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Economic Commission for Europe**Inland Transport Committee****Working Party on Inland Water Transport****Sixty-first session**

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Item 6 (a) of the provisional agenda

Standardization of technical and safety requirements**in inland navigation: European Code for Inland****Waterways (CEVNI) (Resolution No. 24, revised)****Proposed amendments to the European Code for Inland
Waterways (CEVNI): provisions for vessels powered by
liquefied natural gas**

Transmitted by Austria

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 fifty-first session, the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation (SC.3/WP.3) asked the secretariat to initiate work on possible amendments to CEVNI in respect of provisions concerning vessels powered by liquefied natural gas (LNG). SC.3/WP.3 also invited Member States to submit proposals.
3. This document presents a proposal by Austria for amendments to the fifth revised edition of CEVNI, introducing provisions related to the use of LNG. The proposal is based on recent amendments to the Police Regulations for the Navigation of the Rhine, adopted by the Central Commission for the Navigation of the Rhine. Some editorial changes have been made by the secretariat. The Working Party on Inland Water Transport (SC.3) may wish to consider the proposal and submit it to the CEVNI Expert Group.



II. Proposed amendments to CEVNI, revision 5, concerning the use of LNG as fuel for vessels

A. Amendment to article 1.01

4. Part IV “Other terms”, *add* the following paragraphs:
19. The term “liquefied natural gas” (LNG)¹ means a natural gas that has been liquefied by cooling it to a temperature of - 161 °C.
20. The term “LNG system” means the various components of the vessel that may contain LNG or natural gas, such as engines, fuel tanks and bunkering piping.
21. The term “bunkering area” means the area situated within a 20 m radius of the bunkering hose connection.

B. Amendment to article 1.10

5. *Add* the following paragraphs to paragraph 1:
- (f) A certificate of unloading in accordance with article 10.08;
- (g) For vessels displaying the identification marking referred to in article 2.06, the operation manual and safety documentation;
- (h) For vessels displaying the identification marking referred to in article 2.06, expert certificates in the use of LNG as a fuel for the boatmaster and those crew members involved in bunkering operations.

C. Addition of article 2.06²

6. After article 2.05, *add* article 2.06, entitled “Identification marking for vessels powered by LNG”, *as follows*
1. Vessels powered by LNG shall display an identification marking.
2. That identification marking shall be rectangular in shape and shall bear the legend ‘LNG’ in white letters on a red background, with a white border at least 5 cm wide.
- The longest side of the rectangle shall be at least 60 cm in length. The letters shall be at least 20 cm high and their width and the thickness of their strokes must be proportional to their height.
3. The identification marking shall be fixed in an appropriate and clearly visible location.
4. The identification marking shall be lit as necessary, in order to ensure that it is clearly visible at night.

D. Amendment to article 6.28

7. After paragraph 9, *add* a new paragraph 10:
10. Vessels and convoys displaying the identification marking referred to in article 2.06 shall not be authorized to enter a lock when there are LNG emissions

¹ *Note by the secretariat:* In the present document, the words “liquefied natural gas” have been replaced by the abbreviation “LNG”.

² *Note by the secretariat:* Alternatively, insert the text in a new article 3.39.

from the LNG system or when it is probable that there will be such emissions during passage through the lock.

8. *Renumber* existing paragraphs 10-13 as paragraphs 11-14.

E. Amendment to article 7.08

9. *Amend* article 7.08 as follows:

1. An efficient watch shall be kept continuously on board of vessels lying in the fairway.

2. An efficient watch shall be kept continuously on board stationary vessels carrying the markings provided for in article 3.14. However, the competent authorities may exempt vessels berthed in harbour basins from this requirement.

3. An efficient watch shall be kept continuously on board of *[first two proposed amendments do not affect the English version]*:

(a) **Stationary vessels which bear the identification marking referred to in article 2.06, and**

(b) passenger vessels while passengers are on board.

4. **The efficient watch is provided by a crew member who:**

(a) **[for vessels referred to in paragraph 3 (a) above, holds an expert certificate in the use of LNG as a fuel,]³**

(b) **For vessels referred to in paragraph 2 above, holds the specialized knowledge certificate under the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN).⁴**

5. **There is no need to mount an efficient watch on board berthed vessels displaying the identification marking referred to in article 2.06 if:**

(a) **No LNG is used as a fuel on board the vessel;**

(b) **The operational data of the vessel's LNG system are monitored remotely; and**

(c) **The vessel is kept under surveillance by a person capable of acting quickly if the need arises.**

46. All other berthed vessels, assemblies of floating material and floating establishments shall be kept under surveillance by a person capable of acting quickly if the need arises, unless such surveillance is rendered unnecessary by local conditions or is waived by the competent authorities.

57. When the vessel has no boatmaster, the responsibility for setting up such a watch or surveillance shall lie with the operator and, in case the operator is not identifiable, with the owner.

F. Amendment to the title of Chapter 8

10. *Amend* the title of Chapter 8 as follows:

Signalling, ~~and~~ reports and safety requirements.⁵

³ *Note by Austria:* This certificate currently exists only for the Rhine, but will be introduced for all the Member States of the European Union by the new directive on personal qualifications. The present text may be retained in brackets until a decision is made by UNECE on the introduction of the certificate.

⁴ *Note by Austria:* Article 4.01 of the Police Regulations for the Navigation of the Rhine refers to ADN. A direct reference to ADN may thus be sufficient here.

⁵ *Proposal by secretariat:* Signalling, reporting and safety requirements.

G. Addition of article 8.03

11. After article 8.02, *add*:

Article 8.03 – Safety on board vessels powered by LNG

1. Prior to commencing LNG bunkering operations, the boatmaster of the bunkered vessel shall ensure that:

(a) The required firefighting equipment is ready to be deployed at any moment; and

(b) The required equipment for the evacuation of persons on board the bunkered vessel has been put in place between the vessel and the pier.

2. During LNG bunkering operations, all entrances or openings of spaces which are accessible from the deck and all openings of spaces facing the outside shall remain closed.

This provision does not apply to:

(a) Air intakes of running engines;

(b) Ventilation inlets of engine rooms while the engines are running;

(c) Air intakes of rooms fitted with an overpressure system; and

(d) Air intakes of air conditioning installations if these openings are fitted with a gas detection system.

These entrances and openings shall only be opened when necessary and for a short time, after the boatmaster has given his or her permission.

3. During LNG bunkering operations, the boatmaster shall at all times ensure compliance with the prohibition on smoking on board and in the bunkering area. The prohibition on smoking also applies to electronic cigarettes and other similar devices. This prohibition on smoking does not apply to the accommodation or the wheelhouse, provided their windows, doors, skylights and hatches are closed.

4. Once LNG bunkering operations have been completed, all the rooms accessible from the deck must be aired.

H. Addition of article 10.07 bis

12. After article 10.07, *add*:

Article 10.07 bis – Obligation to exercise vigilance during bunkering with LNG

1. The provisions of article 10.07, paragraphs 2 (b), 2 (c), 3 (a) and 3 (e) do not apply during bunkering with LNG.

2. Bunkering with LNG is not permitted when the vessel is under way, during trans-shipment of goods or during embarkation and disembarkation of passengers.

3. Bunkering with LNG may only be carried out at locations designated by the competent authority.

4. Only crew members of the bunkered vessel, bunker station staff and persons having obtained authorization from the competent authority may be present in the bunkering area.

5. Before commencing LNG bunkering operations, the boatmaster of the bunkered vessel shall ensure that:

(a) The receiving vessel is moored in such a way that the cables, in particular the electrical power cables, ground connection terminals and hoses, are not subject to tensile strain and the vessel can be released quickly in an emergency;

(b) A checklist for LNG bunkering operations for vessels displaying the identification marking referred to in article 2.06 has been completed and signed by the boatmaster or by a person mandated by him or her and by the person responsible for the bunkering station and that there is a positive response to all the questions contained therein. Irrelevant questions should be struck out. If a positive response to all the questions is not possible, bunkering is only permitted with the consent of the competent authority;

(c) All the required authorizations have been obtained.

6. The checklist referred to in paragraph 5 (b) shall be:

(a) Completed in two copies;

(b) Made available in at least one language understood by the persons referred to in paragraph 5 (b) above; and

(c) Kept on board the vessel for three months.

7. During LNG bunkering operations, the boatmaster shall constantly ensure that:

(a) All measures are taken to avoid leaks of LNG;

(b) The pressure and temperature inside the LNG fuel tank remain within normal operational limits;

(c) The degree of filling of LNG in the fuel tanks remains within the authorized limits;

(d) Measures are taken for grounding the receiving vessel and the bunker station, in line with the method provided for in the operating manual.

8. During LNG bunkering operations:

(a) In addition to the identification marking referred to in article 2.06, the receiving vessel shall display a sign that is visible to other vessels and that stipulates that it is prohibited to berth within less than 10 m of the receiving vessel, in accordance with article 3.33. The side of the sign must be at least 60 cm in length;

(b) In addition to the identification marking referred to in article 2.06, the receiving vessel shall display, in a location visible to other vessels, sign A.9 warning other vessels not to create wash (Annex 7). The longest side of the sign must be at least 60 cm in length;

(c) At night time, the signs shall be illuminated in such a way as to ensure that they are clearly visible from both sides of the vessel.

9. After LNG bunkering operations, the following steps shall be taken:

(a) The LNG bunkering hoses must be drained, right up to the LNG fuel tank;

(b) The shut-off valves must be closed and the hoses and cables connecting the vessel to the LNG bunkering station must be disconnected;

(c) The competent authority must be notified of the completion of the bunkering operation.

I. Amendment to Annex 3

13. Amend the wording of sketch 68 as follows:

Article 3.33 : Lateral berthing prohibited.

Art. 10.07 bis, para. 8 (a) Obligation to exercise vigilance during bunkering with LNG.⁶

14. Add sketch 76 as follows:

Night	Sketch	Day
	76	
Article 2.06 ⁷ : Identification marking of vessels using liquefied natural gas (LNG) as fuel		

J. Amendment to Annex 7

15. Amend the wording of sign A.9 as follows:

A.9 Do not create wash likely to cause damage

(see articles 6.20, para. 1 (e) and 10.07 bis, para. 8 (b)).

⁶ Note by secretariat: Alternatively, the following could be inserted into the text in brackets in article 3.33, paragraph 1: “for instance, vessels bunkered with LNG, because of the nature of the cargo”.

⁷ Note by the secretariat: Alternatively, reference could be made to article 3.39, as proposed by the secretariat in footnote No. 2.