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## **Economic Commission for Europe**

**Inland Transport Committee** 

**Working Party on Inland Water Transport** 

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Geneva, 4-6 October 2017 Item 6 (d) of the provisional agenda Standardization of technical and safety requirements in inland navigation: Provisions for berthed vessels and floating objects (floating hotels, floating restaurants and similar structures)

## **Provisions for berthed vessels and floating objects**

### Transmitted by the Russian Federation and Ukraine

### I. Mandate

- 1. This document is submitted in accordance with Cluster 5: Inland Waterway Transport, paragraph 5.1 of the programme of work 2016-2017 (ECE/TRANS/2016/28/Add.1) adopted by the Inland Transport Committee at its seventy-eighth session on 26 February 2016.
- 2. At its fiftieth and fifty-first sessions, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) recognized the importance of rules and regulations for berthed floating objects in the different UNECE member States. SC.3/WP.3 proposed that the item be included on the agenda of the sixty-first session of the Working Party on Inland Water Transport (ECE/TRANS/SC.3/WP.3/102, para. 41).
- 3. The present document provides information on the requirements for floating objects and berthed vessels submitted by the Russian Federation and Ukraine.

# II. Classification and surveys of floating objects in the Russian Federation

#### A. General provisions and definitions

4. Pursuant to article 3 of the Inland Water Transport Code of the Russian Federation, a floating object is a non-motorized floating structure, other than a vessel, including a jetty, a floating (on water) house, hotel, restaurant, pontoon, raft, pontoon bridge, floating landing

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stage or other similar technical structure. The concept was introduced in Federal Act No. 367-FZ of 3 July 2016.

- 5. Under article 16 of the Code, floating objects are registered by the relevant inland waterways basin administration. The record of floating objects is maintained in accordance with the rules of registration of floating objects established by the federal transport authority.
- 6. Classification and surveys of floating objects are conducted by organizations mandated by the federal transport authority responsible for the classification and surveying of vessels. The designated authorities include the Russian River Register.
- 7. The Regulations for the Classification and Surveying of Floating Objects were developed by the Russian River Register and came into force on 23 March 2017. The Regulations lay out the requirements that apply to the design, construction, modernization, retrofitting and repair of floating objects, as well as their classification and surveys during their use. The Regulations cover floating objects with hulls made of steel, aluminium alloys, reinforced plastics, reconstituted wood, reinforced concrete, steel-reinforced concrete or ferro-cement.
- 8. The following definitions are used:

Guard ship — floating object fixed to the bank and used for accommodation for crews of dredgers, diving stations, etc.;

Jetty — a floating object with or without a superstructure, used as a wharf facility, fixed permanently to the shore (usually in a river port) and designed to provide berthing for vessels; also any separate element (fixed or floating) of port (wharf) infrastructure with a loading area, set up outside the berthing (coastal) line;

Caisson dock — floating object used to expose the underwater part of the vessel or its individual underwater parts (use of caissons and partial dry-docking);

Pontoon bridge — bridge on floating bearings;

Floating house — floating object designed to be used as a house on water;

Floating jetty — floating object fixed to the shore or anchored in a harbour, with facilities for the safe approach of vessels; it is used for the safe berthing, loading, unloading and servicing of vessels and the embarkation and disembarkation of passengers;

Floating restaurant (café) — floating object designed as a catering establishment on water.

### B. Class assignation, surveys and documents

9. Floating objects are assigned to classes in accordance with their structural features and the category of the water basin in which the floating object is to be used. The categories of water basin for inland waterways correspond to the zones set out in Appendix 1 of the Annex to Resolution No. 61:

Category "M" corresponds to Zone 1;

Category "O" corresponds to Zone 2;

Category "L" corresponds to Zone 3; and

Category "R" corresponds to Zone 4.

10. Floating objects are divided into the following groups for classification:

Group I — single-hull and multi-hull objects for the temporary or permanent residence of passengers (guests), including guard ships, jetties, hotels, restaurants, cafés, floating houses, etc;

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www.rivreg.ru/assets/Uploads/pkpo.pdf.

Group II — objects used for the partial or complete lifting of vessels (floating objects) from the water;

Group III — multi-element objects on individual floating supports and rigidly connected supports (pontoon bridges);

Group IV — objects with pontoon-type hulls not covered by groups I-III.

11. The basic documents issued for floating objects are the certificate of compliance and the survey reports. Floating objects are subject to initial, regular, annual and extraordinary surveys. Surveys are scheduled taking account of the Rules on the Survey of Vessels in Service. The first regular survey of floating objects on inland waterways is conducted within 5 years of the date of construction and takes place while they are afloat if no defects or damage to the hull are detected during the inspection. Regular surveys of floating objects without a double bottom can be conducted when they are afloat until the third (after construction) regular survey, in conditions laid out by the Register.

### C. Specific requirements for floating objects<sup>2</sup>

- 12. The Regulations specify requirements in respect of the hull and its equipment, stability, subdivision and freeboard, the power plant and systems, installations and supply, electrical equipment and radio equipment. The scope of the requirements generally depends on the group to which the floating object belongs. In particular, special requirements apply to fire protection, the bilge system and the ballast system, the anchor equipment, the life-saving appliances, electrical equipment and radio equipment. In addition to the Regulations, floating objects are also subject to the requirements of the Rules for the Classification and Construction of Vessels.
- 13. Group I floating objects used as floating hotels, hostels and guard ships must have structural fire protection according to the number of persons living or present on board:
  - (a) Up to 50 persons as for passenger vessels of a length of up to 65 m;
- (b) From 50 to 200 persons as for passenger vessels of a length of 65 to  $100 \, \mathrm{m}$ ;
  - (c) More than 200 persons as for passenger vessels of a length of over 100 m.

Furthermore, the structural fire protection for group I floating objects designed for the accommodation or presence on board of more than 12 people shall comply with the requirements of the Rules for the Classification and Construction of Vessels used as passenger vessels.

- 14. The structural fire protection for floating docks shall comply with the requirements applicable to inland waterway cargo vessels.
- 15. Group I floating objects designed for the accommodation and recreation of persons must be equipped with firefighting equipment and fire extinguishers that comply with the standards for passenger vessels; those on floating objects of groups II and III must comply with the standards for other vessels. Group IV floating objects are not required to be fitted with firefighting equipment.
- 16. Floating objects are not required to carry the following equipment:
  - (a) Steering gear;
- (b) Anchor equipment (except for floating bridges), if not included in the technical specifications.
- 17. Floating objects shall be equipped with a towing or coupling (push-towing) device or elements thereof to permit them to move on the water.
- 18. Group I floating objects shall be fitted with collective life-saving appliances, lifebuoys and life jackets that comply with the standards set in the Rules for the

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<sup>&</sup>lt;sup>2</sup> This section provides only some typical specific requirements applicable to floating objects.

Classification and Construction of Vessels. Group I floating objects moored at shore and equipped with gangways are not required to have collective life-saving appliances and life jackets, other than life jackets for the watch crew, for the case, for instance, of the floating object being conveyed to a new berth.

- 19. Group I floating objects must be equipped with a grab line around the perimeter of the outer shell in the area of the waterline.
- 20. Floating docks moored to the shore which are equipped with gangways conforming to the requirements of the Rules for the Classification and Construction of Vessels are not required to have life-saving appliances, except for lifebuoys and life jackets for the watch crew.
- 21. Floating bridges are not required to be equipped with life-saving appliances other than lifebuoys. Lifebuoys shall be provided in accordance with the Regulations for the Classification and Surveying of Floating Objects.
- 22. Emergency equipment is not required on:

Group I floating objects and floating docks moored to the shore and equipped with gangways ensuring the safe evacuation of persons to shore;

Floating objects of groups III and IV.

23. Electrical equipment on floating objects of groups I, III and IV must comply with the requirements of Rules for the Classification and Construction of Vessels, as well as the requirements in respect of emergency power sources set out in the Regulations for the Classification and Surveying of Floating Objects:

Group I floating objects designed for accommodation and recreation must comply with the Regulations for Passenger Vessels;

Group III and IV floating objects must comply with the Regulations for Non-motorized Vessels Operated without Crew.

- 24. In particular, the requirements in respect of emergency power sources on floating objects include the following:
- (a) The emergency power source on group I autonomous floating objects shall be capable of functioning for at least three hours and that on non-autonomous floating objects for at least one hour;
- (b) On non-autonomous floating objects for which the main power source is onshore, the emergency source must supply power for the emergency lighting network and the navigation lights; in this case, the emergency power source shall be capable of functioning for at least one hour;
- (c) Group I autonomous floating objects must be fitted with at least two main power sources; the onboard system may additionally be supplied by an onshore source;
- (d) Floating hotels must have an autonomous emergency power source to provide power to users as stipulated in subparagraph (a) above.
- 25. The Regulations for the Classification and Surveying of Floating Objects lay out separate requirements for group II floating objects.
- 26. Floating objects moored to the bank and connected to the public fixed-line telephone network or a technological communications network linked to the public communications network are not required to have radio equipment installed as provided for in the Regulations for the Classification and Surveying of Floating Objects. In this case, the floating objects must be equipped with a portable VHF radiotelephone.

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# II. Requirements for berthed vessels in the Rules on the Classification and Construction of Inland Navigation Vessels of the Shipping Register of Ukraine

- 27. A floating structure (berthed vessel) is a non-motorized floating structure built for stationary operation afloat, e.g., floating docks, wharves, pontoons, workshops, docks, hotels and catering and recreational facilities.
- 28. Since floating structures are considered as vessels, they are subject to classification by a recognized classification society and are issued with a set of documents, including a classification certificate, a certificate of riverworthiness, a certificate of supplies and equipment and a pollution prevention certificate. Requirements for the classification, construction and inspection of berthed vessels are set out in the Rules on the Classification and Construction of Inland Navigation Vessels of the Shipping Register of Ukraine
- 29. The requirements for berthed vessels lay out the conditions in which such vessels may be operated: their location, the wind and wave conditions in the water basin, adverse weather protection, etc. A special project must be developed for the conveyance of such vessels from their permanent place of use.
- 30. The classification of berthed vessels is generally valid for 8 years. Periodic surveys are conducted every 2 years. The first docking survey of newly constructed vessels is conducted 24 years after construction; where the hull is in good technical condition, the docking survey may be replaced by a survey of the underwater part of the hull while afloat (by divers).
- 31. The special requirements for berthed vessels concern primarily devices, equipment and supplies, structural fire protection and firefighting equipment, systems and pipelines and electrical equipment.
- 32. Berthed vessels that are operated permanently at the shore are not required to have anchor equipment if they are safely attached by other means deemed sufficient according to the Register. If local navigation conditions on certain waterways make it necessary for such vessels and means to be anchored, the requirements for non-motorized vessels shall be followed.
- 33. Floating structures and berthed vessels that are operated permanently at the shore are not required to have a steering system.
- 34. Berthed passenger vessels operated at the shore must have the following life-saving appliances:
  - (a) Means for recovering persons from the water (ladder);
- (b) Two gangways connected to the shore, of not less than 1.2 m in width and placed at maximum distance from each other fore and aft; if there are more than 120 people on board, the width of each gangway (clearance) shall be increased by 0.01 m per person.
  - (c) Life jackets:
    - (i) If a berthed vessel is used for regular stays by passengers (hotels, etc.), there must be enough life jackets for the number of places and, in addition, children's life jackets equal to 10% of that number;
    - (ii) If the berthed vessel is used for daytime purposes (restaurant, office, etc.), the number of life jackets must equal 10% of the maximum number of persons allowed;
- (d) For all crew members and shipboard personnel, in the cases referred to in subparagraphs (i) and (ii) above;
  - (e) Lifebuoys for motorized vessels operating in Zone 1;
- (f) Additionally, one lifebuoy with a rescue line at each gangway to/from the shore and two lifebuoys for each open deck, one of which shall have a rescue line.

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- 35. Berthed vessels used at the shore must carry life jackets for all crew members and staff, in addition to the life jackets for passengers.
- 36. Berthed vessels operating without a permanent connection to the shore must have the same life-saving appliances as non-motorized vessels.
- 37. Berthed vessels must be equipped with a grab line of not less than 9.5 mm in diameter around the perimeter of the outer shell in the area of the waterline.
- 38. On berthed passenger vessels and berthed vessels used as offices, etc., viewing rooms and rooms equipped for multimedia shows (presentations, videos, etc.) must have direct exits onto an open deck, with one exit per 50 spectators and a minimum of two exits, located on opposite sides. Each exit shall have doors opening outwards, the doors and passageway being of a minimum width of 1.1 m and indicated by appropriate signs. The furniture in the viewing rooms must be made of fire-retardant materials and securely attached. The viewing rooms may not contain carpets or carpet strips.
- 39. Berthed vessels are not required to have:

Emergency equipment;

A magnetic compass;

A mobile Internet-capable device and Electronic Chart Display and Information System for Inland Navigation (Inland ECDIS) with Electronic Navigational Charts (Inland ENC).

40. The fire protection required on berthed vessels used as floating hotels and hostels depends on the number of people accommodated on board:

Up to 50 people — as for cargo vessels with gross tonnage of over 500;

From 50 to 200 people — as for vessels carrying a maximum of 36 passengers;

Over 200 people — as for vessels carrying more than 36 passengers.

- 41. The fire protection of floating docks, power stations, workshops and warehouses is the same as for cargo vessels with a gross tonnage of over 500.
- 42. The following equipment is permitted on board berthed vessels:
  - (a) Forced-air heating equipment (with the exception of passenger vessels);
- (b) Local stove heating except in rooms housing equipment powered by liquid fuel and/or liquefied gas or storage tanks for such fuels.
- 43. The following provisions apply to berthed vessels with water-based fire-fighting systems:
- (a) Where a berthed vessel is permanently moored to the shore, water may be supplied to the water-based fire-fighting system from a shore-based system at a delivery rate and pressure of not less than the target value for the fire pumps;
- (b) On jetties, guard ships and other berthed vessels used to accommodate up to 12 people and not fitted with an independent power source, with a crew of 3 or more, a portable motor pump unit that complies with the requirements of the Register may be used as a fire pump.
- 44. Berthed vessels equipped with power sources or receiving electricity from the shore are fitted with drainage devices as for motorized vessels with a main engine output of up to 225 kW.
- 45. On berthed vessels where the main power source is onshore, the emergency power source must supply:
  - (a) If a crew is present an emergency lighting network and navigation lights;
  - (b) In the absence of a crew navigation lights.

The emergency power source shall be capable of functioning for at least one hour.

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46. Generators and the onshore power system may be used as main sources of power for berthed vessels. In the case of autonomous berthed vessels, there must be at least two generators to serve as main power sources. The vessel's network may additionally be powered by the onshore electricity grid.

In the case of non-autonomous berthed vessels, the onshore electricity grid may be used alone.

- 47. On autonomous berthed vessels, the capacity of generators used as the main power source or the capacity received from the onshore electricity grid must be sufficient to allow operations in accordance with the assigned use of the vessel, including in the case of fire, holes in the hull or other adverse circumstances that may affect the safety of the berthed vessel during the operation of the main power source.
- 48. The power system for the important installations, lighting and signalling of floating hotels and hostels shall meet the requirements for passenger vessels.
- 49. All floating hotels and berthed vessels that have sleeping berths for passengers must have an autonomous emergency power source.

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