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Standardization of technical and safety requirements in inland navigation:

Prevention of pollution of inland waterways by vessels (resolution No. 21, revision 2)

Recommendations on organization of the collection of waste from vessels operating on the Danube

Transmitted by the Danube Commission

Mandate

1. This document is submitted in line with the Proposed Programme Budget for 2022, part V, Regional cooperation for development, section 20, Economic Development in Europe, Programme 17, Economic Development in Europe ([A/76/6](#) (Sect.20), para. 20.76).
2. At its sixty-first session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation took note of the adoption of the revised Recommendations on the organization of the collection of waste from vessels operating on the Danube at the ninety-seventh session of the Danube Commission on 15 June 2022 and noted that it would be desirable to publish this document as a working document for SC.3 for future reference. The text of the Recommendations transmitted by the secretariat of the Commission is attached as an annex to this document. With the adoption of these Recommendations, the Recommendations on the organization of collection of waste from ships navigating on the Danube, adopted in 2011 at the seventy-sixth session of the Commission, will cease to have effect.



Annex

Recommendations on the organization of the collection of waste from vessels operating on the Danube

Adopted by decision of the of the Danube Commission at its ninety-seventh session on 15 June 2022 (document CD/SES 97/16)

1. General provisions

Scope of the Recommendations:

1.1 The present Recommendations shall be applied in the navigable sections of the Danube and port waters of the Danube, without prejudice to the special provisions prescribed under national law by the competent authorities (Administrations) for those sections and ports and required by local conditions.

1.2 The German section of the Danube is covered by the Convention on the Collection, Deposit and Reception of Waste Produced during Navigation on the Rhine and Inland Waterways (CDNI-1996).

1.3 The Recommendations concern all competent authorities involved in matters of navigation on the Danube, Danube port authorities, boatmasters and other persons directly or indirectly involved in navigation on the Danube.

1.4 The Recommendations are to be implemented by all vessels, including boats using the Danube temporarily.

For seagoing vessels and river-sea vessels, these recommendations shall be deemed to be carried out if the relevant provisions of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended (MARPOL 73/78), are complied with.

1.5 Newly-built vessels and vessels undergoing conversion or modernization, whose construction or repair will begin after these Recommendations come into force, are to be equipped, in accordance with the provisions of these Recommendations, with containers and the means for the storage of waste on board for the purpose of its collection and subsequent deposit at reception facilities.

Vessels in service shall be subject to the requirements of these Recommendations, with the exception of paragraph 2.30.

1.6 The Recommendations contain control measures and means of international cooperation to ensure the collection of waste from vessels operating on the Danube.

1.7 The Recommendations are proposed for transposition into the national legislation of the Danube Commission member States.

1.8 The following terms are used in the Recommendations:

(1) “*Waste generated on board*”: matter or objects defined in subparagraphs (2), (3), (4), (13) below and which the holder disposes of or has the intention or obligation to dispose of.

(2) “*Waste generated from the operation of the vessel*”: waste and wastewater generated on board as a result of the operation and maintenance of the vessel; this includes oily and greasy waste and other waste generated from the operation of the vessel.

(3) “*Oily and greasy waste generated from the operation of the vessel*”: used oil, bilge water and other oily and greasy waste such as used grease, used (air or oil) filters, used rags (contaminated fabrics and cotton wool), containers (empty contaminated packagings) and packagings for such waste.

- (4) “*Bilge water*”: oily water from the engine room bilges, peaks, cofferdams, double-hull spaces or side compartments.
- (5) “*Other wastes generated from the operation of the vessel*”: domestic wastewater, domestic refuse, cleansing slurry, slops and other special waste.
- (6) “*Cargo-related waste*”: waste and wastewater generated on board the vessel deriving from the cargo; this does not include residual cargo and handling residues as defined in subparagraphs (14) and (17) below.
- (7) “*Vessel*”: inland waterway vessel, including small craft and ferries, as well as floating equipment and seagoing vessels.
- (8) “*Passenger vessel*”: a day-trip or cabin vessel constructed and equipped to carry more than 12 passengers.
- (9) “*Seagoing vessel*”: a vessel permitted to undertake maritime or coastal navigation and usually principally for such navigation.
- (10) “*Reception station*”: a vessel or a shore facility approved by the competent authorities for receiving waste generated on board.
- (11) “*Boatmaster*”: the person under whose authority the vessel is placed and who has the necessary qualifications for this purpose. Boatmasters are considered to possess the necessary qualifications if they hold a valid boatmaster’s certificate.
- (12) “*Bunkering station*”: an installation or vessel for the supply of liquid products for the operation of vessels.
- (13) “*Used oil*”: used oil or other non-reusable grease from engines, gears and hydraulic equipment.
- (14) “*Residual cargo*”: liquid cargo remaining in the cargo tanks or cargo piping after unloading without the use of a stripping system in accordance with ADN* and dry cargo remaining in the holds after unloading before manual or mechanical sweepers or suction facilities are used.
- (15) “*Cargo residues*”: liquid cargo that cannot be discharged from cargo tanks or piping with the use of a stripping system in accordance with ADN and dry cargo that cannot be removed from the hold by the use of manual or mechanical sweepers or suction facilities.
- (16) “*Stripping system (cargo system for tanks)*”: system for draining and stripping the cargo tanks and piping as completely as possible, except for the cargo residues that cannot be removed with the use of a stripping system.
- (17) “*Handling residues*”: cargo that falls on the vessel outside the hold in the course of handling.
- (18) “*Swept hold*”: hold cleared of residual cargo by cleaning methods such as brooms or mechanical sweepers, but without the use of suction or washing apparatus and containing only cargo residues.
- (19) “*Stripped cargo tank*”: cargo tank from which residual cargo has been removed using a stripping system and containing only cargo residues.
- (20) “*Vacuum cleaned hold*”: hold from which residual cargo has been removed using suction equipment and containing considerably fewer cargo residues than a swept hold.
- (21) “*Unloading of residual cargo*”: removal of residual cargo from the holds and from the cargo tanks and piping using suitable means (e.g. brooms, mechanical sweepers, suction equipment, stripping system) making it possible to meet one of the following standards of unloading:

* *Note by the secretariat*: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

- (a) “Swept hold” or “cleaned hold”;
 - (b) “Stripped tank”;
 - (c) Removal of handling residues and packagings and stowage materials.
- (22) “*Washing*”: removal of cargo residues from the swept or vacuumed hold or the stripped cargo tank using steam or water.
- (23) “*Washed hold or tank*”: hold or tank that following washing is suitable for any category of cargo.
- (24) “*Wash water*”: water from the washing of holds or cargo tanks. It also includes ballast water or rainwater from these holds or cargo tanks.
- (25) “*Domestic wastewater*”: wastewater from kitchens, dining rooms, showers and laundries, and water containing faecal matter.
- (26) “*Domestic refuse*”: organic and inorganic waste from domestic and food waste, excluding waste generated from the operation of the vessel.
- (27) “*Cleansing slurry*”: residue produced on board the vessel by the operation of an on-board sewage plant.
- (28) “*Slops*”: cargo residues mixed with leftover water from swabbing, rust and sludge, which may or may not be suitable for pumping.
- (29) “*Other special waste*”: waste generated from the operation of the vessel other than oily and greasy waste, domestic wastewater, domestic refuse, cleansing slurry and slops.
- (30) “*River-sea vessel*”: a vessel that, according to its technical specifications, is suitable and duly approved for operation for navigation purposes in maritime areas and on inland waterways.
- (31) “*Charterer*”: the person with which, on whose behalf or for whose benefit a contract of carriage of goods has been concluded with the carrier or other party, by which, on whose behalf or for whose benefit it has actually been delivered to the consignee in accordance with the contract of carriage.
- (32) “*Carrier*”: the person responsible for the carriage of goods directly or through third parties.
- (33) “*Consignee*”: the person mentioned in the transport document that is to receive the goods or containers.
- (34) “*Vessel operator*”: a natural or legal person responsible for the day-to-day tasks related to the operation of a vessel or, failing that, the owner of the vessel.
- (35) “*Exclusive transport operations*”: transport operations during which the same cargo or another cargo, the carriage of which does not require the prior cleaning of holds or cargo tanks, is continuously carried in the vessel’s hold or cargo tank, according to the documents.
- (36) “*Compatible transport operations*”: transport operations during which cargo, the carriage of which does not require the prior cleaning of holds or cargo tanks, according to the documents, is successively carried in the vessel’s hold or cargo tanks.
- (37) “*Cabin vessels*”: passenger vessels with cabins for the overnight accommodation of passengers.
- (38) “*Used grease*”: used grease collected from run off from greasers, bearings and greasing facilities and other non-reusable grease.

2. Provisions for the collection of waste from vessels operating on the Danube

2.1 It is forbidden to throw, discharge or allow to fall or flow into the Danube any objects or substances likely to cause an obstruction or danger to navigation or to pollute the water.

2.2 The Danube Commission member States shall establish or have established a sufficiently extensive network of reception stations on the Danube for the collection of waste from vessels in accordance with these Recommendations. They shall ensure that reception stations fulfill the obligation to collect waste from vessels in accordance with national regulations.

2.3 Boatmasters and other persons referred to in these Recommendations shall comply with the local regulations established by the competent authorities (Administrations) on the collection of waste from vessels for the relevant sections of the Danube and port waters.

2.4 Boatmasters are required to notify the nearest competent authorities (Administrations) of any accidental discharge of hazardous substances as soon as possible, using the means available at the time of the incident, with an entry in the vessel's logbook.

The report on the discharge of harmful substances must contain the following information:

- (a) The type, name or designation, home port or place of registry and official identification number of the vessel (see article 2.01 of DFND**) from which the report is received;
- (b) Site of pollution;
- (c) Name of the vessel from which the discharge occurred;
- (d) Nature of pollution (slick, stripes, spots);
- (e) Concentration of pollution on the water surface;
- (f) State of pollution (solid, liquid, gaseous);
- (g) Size of the polluted area.

The boatmaster may, at his or her discretion, supplement each report with any other information relating to the incident.

2.5 The boatmaster is responsible for compliance with these Recommendations. The owner or the person entitled to dispose of the vessel shall ensure and duly monitor compliance with these Recommendations.

2.6 With regard to issues related to the collection of waste from vessels operating on the Danube from a health, veterinary and phytosanitary point of view, the Rules for the Sanitary Supervision on the Danube and the Rules for the Veterinary and Phytosanitary Supervision on the Danube must be followed.

Part A

Waste from the operation of ships containing oily and greasy waste

2.7 It is prohibited to throw or discharge from vessels into the Danube oily or greasy waste generated from the operation of the vessel.

The above prohibition does not apply to discharge of separated water by separator vessels and vessels that are certified by the competent authorities and where the maximum content of residual oil in the separated water, without preliminary dilution, complies with the national regulations but is at least below 5 mg/l.

** *Note by the secretariat:* Basic rules of navigation on the Danube.

2.8 The vessel must be capable of collecting and storing bilge water generated from its operation. The engine-room bilge is considered to be intended for storage for this purpose.

It is necessary to dispose of bilge water in certified reception stations.

2.9 For the collection of used oil, there must be one or more special containers in the engine room with a minimum capacity of 1.5 times the quantity of the used oil.

The inspection body may grant exceptions to the requirements of this paragraph for vessels that are used only for short distances.

2.10 Every vessel with an engine room or engine compartment, except small craft, is required by article 10.06 of DFND to have a used-oil log on board (annex 1). Every deposit of oily and greasy waste on a vessel must be entered in the log. Following its renewal, the previous log must be kept on board for at least six months after the last entry made.

2.11 Oil and greasy waste from the operation of the vessel must be deposited, with written proof, at reception stations at specified intervals depending on the condition and nature of the operation of the vessel. The proof shall consist of an entry made in the used-oil log by the reception station.

2.12 The organization of waste collection and handling on board shall comply with certain provisions of the Basic Rules of Navigation on the Danube (DFND).

2.13 The use of collection tanks and systems for the evacuation, collection and deposit of oily waste from operations for other purposes is not permitted on board vessels.

2.14 Closing devices of systems for the direct discharge of oily waste from the operation of vessels shall be designed so that they can be sealed in the closed position. If the operating position of the valve can be changed not only by a hand lever on site, but also by remote control, the sealing shall be carried out in two places: directly at the hand lever on site and at the location of the remote control.

Sealing of the closing device may only be carried out by competent persons who have been designated by the person in charge on board.

The requirements do not apply to vessels that do not have their own means of evacuating oily waste generated from the operation of vessels.

Sealing of closing devices must be recorded in the log for sealing of closing devices and in the logbook.

Entries in the logbook must contain the following information:

- (a) Date and time of sealing;
- (b) Location of the vessel at the time of sealing;
- (c) Operating position of the device (open/closed);
- (d) Distinguishing mark of the seal;
- (e) Position and name of the person responsible for the sealing.

2.15 For sea-going vessels and river-sea vessels operating on the Danube, the locking of closing devices sealed in the closed position shall be considered equivalent to sealing the closing devices of the bilge water collection system through which such water can be discharged from the vessel. An oil discharge monitoring and control system in accordance with MARPOL 73/78 shall be considered to be equivalent to the locking of closing devices sealed in the closed position. The presence of an oil discharge monitoring and control system must be confirmed by an International Oil Pollution Prevention Certificate in accordance with MARPOL 73/78.

2.16 The competent authorities may check the accuracy of the entries in the used-oil log and make copies of them.

Part B

Waste from cargo tanks

2.17 The Danube Commission member States shall establish or have established the infrastructural and other conditions for depositing and receiving residual cargo, handling residues, cargo residues and wash water.

2.18 The present Part B shall not apply to the loading and unloading of river-sea vessels and seagoing vessels:

(a) In seaports in navigable waters that are maritime in nature;

(b) In inland ports that are subject to European Directive 2019/883/EC (EU member States have decided to bring into force by 28 June 2021 the legal and administrative provisions that are required to comply with this directive).

2.19 It is prohibited to throw or discharge parts of cargo or waste from cargo holds from vessels into the waterway. This prohibition does not apply to wash water containing cargo residues if the discharge to the waterway for this cargo is specifically permitted under annex 2 and the provisions of that annex have been complied with.

2.20 In the event of spillage of substances for which annex 2 provides that they must be deposited for special processing, or if there is a threat of such spillage, the boatmaster shall immediately notify the nearest competent authority, indicating as accurately as possible the location of the incident and the quantity and type of substance.

2.21 Unloading certificate

2.21.1 Every vessel unloaded in a member State that has implemented these Recommendations shall carry a valid certificate of unloading, which shall be issued in accordance with the model in annex 3.

The certificate must be kept on board for at least six months after it has been issued. For vessels without a crew, the unloading certificate may be kept by the carrier in a place other than on board.

2.21.2 During discharge of residual cargo and deposit and reception of waste from cargo holds, the unloading standards and the requirements on deposit and reception in annex 2 shall apply.

2.21.3 After loading, the vessel may not continue its journey until the boatmaster has ensured that the handling residues have been removed.

2.21.4 The vessel may not continue its journey after unloading until the boatmaster has confirmed in the unloading certificate that the cargo residues and the handling residues have been taken care of.

2.21.5 Paragraph 2.21.4 shall not apply to vessels engaged in exclusive transport operations.

2.21.6 When the cargo holds or tanks are washed and the washing water may not be discharged into the Danube, in accordance with the unloading standards and the requirements on deposit and reception contained annex 2, the vessel may not continue its journey until the boatmaster has confirmed in the unloading certificate that the washing water has been deposited or assigned a reception station.

2.21.7 Paragraphs 2.21.1 and 2.21.4 does not apply to vessels that by their type and design are suitable for, and are used for:

- (a) Transporting containers;
- (b) Transporting mobile cargo (Ro-Ro), break bulk and heavy cargo and large equipment;
- (c) Supplying fuels, drinking water and shipboard supplies to seagoing and river vessels (supply vessels);
- (d) Collecting oily and greasy waste from seagoing and river vessels;

- (e) Transporting liquefied gases (ADN type G);
- (f) Transporting liquid sulphur (at 180 °C), cement powder, fly ash and comparable loads that are carried as bulk material or as pumpable cargo, employing an appropriate and dedicated system for loading, unloading and storing the cargo onboard;
- (g) Transporting sand, gravel or dredged material from the dredging location to the place of unloading if the vessel in question has been built and equipped solely for such transport, where the vessel in question has also really transported only the aforementioned loads or cargoes and did so as its last cargo. This provision shall not apply to the carriage of mixed cargo using such vessels.

2.22 Paragraphs 2.21.1 and 2.21.4 also shall not apply to cases where unloading is carried out on a seagoing vessel. The boatmaster shall confirm such unloading by means of appropriate documents and present them at the request of the supervisory authorities. In the unloading certificate referred to in paragraph 2.21, the consignee of the cargo shall attest to the unloading of the cargo, the unloading of the residual cargo, and, to the extent to which it is responsible, the washing of holds or cargo tanks and the reception of waste from cargo holds or, as appropriate, the designation of a reception station.

2.23 When the carrier hands over the vessel to the charterer, a standard of unloading must have been achieved such that the cargo may be carried and delivered without suffering damage. As a general rule, this shall mean the “swept hold” or “stripped tank” unloading standard, with the vessel being free of any handling residues. A higher standard of unloading or washing may be agreed in advance.

2.24 The loading and unloading of a vessel shall include the measures necessary for discharging residual cargo and for swilling out provided for in Part B. Residual cargo shall, to the extent possible, be added to the cargo. During loading, the charterer shall ensure that the vessel is kept free of handling residues.

2.25 For dry cargo, the consignee of the cargo shall ensure that, after unloading, the hold is returned in a swept or vacuumed condition, in accordance with the unloading standards and the requirements on deposit and reception set out in annex 2. It is required to accept from the unloaded vessel the residual cargo and handling residues from the cargo operations carried out. For liquid cargo, the charterer shall ensure that, after unloading, the tank is returned in a stripped condition. Unless otherwise provided for in the contract for carriage, the boatmaster shall carry out the unloading, including discharging any remnants, using a stripping system.

TW couplings (forms MKS/VKS; MKST/VKST) for accepting cargo residues must be equipped with standard couplings with a nominal diameter of 50 mm made of stainless steel or copper-zinc alloy designed for working pressure of 0.5 MPa.¹

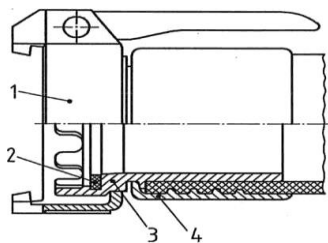


Figure 1
Hose fitting with TW coupling
(form MKS)

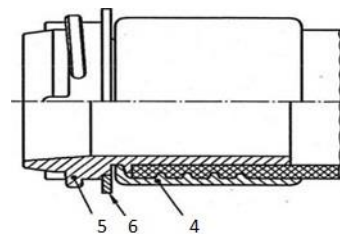


Figure 2
Hose fitting with TW coupling
(form VKS)

¹ At the receiving stations of EU member States, couplings that comply with European standard EN 14420 for reception equipment are used.

Table 1
Composition of the parts for figures 1 and 2

Part No.	Name
1	Clamping ring with levers
2	Moulded seal
3	Hose connector form MKST
4	Clamping sleeve
5	Hose connector form VKST
6	Protective ring

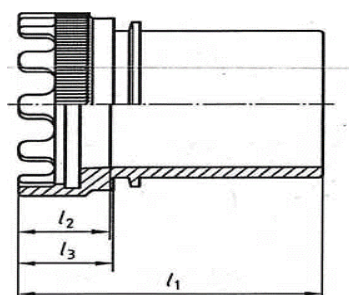


Figure 3
 Hose connector with TW coupling (form MKS)

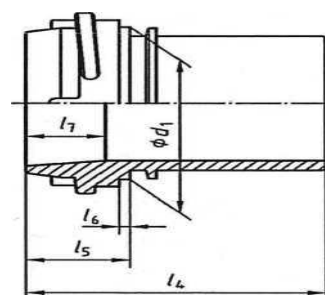


Figure 4
 Hose connector with TW coupling (form VKST)

Table 2
Hose connection MKST form (dimensions in mm)

Nominal diameter DN		For hose internal diameter	l_1 minimum	l_2 maximum	$l_3 + 1$ 0
TW connection with internal thread	Hose connection				
50	50	50	75	-	26

Table 3
Hose connection VKST form (dimensions in mm)

Nominal diameter DN			For hose internal diameter	d_1 Size limits	l_4 Min.	l_5 ± 0.5	l_6 Min.	l_7 Max.
TW connection with internal thread	Hose connection	For hose internal diameter						
50	50	50	58	-0.3	87	± 0.5	3	30

Alternatively, connections/couplings that meet higher or equivalent requirements may be used.

2.26 When the stripping system is being used on board, the counter-pressure in the piping system used by the consignee of the cargo shall, before the stripping operation commences, not exceed 3 bar.

2.27 In the case of dry cargo, the consignee, and in the case of liquid cargo, the consignor, shall ensure that the hold or cargo tank is brought into a washed condition if the vessel has carried cargo for which residual cargo is not permitted to be discharged into the Danube together with the wash water according to discharge standards and requirements on deposit and reception set out in annex 2. The requirements do not apply to the holds and cargo tanks

of vessels that are carrying out exclusive transport operations. The carrier must be able to provide documentary proof.

2.28 The construction and equipment requirements for vessels carrying dangerous goods must comply with those contained in ADN. A stowage plan shall be carried on board every vessel carrying dangerous goods in addition to other documents prescribed in ADN (see ADN, subsection 8.1.2.2 – dry cargo vessel and ADN, subsection 8.1.2.3 – tank vessels).

2.29 The boatmaster shall enter in the stowage plan when transporting cargo in bulk or in packages the dangerous goods stowed in the individual holds or on deck (see ADN, paragraph 7.1.4.11.1). The boatmaster shall enter in the stowage plan for carriage in tank vessels the dangerous goods stowed in containers, indicating their numbers (see ADN, paragraph 7.2.4.11.2).

Part C

Other waste from the operation of vessels

2.30 Vessels with a crew of 12 or more should be equipped with a system for the deposit and storage of domestic wastewater, including a collecting tank and a standard discharge connection for the deposit of domestic waste into reception facilities.

The disposal of domestic wastewater must be documented.

2.31 Vessels engaged in passenger transport shall meet the following requirements:

2.31.1 Wastewater collection tanks shall have sufficient capacity and be equipped with an indicator of the level of their contents.

There shall be on-board pumps and piping for emptying tanks by which domestic wastewater can be discharged from both sides of the vessel.

Instead of the aforementioned pumps, the pumping systems of the receiving facilities may be used.

Limit values for on-board sewage treatment plants shall comply with annex 4.

2.31.2 For cabin vessels with more than 50 sleeping berths, following an extension of the period of validity of the vessel's certificate, but no later than 31 December 2024, it shall be checked whether the requirements of section 2.31.1 are met.

2.32 A competent authority must be represented to agree on the total volume of domestic wastewater collection tanks, taking into account the passenger vessel's operating mode.

2.33 On passenger vessels that have on-board domestic wastewater treatment plants, it shall be ensured that the cleansing slurry is properly deposited.

2.34 An on-board domestic sewage treatment plant shall be equipped with a device for sampling the treated water.

2.35 The on-board domestic sewage treatment plant shall have a capacity corresponding to the calculated water consumption on board.

2.36 It is prohibited to throw or discharge domestic waste, slops, cleansing slurry or other special waste from vessels into the waterway.

2.37 The Danube States shall ensure that the Danube River has the capacity to receive domestic wastewater and household waste:

- (a) At handling facilities or in ports;
- (b) At dedicated mooring posts for passenger vessels mooring there;
- (c) At certain holding areas and locks for vessels passing through.

2.38 Household refuse shall be collected and disposed of, if possible, after it has been sorted, by waste paper, glass (coloured or clear), plastic, metal and other waste (including food waste) in accordance with annex 5.

2.39 The competent authority (Administration) may allow the use of installations (incinerators) for burning household refuse in the section of the waterway within its competence. In this case, such equipment and its components shall meet the conditions required by the competent authority (Administration).

2.40 Where the use of incinerators for burning household refuse is prohibited on certain Danube waterways, the competent authority (Administration) may impose a ban on the use of such devices by sealing them.

3. Technical requirements for equipping the infrastructure of the Danube and the ports with reception facilities

3.1 The competent authorities (Administrations) shall indicate in an appropriate format the locations of reception stations for waste from vessels, the timetable for waste-collecting vessels and any changes to this information.

3.2 Reception facilities must be equipped:

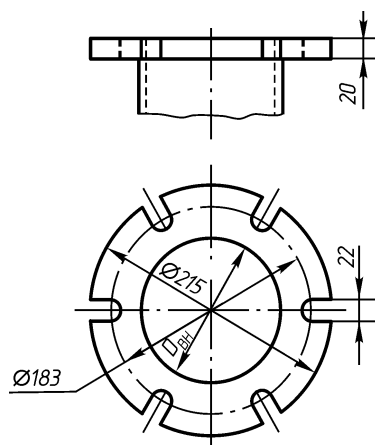
3.2.1 With a waste-collecting vessel that services sections of the Danube River, and/or

3.2.2 With a stationary floating or shore-based reception facility for receiving waste from vessels;

3.2.3 With pipe discharge connections for receiving oily and greasy wastes (fig. 5). The flange of an international standard receiving/discharge connection intended for pipes with an internal diameter of up to 125 mm must be made of steel or similar material and have a flat frontal surface.² The flange, together with a gasket made of oil-resistant material, must be designed for a working pressure of 0.6 MPa. The connection is to be made with six bolts with a diameter of 20 mm. The discharge connections shall be fitted with blank flanges.

Figure 5

International standard flange connection for oily water



If another type of standard flange is used, it must be fitted with a device that conforms to ISO 7608 for connection to the above-mentioned type of flange.

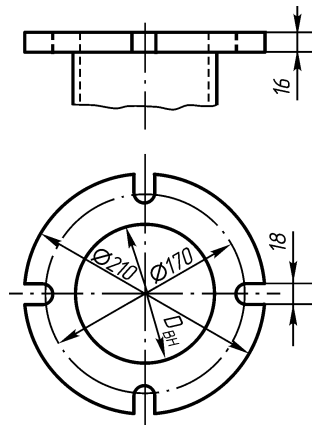
3.2.4 Connecting flanges for receiving domestic wastewater (fig. 6). The flange of an international standard receiving/discharge connection intended for pipes with an internal diameter of up to 100 mm must be made of steel or similar material and have

² In the Danube Commission member States that are members of the EU, Standard EN 1305:2018 shall apply.

a flat frontal surface.³ The flange, together with a gasket, must be designed for a working pressure of 0.6 MPa. The connection is to be made with four bolts with a diameter of 16 mm. The discharge connections shall be fitted with blank flanges.

Figure 6

International standard flange connection for domestic wastewater



3.3 The Danube States shall endeavour to have reception facilities collect waste without causing excessive vessel downtime.

3.4 The Danube Commission member States shall endeavour to introduce a uniform procedure for the collection and a procedure for the deposit of ship-borne waste to reception stations in accordance with the Recommendations.

3.5 The proper deposit of slops and cleansing slurry must be documented according to national regulations.

3.6 The individual reception stations of the Danube riparian States listed in the summary table of reception stations for the collection of waste from vessels on the Danube⁴ have no obligation to receive waste generated on board vessels from other countries on the Danube.

4. Application of the provisions for the collection of waste from vessels operating on the Danube

4.1 The competent authorities (Administrations) shall be entitled, on the sections of the Danube River under their jurisdiction, by notifying the boatmaster or the person representing the boatmaster, to go on board without hindrance at any time to monitor compliance with these Recommendations.

4.2 The competent authorities (Administrations) have rights and duties on the Danube River sections under their jurisdiction regarding the fulfilment of requirements for the collection of waste from vessels operating on the Danube.

On this basis, the competent authorities (Administrations):

4.2.1 Establish or arrange for the establishment of services to operate the reception facilities for the collection of waste from vessels;

4.2.2 Monitor within the area of the Danube under their jurisdiction:

4.2.2.1 Compliance with the requirements of these Recommendations;

³ In the Danube Commission member States that are members of the EU, Standard EN 1306:2018 shall apply.

⁴ Available on the Danube Commission website under “Danube Shipping” (Environmental Protection), www.danubecommission.org/dc/fr/.

4.2.2.2 All vessels passing through their sections in terms of collection of waste from vessels;

4.2.2.3 The holding on board vessels:

- (a) Of a used-oil log
- (b) Of the stowage plan prescribed in ADN for vessels carrying dangerous goods (ADN, subsect. 8.1.2.2, and para. 7.1.4.11.1 for dry cargo vessels; ADN subsect. 8.1.2.3 and para. 7.2.4.11.2 for tank vessels);
- (c) Of documentation for sea-going vessels and river-sea vessels in accordance with MARPOL 73/78 requirements.

5. Organization of monitoring and identification of violations of existing recommendations procedure for the application of sanctions

5.1 The competent authorities (Administrations), within the areas under their jurisdiction, have the right:

5.1.1 To check the maintenance of a log for the sealing off of closing devices of pipes through which harmful substances may be discharged;

5.1.2 Give instructions to remedy violations of the established rules for handling waste;

5.1.3 Issue orders to stop vessels that are suspected of illegally discharging waste generated from vessels, to establish the facts of the case and to draw up a report on it.

5.2 Violations of applicable regulations are established on the basis of observations and inspections by the competent authorities (Administrations).

5.3 Violations may be reported on by State and public authorities and by water quality protection organizations and private individuals. The information is to be provided to the competent authorities (Administrations) for the purpose of official establishment of the facts and imposition of appropriate sanctions.

5.4 The facts of pollution of water bodies and violations of other prohibitions and rules relating to the collection of waste may be established according to the procedure similar to that applied in cases of shipping accidents.

5.5 The competent authorities (Administrations) are recommended to record facts of pollution of the Danube in the "Pollution Report" according to internationally agreed methods.

5.6 It is recommended that the "Pollution Report" should set out the circumstances confirming the fact of pollution, the involvement of the vessel in the pollution of Danube waters and information forming the basis for calculating the damage caused to the State by this pollution.

5.7 Based on the established fact of pollution of the waters of the Danube recorded in the "Pollution Report", the competent authorities (Administrations) are to calculate the amounts of damage caused by pollution of the waters and determine the sanctions that can be applied to a crew member and the operator or owner of the vessel.

5.8 Persons suspected of illegal dumping of waste from vessels shall be prosecuted in accordance with the laws of the country where the offence was committed and recorded.

6. International cooperation for the organization of waste collection from vessels operating on the Danube

6.1 The Danube riparian States shall ensure, on the navigable sections of the Danube within their competence, the reception of waste collected on board vessels at reception stations for subsequent treatment on the shore. Reception stations shall be state of the art, have the necessary capacity and be located at a sufficient distance from each other.

6.2 The Danube riparian States shall take measures to develop infrastructure, in particular the construction of port and floating reception facilities for the reception and disposal of waste from vessels.

6.3 Danube Commission member States shall apply the principle of direct or indirect payment.

6.4 The financing of the system of collection and disposal of waste containing oil and/or grease is provided by:

6.4.1 Sales of vignettes or similar vouchers, the price of which differs, for example, depending on the type and size of the vessels, their total capacity and the intensity of use on the Danube;

6.4.2 A direct charging system;

6.4.3 Indirect charging system whereby the deposit of a certain amount of waste is free of charge and included in the port charges. Payment is made as part of the payment of port dues for vessels from all countries, regardless of whether or not they have deposited waste.

In the event that the amount of waste from vessels accepted free of charge is exceeded, direct payment must be made.

6.5 The procedures referred to in paragraph 6.4 shall be reviewed as necessary in the light of experience gained in the operation of these systems.

Annex 1

Model used-oil log***

Annex 2

Unloading standards and deposit/receipt rules for accepting the discharge of wash water with residual cargo (Cargo list)***

Annex 3

Unloading certificate***

*** *Note by the secretariat:* This is not reproduced in the present document.

Annex 4

Limit and control values for domestic wastewater treatment plants

1. On-board domestic wastewater treatment plants shall, during type approval tests, ensure compliance with the following limit values:

Table 1

Limit values for domestic wastewater from on-board wastewater treatment plants (equipment under test) to be met during type approval tests

<i>Parameters</i>	<i>Concentration</i>	<i>Sampling</i>
Biochemical oxygen demand (BOD ₅ /BOD ₅) according to ISO 5815-1:2019 and 5815-2:2003 ¹)	20 mg/l	24h composite sample, homogenized
	25 mg/l	Random sample, homogenized
Chemical Oxygen Demand (COD) ⁽²⁾ according to ISO 6060:1989 ⁽¹⁾	100 mg/l	24h composite sample, homogenized
	125 mg/l	Random sample, homogenized
Total organic carbon (TOC) EN 1484:2019 ⁽¹⁾	35 mg/l	24h composite sample, homogenized
	45 mg/l	Random sample, homogenized
Coli index (criterion of bacterial contamination of domestic wastewater)	Not more than 1,000 units per 1 litre of water	Random sample, homogenized

⁽¹⁾ Member States may use equivalent procedures.

⁽²⁾ Instead of chemical oxygen demand (COD), total organic carbon (TOC) measurements may also be used to test samples.

2. The following control values should be observed during the random sampling:

Table 2

Limit values of onboard wastewater treatment plants for domestic wastewater monitored during their operation on board inland waterway vessels

<i>Parameters</i>	<i>Concentration</i>	<i>Sampling</i>
Biochemical oxygen demand (BOD ₅ /BOD ₅) according to ISO 5815-1:2019 and 5815-2:2003 ¹)	25 mg/l	Random sample, homogenized
Chemical Oxygen Demand (COD) ⁽²⁾ according to ISO 6060:1989 ⁽¹⁾	125 mg/l	Random sample, homogenized
	150 mg/l	Random sample
Total organic carbon (TOC) EN 1484:2019 ⁽¹⁾	45 mg/l	Random sample, homogenized
Coli index (criterion of bacterial contamination of domestic wastewater)	Not more than 1,000 units per 1 litre of water	Random sample, homogenized

⁽¹⁾ Member States may use equivalent procedures.

⁽²⁾ Instead of chemical oxygen demand (COD), total organic carbon (TOC) measurements may also be used to test samples.

The appropriate values in the random sample are to be observed. The competent authorities are to take samples at irregular intervals.

3. Procedures using products containing chlorine are not admissible.
4. Likewise, the standard level of purification should only be achieved through the purification and disinfection of domestic wastewater. Obtaining purification values by dilution with water is not allowed. The installation must provide the degree of purification specified by the current regulations.
5. To ensure the safety of work associated with the maintenance and repair of the installation, a system of flushing and decontamination of the installation and the technical equipment used must be provided for.

Annex 5

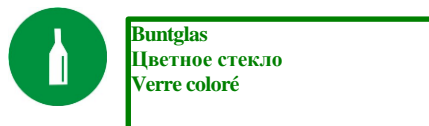
Uniform waste marking symbols

Unified symbols for types of waste:

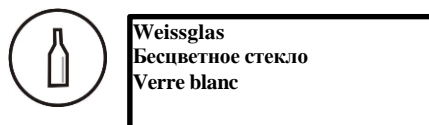
Waste paper:



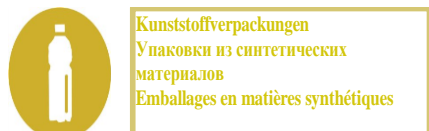
Coloured glass:



Clear glass:



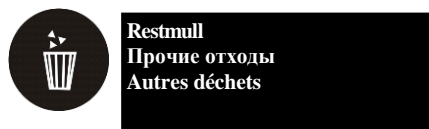
Plastics



Metal:



Other waste, including food waste:



Annex 6

Wastewater log****

**** *Note by the secretariat:* This is not reproduced in the present document; it corresponds to the proposal for a new annex 12 “Model wastewater log” to the European Code for Inland Waterways (ECE/TRANS/SC.3/WP.3/2021/3, para. 7).