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**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)****Twenty-fourth session**

Geneva, 27–31 January 2014

Item 5 (b) of the provisional agenda

**Proposals for amendments to the Regulations annexed to ADN:  
Other proposals****Amendment of the provisions to be adopted for ADN 2015 regarding the transport of liquefied natural gas (LNG), UN No. 1972****Transmitted by the Government of Switzerland<sup>1,2</sup>****Introduction**

1. At its 23<sup>rd</sup> session in August 2013, the Safety Committee addressed the elaboration of regulations regarding the transport of liquefied natural gas (LNG), UN No. 1972. The documents ECE/TRANS/WP.15/AC.2/2013/27 and INF.20 served as the working basis.
2. Switzerland's representative pointed out that the existing LNG regulations from the maritime transport sector and relevant experience gained by classification societies recognised under ADN ought to be given due consideration in the development of regulations for inland navigation.

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<sup>1</sup> In accordance with the programme of work of the Inland Transport Committee for 2012-2016 (ECE/TRANS/224, para 94, ECE/TRANS/2012/12, programme activity 02.7, (A1b)).

<sup>2</sup> Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR/ZKR/ADN/WP.15/AC.2/2014/7.

## Justification

3. The very low transport temperatures of LNG place particularly high demands on the construction and operation of tank vessels. Existing regulations and standards from the maritime transport sector for the carriage of LNG in tank vessels cannot be fully included in the ADN for various reasons. It has to be ensured, however, that at least the safety level of maritime transport is observed. This is all the more important because carriage by inland navigation is performed through mostly densely populated areas.
4. The International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) is deemed to be the current state of the art. Although the IGC Code was devised and is continuously being further developed for maritime transport, many of its regulations are of great relevance to inland navigation. Therefore, the ADN provisions ought to be based on IGC regulations or supplement them with specific regulations for inland navigation. Classification societies acting under the ADN that demonstrably possess relevant experience and regulations from the maritime transport sector will have to play a key role in the process.
5. Arrangements have to be made to protect the cargo tanks against severe damage in case of collision, particularly with engineering structures such as bridges and lock components.
6. Comprehensive studies furnish evidence that the ship/shore or ship/ship transfer of LNG has to be given particular attention. Uniform connections of the piping and standardized safety devices are indispensable for the safe handling of LNG.
7. In addition, the crew of LNG tank vessels has to be specifically trained in handling LNG.

## Proposals

8. The following additional amendments are proposed:
  - 7.2.1.1 Amend to read as follows:
    - “7.2.1.1 During the carriage and handling of deeply refrigerated liquefied natural gas (LNG) the rules of the IGC Code shall apply by analogy (Note: the IGC Code references applicable for inland navigation would need to be mentioned here).
    - 7.2.1.2 – 7.2.1.20 (*Reserved*)”
  - 8.2.1.5 Insert the following new paragraph at the end:

“Furthermore, experts in the carriage of deeply refrigerated liquefied natural gas (LNG) shall take part in a specialization course, which is recognized by the competent authorities and which covers the particular hazards of LNG.”
  - 9.3.1.8.1 Insert the following new text at the beginning:

“Tank vessels shall be built under survey of a recognised classification society.

Tank vessels designed for the carriage of deeply refrigerated liquefied natural gas (LNG) shall be built under survey of a recognised classification society that adheres to special rules for the carriage of LNG according to the IGC Code (IMO Resolution xx of yyy).”
  - 9.3.1.11.2 Insert a new (e) to read as follows:
    - “(e) Cargo tanks designed for the carriage of deeply refrigerated liquefied natural gas (LNG) shall be covered in the bow area with a collision safeguard.”

9.3.1.25.2 Insert a new (h) to read as follows:

“(h) All shore connections of the piping for loading and unloading, which are used for loading or unloading, shall be fitted with a connecting flange in conformity with [the American National Standards Institute (ANSI) standard for flanges in accordance with guidelines of the Oil Companies International Marine Forum (OCIMF), 150 lbs (or EN/ISO 28460, DN 200, if appropriate)]. The connecting flanges shall be compatible with the safety quick-disconnect coupling of the piping for loading and unloading of the shore facility.”

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