Economic Commission for Europe

Inland Transport Committee

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)

Twentieth session
Geneva, 23–27 January 2012
Item 4 (b) of the provisional agenda

Proposals for amendments to the Regulations annexed to ADN: other proposals

Hoses and hose assemblies\(^1,2\)

Transmitted by the European Barge Union (EBU)

A. Presentation of the problem

1. For the seventeenth session of the Safety Committee (23 to 26 August 2010), the International Association of Classification Societies (IACS) submitted proposals to amend the Regulations annexed to ADN in document ECE/TRANS/WP.15/AC.2/2010/22, which primarily concerned the English language version. During the seventeenth session of the Safety Committee, the representatives of Switzerland, IACS and EBU were requested to review the terminology used – especially in the German language version.

2. In order to complete this assignment, a small working group met on 29 March 2011 in Duisburg. The results of the working session were presented to the Safety Committee at its nineteenth session from 22 to 25 August 2011 in informal document INF.6. Since new findings were made after the meeting on 29 March 2011, EBU submitted two additional amendments in document INF.22 of 11 August 2011.

\(^1\) Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR/ZKR/ADN/WP.15/AC.2/2012/6.

\(^2\) In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106, ECE/TRANS/2010/8, programme activity 02.7 (b)).
3. The topic was presented by EBU at the nineteenth session of the Safety Committee. The EBU was requested to present a working document summarizing both documents at the twentieth session of the Safety Committee.

B. Starting point

4. The working group, which met on 29 March 2011, reviewed the wording of 8.1.6.2 using the results of this review for the examination of the ADN.

5. In spring 2011, some of the standards on the testing of hoses and hose assemblies specified in the ADN were updated and renumbered. Therefore, the existing standards of the ADN must also be updated. A transitional arrangement is required for existing hose assemblies.

6. Following the discussion on 29 March 2011, EBU realised that the use of the term "hoses and hose assemblies" is inaccurate and may lead to misunderstandings.

7. The use of the term "hoses and hose assemblies" suggests that on board tankers hoses and hose assemblies are used side by side. This is not the case. Hose assemblies, which can be used for work on board are always fittings attached to hoses. On board, a hose without fittings is of no use. This is explained by the following definitions:

Definition of hoses

Hoses are flexible tubular semi-finished products of elastomers, thermoplastics or stainless steel composed of one or several coatings and liners.

Definition of hose fittings

Hose fittings are couplings and connection elements of hoses.

Definition of hose assemblies

Hose assemblies are hoses, which are integrated or welded on both sides into hose fittings; hose fittings shall be integrated so that it is only possible to loosen them with a tool.

8. It is necessary to separate the term "hoses and hose assemblies" because ADN requires "hoses and hose assemblies" to be tested. However, only the test specifications for hose assemblies apply to hose assemblies. The scope and contents of test specifications for hoses (e.g. also the testing of the bursting pressure) vary and concern the manufacturers/assemblers.

C. Amendment proposal

9. Amend 8.1.6.2 as follows:

"8.1.6.2 Hose and Hose assemblies used for loading, unloading or delivering products for the operation of the vessel and residual cargo shall comply with ….. ."

Note: EN ISO 10380:2003-10 will be re-edited soon. It is expected that EN ISO 10380:2011-03 will be issued shortly.

D. Additional proposed amendments in the German version

10. In 1.2.1, amend the definition of "Pipes for loading and unloading (cargo piping)" as follows:
"Pipes for loading and unloading (cargo piping) means all pipes which may contain liquid or gaseous cargo, including piping, hose assemblies, connected pumps, filters and closure devices"

11. In the checklist according to 8.6.3, amend sub-item 6.4 as follows:
"6.4 Are the shoreside loading arms free to move in all directions and do the hoses hose assemblies have enough room for easy movement?"

12. After the checklist according to 8.6.3, amend the explanation concerning Question 6 as follows:

**Question 6:**
A valid inspection certificate for the loading/unloading hoses hose assemblies must be available on board. The material of the hoses loading and unloading piping must be able to withstand the expected loads and be suitable for cargo transfer of the respective substances. The term cargo includes hoses as well as the shoreside loading/discharging arms. The cargo transfer hoses loading and unloading piping between vessel and shore must be placed so that they cannot be damaged by ordinary movements of the vessel during the loading and unloading process as well as by variations of the water-level passing vessels and the loading/unloading process. In addition, all flanged joints must be fitted with appropriate gaskets and sufficient bolt connections in order to exclude the possibility of leakage.

13. In the checklist according to 8.6.3, amend question10 as follows:
10. Is continuous constant and suitable supervision of loading/unloading ensured for the whole period of the operation?

14. After the checklist according to 8.6.3, amend the explanation concerning Question 10 as follows:

"**Question 10:**
Loading/unloading must be supervised on board and ashore so that dangers which may occur in the vicinity of the cargo hoses loading/unloading piping between vessel and shore can be recognised immediately. When supervision is effected …”.

15. Amend 8.1.2.3 (h) as follows:
(h) The inspection certificate for the pipes hose assemblies for loading and unloading prescribed in 8.1.6.2.

16. Amend 9.3.1.0.3 (c) as follows:
third bullet:
• Hoses for loading and unloading Hose assemblies for loading and unloading;

fourth bullet:
• Insulation of cargo tanks and of hoses for loading and unloading the piping for loading and unloading.

17. Amend 3.2.3, explanatory notes for column (20), 12 (k) as follows:
(k) **Loading pipes used for these substances** Hose assemblies for loading and unloading shall be marked as follows:

18. Amend 3.2.3, explanatory notes for column (20), 33 (f) .2 as follows:
2. The rate and estimated size of the spill on the deck shall be determined in the light of the maximum permissible loading or unloading rates, the time required to halt the spillage in the event of tank overfill or a piping/hose *assembly* failure, and the time necessary to begin the application of dilution water with actuation of the alarm at the cargo control location or in the wheelhouse.

19. Amend the third indent of 9.3.2.26.4 to read as follows:
   • "connections with shut-off devices for pipes and hose assemblies."

20. Amend 9.3.3.26.4 as follows:
   
   "in the case of an open system" amend the third indent as follows:
   • connections with stop valves for pipes and hose assemblies;

   "in the case of a protected system" amend the third indent as follows:
   • connections with stop valves, for pipes and hose assemblies;

   "in the case of a closed system" amend the third indent as follows:
   • connections with stop valves, for pipes and hose assemblies;

   "Receptacles for residual products shall be equipped with:" amend the third indent as follows:
   • connections with stop valves, for pipes and hose assemblies.

21. Amend the other language versions accordingly.

E. **Proposed amendments in the English version**

22. After the checklist according to 8.6.3, amend the explanation concerning Question 6 as follows:

   "A valid inspection certificate for the loading/unloading hose assemblies must be available on board. The material of the hose assemblies must be able to withstand the expected loads ...".

23. Amend 8.1.2.3 (h) as follows:

   "(h) The inspection certificate for the pipes hose assemblies for loading and unloading prescribed in 8.1.6.2;"

24. Amend 9.3.1.0.3 (c) as follows:

   third bullet:
   • Hose assemblies for loading and unloading;

   fourth bullet:
   • Insulation of cargo tanks and of hose piping for loading and unloading.
F. Proposed transitional measure

Add the new transitional measure in 1.6.7.2 as follows: