to Table 1. The inflow shall be measured continuously by the technical service. The daily hydrograph must keep within a $\pm 5\%$ tolerance.

Figure 1

Daily hydrograph for feeding of on-board sewage treatment plant with upstream sewage storage tank

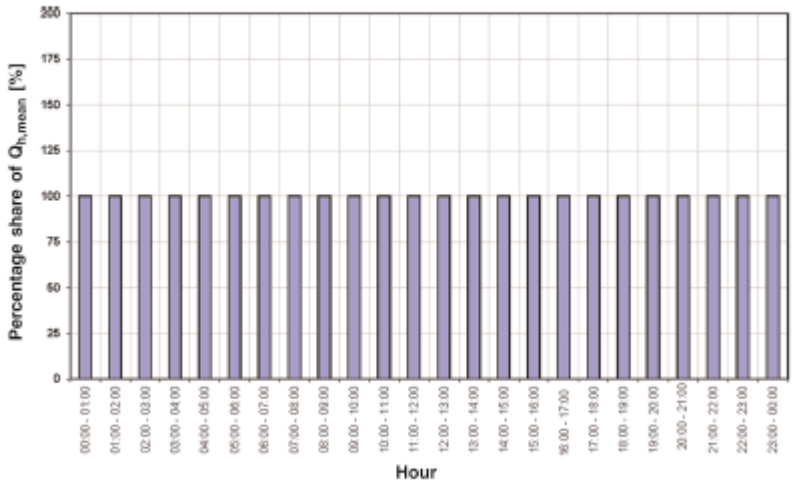
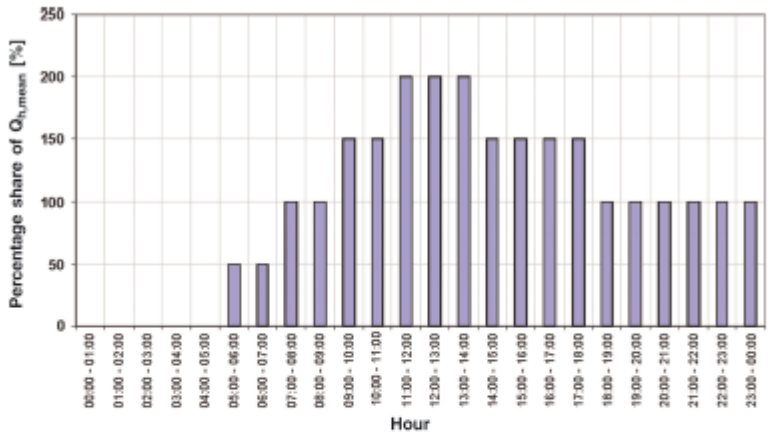


Figure 2

Daily hydrograph for feeding of on-board sewage treatment plant without upstream sewage storage tank



3.2 Interruption or cancellation of the test

It may be necessary to interrupt the test if the test plant can no longer be operated properly due to power failure or the malfunction of a subassembly. The test may be interrupted for the duration of the repair. In such cases it is not necessary to repeat the whole of the test, only the loading phase in which the subassembly malfunction took place.

After the test is interrupted for a second time, the technical service shall decide whether the test may be continued or must be cancelled. The grounds for the decision must be stated and documented in the test report. Should the test be cancelled it must be repeated in full.

3.3 Examinations of purification efficiency and compliance with outflow limit values

The technical service shall take samples from the inflow to the test plant and analyze them in order to confirm conformity with the inflow characteristics. Sewage samples shall be taken from the outflow of the test plant and analyzed to determine the purification efficiency and compliance with the required outflow limit values. Sampling carried out shall include both simple random samples and 24h composite samples. In the case of the 24h composite samples, either time-proportional or flow-proportional sampling may be carried out. The type of 24h composite sample shall be specified by the inspection body. Sampling in the inflow and outflow shall be carried out simultaneously and to the same degree.

In addition to the control parameters BOD₅, COD and TOC the following parameters for inflow and outflow shall be measured in order to describe and represent the environmental and test conditions:

- (a) solids removable by filtration (SRF);
- (b) pH;
- (c) conductivity;
- (d) temperature of liquid phases.

The number of examinations varies according to the relevant loading phase and is set out in Table 2. The number of samplings relates to the inflow or outflow of the test plant.

Table 2

Specification of the number and timing of samplings in the inflow and outflow of the test plant

Loading phase	Number of test days	Number of samplings	Specification of timing of samplings
Normal load	20 days	24h composite samples: 8 Random samples: 8	Sampling at regular intervals throughout the period
Overload	3 days	24h composite samples: 2 Random samples: 2	Sampling at regular intervals throughout the period
Underload	3 days	24h composite samples: 2 Random samples: 2	Sampling at regular intervals throughout the period
Stand-by	4 days	24h composite samples: 2 Random samples: 2	24h composite sample: Sampling after inflow switched on and 24h later. Random sample: 1 hour after inflow switched on and 24h later.

Total number of 24h composite samples: 14

Total number of random samples: 14

Where applicable, the following operating parameters shall also be measured from the random samples taken:

- (a) concentration of dissolved oxygen in the bioreactor;
- (b) dry matter content in the bioreactor;
- (c) temperature in the bioreactor;
- (d) ambient temperature;
- (e) other operating parameters in accordance with the manufacturer's operating instructions.

3.4 Evaluation of examinations

In order to document the determined purification efficiency and to check adherence to process limit values, the minimum sample value (Min), the maximum sample value (Max) and the arithmetical mean (Mean) shall be specified as well as the individual measurement results for control parameters BOD₅, COD and TOC.

The loading phase shall also be given for the maximum sample value. Evaluations shall be carried out for all loading phases jointly. The results shall be processed as shown in the following table:

Table 3a

Specification for the statistical processing of data gathered — evaluation to document compliance with outflow limit values

Parameter	Sampling type	Number of test that meet the limit values	Mean	Min	Max	
					Value	Phase
Inflow BOD ₅	24h composite samples	— (1)				
Outflow BOD ₅	24h composite samples					
Inflow BOD ₅	random samples	—				
Outflow BOD ₅	random samples					
Inflow COD	24h composite samples	—				
Outflow COD	24h composite samples					
Inflow COD	random samples	—				
Outflow COD	random samples					
Inflow TOC	24h composite samples	—				
Outflow TOC	24h composite samples					
Inflow TOC	random samples	—				
Outflow TOC	random samples					
Inflow SRF	24h composite samples	—				
Outflow SRF	24h composite samples					
Inflow SRF	random samples	—				
Outflow SRF	random samples					

(1) No limit values exist for the inflow.

Table 3b

Specification for the statistical processing of data gathered — evaluation to document purification efficiency

Parameter	Sampling type	Mean	Min	Max
Elimination efficiency BOD ₅	24h composite samples			
Elimination efficiency BOD ₅	Random samples			
Elimination efficiency COD	24h composite samples			
Elimination efficiency COD	Random samples			
Elimination efficiency TOC	24h composite samples			
Elimination efficiency TOC	Random samples			
Elimination efficiency SRF	24h composite samples			
Elimination efficiency SRF	Random samples			

The remaining parameters in accordance with 3.3(b) to (d) and the operating parameters in accordance with 3.3 shall be summarized in a table specifying the minimum sample result (Min), the maximum sample result (Max) and the arithmetical mean (Mean).

3.5 Compliance with the requirements of Chapter 14a

The limit values in accordance with Article 14a.02(2) Tables 1 and 2 shall be deemed to be upheld, when each value for the parameters COD, BOD₅ and TOC:

- (a) the mean values of the total of 14 outflow samples; and
- (b) at least 10 of the total of 14 outflow samples do not exceed the specified limit values for 24h composite samples and random samples.

3.6 Operation and maintenance during testing

Throughout the testing the test plant shall be operated in accordance with the manufacturer's specifications. Routine checks and maintenance work shall be carried out in compliance with the manufacturer's operation and maintenance instructions. The excess sludge generated by the biological purification process may only be removed from the on-board sewage treatment plant if this is specified by the manufacturer in their operation and maintenance instructions. All maintenance work carried out shall be recorded by the technical service and documented in the test report. During the test no unauthorized persons may have access to the test plant.

3.7 Sample analysis/analysis method

The parameters to be studied shall be analyzed using approved standard procedures. The standard procedure applied shall be specified.

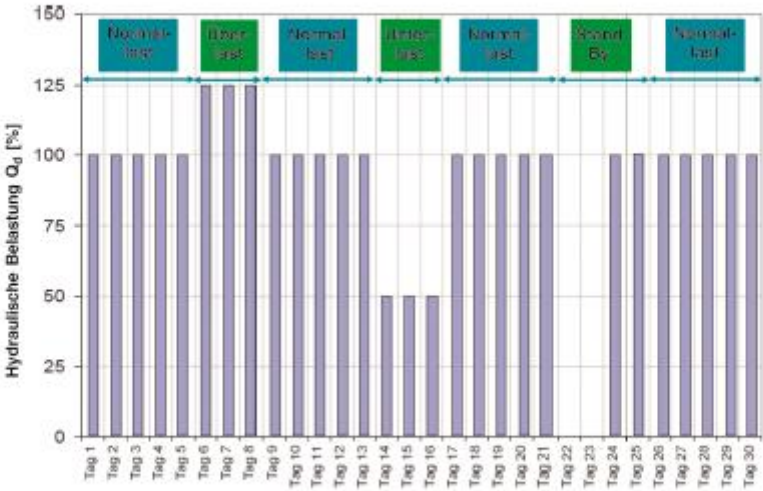
4 TEST REPORT

4.1 The inspection body is required to compile a report on the type test carried out. The report shall include at least the following information:

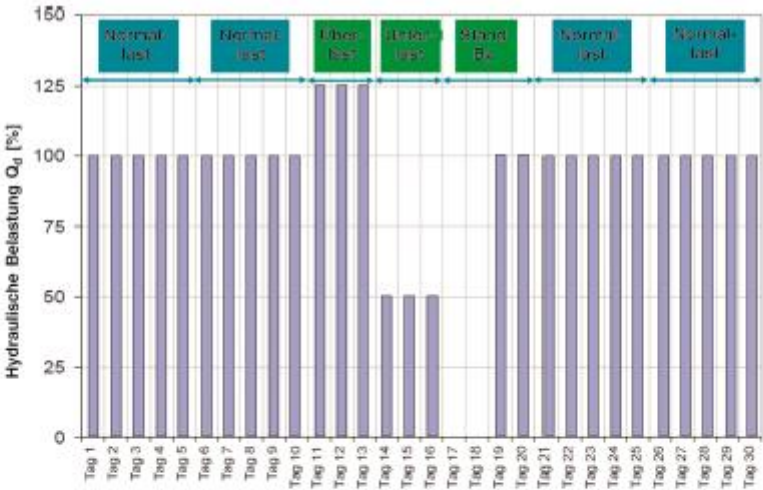
- (a) details on the plant tested, such as its type, information on the nominal daily pollutant load and the dimensioning principles applied by the manufacturer;
- (b) information on the conformity of the on-board sewage treatment plant tested with the documentation provided before the testing;
- (c) information on individual measurement results, as well as on the evaluation of the plant's purification efficiency and compliance with the required outflow limit values;
- (d) details on the removal of excess sludge, such as the size of the volumes removed and the frequency of removal;
- (e) information on all operation, maintenance and repair work carried out during testing;
- (f) information on any deterioration in the quality of the on-board sewage treatment plant occurring during testing as well as any interruptions of testing;
- (g) information on any problems arising during testing;
- (h) a list of responsible persons involved in the type testing of the on-board sewage treatment plant, giving their names and job titles;
- (i) name and address of the laboratory which carried out the analysis of the waste water samples;
- (j) analysis methods applied.

Examples of test sequences

Example 1



Example 2



DE	EN
Normallast	Normal load
Überlast	Overload
Unterlast	Underload
Stand By	Stand-by
Hydraulische Belastung Q _d	Hydraulic load Q _d
Tag	Day

Notes on determining biochemical oxygen demand after five days (BOD₅) in 24h composite samples

The International Standards ISO 5815 and 5815-2: 2003 stipulate that in order to carry out the analysis to determine biochemical oxygen demand after five days water samples should be stored immediately after sampling and up to the time of analysis in a brim-full, tightly sealed bottle at a temperature of 0–4 °C. The process of determining BOD₅ should be initiated as soon as possible or at least within twenty-four hours of completion of sampling.

In order to prevent biochemical degradation processes starting in the 24h composite sample, in practice the water sample is cooled to a maximum of 4 °C while sampling continues, and is stored at this temperature once the sampling process is complete.

Suitable sampling equipment is commercially available.'
