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Working Party on the Transport of Dangerous Goods

Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)

Thirty-ninth session

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Item 8 of the provisional agenda

Any other business

Description of the tasks to be carried out by an informal working group on certificates and other shipboard documents in electronic form

Submitted by the Central Commission for the Navigation of the Rhine (CCNR)*, **

Introduction

1. For the thirty-eighth session of the ADN Safety Committee, the CCNR secretariat submitted, in informal document INF.9, an initial proposal for work on the dematerialization of certificates and other documents to be carried on board.
2. The ADN Safety Committee had an exchange of views on the possibility of introducing authorization under ADN for the use of electronic documents on board. The ADN Safety Committee decided to develop detailed provisions for ADN on the use of electronic documents.
3. The ADN Safety Committee decided that an informal working group should be established for this purpose. The working group would be responsible for determining, taking into account the work already carried out, which certificates and other documents are suitable for use in electronic form and under what conditions such documents could be used (format, cybersecurity, database, data protection, etc.).
4. The ADN Safety Committee invited the CCNR secretariat to prepare a proposal for the next session, on terms of reference and a road map for the informal working group.

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I. Background to the CCNR’s authorization of the use of certificates and other documents in electronic form on board vessels

5. The Ministerial declaration of 17 October 2018, “150 years of the Mannheim Act – the driving force behind dynamic Rhine and inland navigation” calls on CCNR “to press ahead with development of digitalization, automation and other modern technologies, thereby contributing to the competitiveness, safety and sustainability of inland navigation” (para. 5).
6. The development of digitalization in the Rhine navigation sector is reflected in the gradual dematerialization of certificates and other shipboard documents.
7. In inland waterway transport, the term “dematerialization” can be defined as the replacement of hard copies (certificates and other printed documents) by data sets issued electronically and presented in the same form for inspection. In practice, implementation may vary depending on whether it is the documents or the data they contain that are to be dematerialized.
8. At its spring 2020 meeting, the CCNR Working Group on Police Regulations reached the following conclusions:
 - (a) a step-by-step approach should be adopted;
 - (b) some paper versions are also falsifiable;
 - (c) by analogy with the paper document, presentation of on-board documents should initially be permitted in electronic format, with no requirement for further authentication;
 - (d) an on-board document could be presented in PDF format,¹ available at all times for consultation online and offline with no requirement for further authentication.

II. CCNR measures to allow the use of documents in electronic format on board

9. In 2021, by resolution 2021-I-10 amending the Police Regulations for the Navigation of the Rhine (RPNR),² CCNR authorized the use of electronic format on board for certain certificates and other documents (RPNR, art. 1.10 and annex 13).
10. Article 1.10 of RPNR refers to annex 13, which contains a comprehensive list of certificates and other documents that must be carried on board and specifies whether the document concerned may be carried on board in electronic format and, if so, in what format. Other regulations, such as the Rhine Vessel Inspection Regulations (RVBR), the European Standard for Technical Regulations for Inland Navigation Vessels (ES-TRIN), the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN), the Regulations concerning Navigation Personnel on the Rhine (RPN) and the Convention on the Collection, Deposit and Reception of Waste Produced during Navigation on the Rhine and Inland Waterways (CDNI), also contain requirements relating to these documents.
11. This amendment aims to establish the conditions for the issuance and presentation in electronic format of certain documents to be carried on board, although the time frame for dematerialization has yet to be determined.

¹ The acronym PDF (Portable Document Format) refers to a file format that describes print pages, created by the Adobe company. The PDF format is a digital file format that preserves the content and formatting of the original document (static or dynamic). By extension, the term PDF refers to the document encoded in this format. The PDF format is now widely used for the exchange of formatted documents. In 2008 the PDF format became the ISO 32000–1 standard.

² <https://www.ccr-zkr.org/files/documents/resolutions/ccr2021-Ifr.pdf>.

12. The amendment should enter into force on 1 June 2022. Further changes are likely to be made to reflect the gradual introduction of electronic format for boatmaster or vessel documents.

13. At its spring meeting, the CCNR Committee on Dangerous Goods concluded that ADN needs to anticipate this development and that action should therefore be taken to determine whether documents required under ADN can be authorized in electronic form and if so, under what conditions.

III. Tasks of an informal working group

A. Documents to be considered

14. At its thirty-eighth session, the ADN Safety Committee concluded that, with the exception of the transport documents required in 8.1.2.1 (b) of ADN and the copy of ADN containing the annexed regulations, in the version in force, required in 8.1.2.1 (d) of ADN, all the certificates and other documents required in 8.1.2.1, 8.1.2.2 and 8.1.2.3 of ADN were required to be available in physical form (on paper). (See also annex.)

15. The informal working group should therefore focus on the certificates and other documents mentioned in 8.1.2.1, 8.1.2.2 and 8.1.2.3.

16. Since the transport documents referred to in 8.1.2.1 (b) of ADN are already dealt with by the Joint Meeting's informal working group on telematics, it is not necessary to deal with these documents within the framework of ADN.

17. Furthermore, all certificates are excluded from the dematerialization project for the time being and must always be available on board in physical form.

18. The ADN Safety Committee invites the informal working group to submit a list of documents that could be dematerialized, taking into account the points mentioned above.

B. Data formats to be considered

19. In general, a distinction can be made between data-based and document-based approaches. For the first approach, databases will need to be developed, for the second approach, existing formats such as PDF can be used.

20. In view of the conclusions in point 8 above, the informal working group should first consider the document-based approach and determine whether it is possible to dispense with further authentication for the documents required under ADN (see also section A in this respect).

21. The ADN Safety Committee invites the informal working group to submit a proposal for a data format for dematerialization of the documents identified in section A.

C. Work of other regulatory institutions to be considered

22. The ADN Safety Committee has already identified the work of the European Union on the implementation of the European Regulation on Electronic Freight Information (eFTI) as being important to take into account.

23. The ADN Safety Committee invites the informal working group to identify other international regulations and to consider whether they might apply to the dematerialization of certificates and other documents required under ADN.

24. The ADN Safety Committee also invites the informal working group to determine to what extent the work of other regulatory institutions should be taken into account in the question of authorizing PDF format for electronic documents without additional authentication.

IV. Road map for the work of an informal working group

25. On the basis of the description of tasks (see also section IV), the ADN Safety Committee could mandate the establishment of an informal working group and appoint a chair at its thirty-ninth session (January 2022). The CCNR secretariat could provide secretariat services to the informal working group.

26. The informal working group could hold its first meeting in the spring of 2022 to review its mandate and set a timeline for its work. The chair of the informal working group could then report to the ADN Safety Committee at its fortieth session in August 2022.

27. The CCNR secretariat estimates that at least one meeting will be required for each of the tasks set forth in sections A to C.

28. The ADN Safety Committee invites the informal working group to submit to its forty-second session in August 2023 a working document containing proposals.

29. At one of its subsequent sessions the ADN Safety Committee could then adopt provisions on the dematerialization of certificates and other documents for ADN 2025.

Annex

Text of ADN 2021

8.1.2.1 In addition to the documents required by other regulations, the following documents shall be kept on board:

- (a) The vessel's certificate of approval referred to in 1.16.1.1 or the vessel's provisional certificate of approval referred to in 1.16.1.3 and the annex referred to in 1.16.1.4;
- (b) Transport documents referred to in 5.4.1 for all dangerous goods carried as cargo on board and, where necessary the large container/vehicle packing certificate (see 5.4.2);
- (c) The instructions in writing prescribed in 5.4.3;
- (d) A copy of the ADN with the latest version of its annexed Regulations which may be a copy which can be consulted by electronic means at any time;
- (e) The inspection certificate of the insulation resistance of the electrical installations and equipment prescribed in 8.1.7.1 and the certificates prescribed in 8.1.7.2 concerning the inspection of all installations, equipment and autonomous protection systems and the conformity of the documents required in 8.1.2.2 (e) to (h) and 8.1.2.3 (r) to (v) with the circumstances on board;
- (f) A certificate concerning the inspection of the fire-extinguishing hoses prescribed in 8.1.6.1 and a certificate concerning the inspection of the special equipment prescribed in 8.1.6.3;
- (g) A book in which all required measurement results are recorded;
- (h) A copy of the relevant text of the special authorizations referred to in 1.5 if the transport operation is performed under this/these special authorization(s);
- (i) Means of identification, which include a photograph, for each crew member, in accordance with 1.10.1.4; and
- (j) *(Deleted)*
- (k) For vessels which carry hose assemblies used for loading, unloading or delivering liquefied natural gas for the operation of the vessel, the inspection certificate and the documentation of the calculated maximum load stress prescribed in 8.1.6.2.

8.1.2.2 In addition to the documents prescribed in 8.1.2.1, the following documents shall be carried on board dry cargo vessels:

- (a) The stowage plan prescribed in 7.1.4.11;
- (b) The ADN specialized knowledge certificate prescribed in 8.2.1.2;
- (c) For vessels complying with the additional requirements for double-hull vessels:
 - a damage-control plan;
 - the documents concerning intact stability as well as all conditions of intact stability taken into account for the damaged stability calculation in a form the master understands;
 - the certificate of the recognized classification society (see 9.1.0.88 or 9.2.0.88);
- (d) The inspection certificates concerning the fixed fire extinguishing systems prescribed in 9.1.0.40.2.9;
- (e) A list of or a general plan indicating the fixed installations and equipment suitable for use at least in zone 1 and the installations and equipment complying with 9.1.0.51;
- (f) A list of or a general plan indicating the fixed installations and equipment which are not authorized for use during loading and unloading, during a stay near to or within an onshore assigned zone (marked in red according to 9.1.0.52.2);

- (g) A plan indicating the boundaries of the zones and the location of the electrical and non-electrical equipment installed in the relevant zones intended for use in explosion hazardous areas;
- (h) A list of the installations and equipment referred to under (g) with the following information:
 - Installation/equipment, location, marking (explosion protection level according to IEC 60079-0, equipment category according to Directive 2014/34/EU¹ or equivalent protection level, explosion group, temperature class, type of protection, test body) in case of electrical equipment for use in zone 1 (alternatively, a copy of the certificate of conformity according to Directive 2014/34/EU¹);
 - Installation/equipment, location, marking (explosion protection level according to IEC 60079-0, equipment category according to Directive 2014/34/EU¹ or equivalent protection level, including explosion group and temperature class, type of protection, identification number) in case of electrical equipment for use in zone 2 and in the case of non-electrical equipment for use in zone 1 and zone 2 (alternatively, a copy of the certificate of conformity according to Directive 2014/34/EU¹);

The documents listed in paragraphs (e) to (h) shall bear the stamp of the competent authority issuing the certificate of approval.

8.1.2.3

In addition to the documents prescribed in 8.1.2.1, the following documents shall be carried on board tank vessels:

- (a) The cargo stowage plan prescribed in 7.2.4.11.2;
- (b) The ADN specialized knowledge certificate prescribed in 8.2.1.2;
- (c) For vessels which have to conform to the conditions of damage-control (see 9.3.1.15, 9.3.2.15 or 9.3.3.15)
 - a damage-control plan;
 - the documents concerning intact stability as well as all conditions of intact stability taken into account for the damaged stability calculation in a form the master understands; the stability booklet and the proof of the loading instrument having been approved by the recognized classification society;
- (d) *(Deleted)*
- (e) The certificate of class issued by the recognized classification society prescribed in 9.3.1.8.1, 9.3.2.8.1 or 9.3.3.8.1;
- (f) The certificates concerning the inspection of the gas detection systems and the oxygen measuring system prescribed in 8.1.6.3;
- (g) The vessel substance list prescribed in 1.16.1.2.5;
- (h) The inspection certificate for the hose assemblies for loading and unloading prescribed in 8.1.6.2;
- (i) The instructions relating to the loading and unloading flows prescribed in 9.3.2.25.9 or 9.3.3.25.9;
- (j) The inspection certificate of the cargo pump-rooms prescribed in 8.1.8;
- (k) In the event of the carriage of goods having a melting point $\geq 0^{\circ}$ C, heating instructions;
- (l) *(Deleted)*
- (m) The registration document referred to in 8.1.11;
- (n) For the carriage of refrigerated substances, the instruction required in 7.2.3.28;

¹ Official Journal of the European Union No. L 96 of 29 March 2014, p. 309.

¹ Official Journal of the European Union No. L 96 of 29 March 2014, p. 309.

- (o) The certificate concerning the refrigeration system, prescribed in 9.3.1.27.10, 9.3.2.27.10 or 9.3.3.27.10;
- (p) The inspection certificates concerning the fixed fire extinguishing systems prescribed in 9.3.1.40.2.9, 9.3.2.40.2.9 or 9.3.3.40.2.9;
- (q) When carrying refrigerated liquefied gases and the temperature is not controlled in accordance with 9.3.1.24.1 (a) and 9.3.1.24.1 (c), the determination of the holding time (7.2.4.16.16, 7.2.4.16.17 and documentation on the heat transmission coefficient);
- (r) A list of or a general plan indicating the fixed installations and equipment suitable to be used at least in zone 1 and the installations and equipment complying with 9.3.1.51, 9.3.2.51 or 9.3.3.51;
- (s) A list of or a general plan indicating the fixed installations and equipment which are not authorized for use during loading and unloading, degassing or during a stay near to or within an onshore assigned zone (marked in red according to 9.3.1.52.3, 9.3.2.52.3 or 9.3.3.52.3);
- (t) A plan approved by a recognized classification society indicating the boundaries of the zones and the location of the electrical and non-electrical equipment installed in the relevant zone intended to be used in explosion hazardous areas, as well as autonomous protection systems;
- (u) A list of the installations/equipment referred to under (t) and of the autonomous protection systems, with the following information:
- Installations/equipment, location, marking (explosion protection level according to IEC 60079-0, equipment category according to Directive 2014/34/EU¹ or at least equivalent), including explosion group and temperature class, type of protection and test body, in the case of electrical equipment for use in zone 0 or zone 1 and, in the case of non-electrical equipment for use in zone 0; (alternatively, a copy of the inspection certificate, for example the declaration of conformity under Directive 2014/34/EU¹);
 - Installation/equipment, location, marking (explosion protection level according to IEC 60079-0, equipment category according to Directive 2014/34/EU¹ or equivalent protection level, including explosion group and temperature class, type of protection, identification number) in the case of electrical equipment for use in zone 2 and in the case of non-electrical equipment for use in zone 1 and zone 2 (alternatively, a copy of the inspection certificate, for example, the certificate of conformity according to Directive 2014/34/EU¹);
 - Self-protection system, place of installation, marking (explosion group/subgroup);
- (v) A list of or general plan indicating the fixed installations and equipment installed outside the explosion hazardous areas that may be used during loading, unloading, degassing, berthing or during a stay in the immediate vicinity of or within an onshore assigned zone, if not referred to in (r) and (u).
- The documents listed in (r) to (v) shall bear the stamp of the competent authority issuing the certificate of approval.
- (w) The certificates required under 3.2.3.1, Explanations concerning Table C, explanatory note for column (20), remark 12 subparagraphs (p) and (q), if appropriate;
- (x) The certificates required under 3.2.3.1, Explanations concerning Table C, explanatory note for column (20), remark 33 subparagraphs (i), (n) and (o), if appropriate.

¹ *Official Journal of the European Union No. L 96 of 29 March 2014, p. 309.*