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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)****Nineteenth session**

Geneva, 22-25 August 2011

Item 7 of the provisional agenda

**Special authorizations, derogations and equivalents****Use of liquefied natural gas as a fuel<sup>1 2</sup>****Transmitted by the Government of the Netherlands****I. Introduction**

1. Emissions reduction is an important subject for inland navigation. Enormous progress has been made over the last 20 years in cleaning up truck engines. Inland navigation will have to make a serious effort in the years to come to keep up, focusing on the one hand on air quality parameters such as NOx and soot, and on the other hand on CO<sub>2</sub>.

2. Liquefied natural gas (LNG) is a clean fuel that has been used in ferries and other seagoing vessels in Norway for over 10 years. The use of LNG potentially reduces emissions of NOx by 80%, soot by 100%, and CO<sub>2</sub> by 20%, compared to a diesel engine.

3. Interest in the Netherlands in using LNG as a fuel for inland navigation has been growing over the last two years. Several companies are having systems developed to be able to use LNG as a fuel. In addition, several very large shippers are interested in using LNG for their inland navigation transport.

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<sup>1</sup> Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR/ZKR/ADN/WP.15/AC.2/2011/38.

<sup>2</sup> 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)).

4. The Netherlands recognizes and fully supports these developments and believes LNG could be a break-through solution, working positively towards cleaner air, and at the same time further reducing CO<sub>2</sub> emissions in inland navigation.

## **II. Equivalents**

5. For three vessels the developments are considered ready to be put into operation. These systems have been developed for two shipyards under the supervision of Lloyds Register. The vessels concerned are:

tanker vessel “Argonon” (yard no. 07 KHO 169 of Trico Shipyard Rotterdam);

tanker vessel “Type I-Tanker” (yard no. 1401 of Peters Shipyard, Kampen);

tanker vessel “Type I-Tanker” (yard no. 1402 of Peters Shipyard, Kampen),

6. LNG, however, has a flashpoint below 55 degrees Celsius and therefore the use of LNG as a fuel for inland navigation vessels is prohibited by ADN. In order to allow these vessels to use LNG as a fuel, a recommendation for an equivalent based on 1.5.3.1 of ADN is needed.

7. Since the use of LNG is new in inland navigation, the Netherlands considers it too early at this stage to propose amendments to the Regulations annexed to ADN themselves. The Netherlands would prefer to gather experience with a number of vessels, by using these recommendations. These experiences could then be used for submitting a proposal to amend the Regulations at a later stage.

8. The annexes to this document containing the proposals for equivalents for the above mentioned vessels can be found in Informal documents INF.1, INF.2 and INF.3, accompanied by the Hazard Identification Studies carried out for each vessel by Lloyds Register.

9. At the same time recommendations for these vessels based on the Rhine Vessels Inspection Regulations are being discussed within the CCNR. Should the discussions within CCNR generate new information before the nineteenth session of the Safety Committee, delegations will be informed accordingly.

## **III. Proposal**

10. The Working Party is invited to discuss the proposals for equivalents contained in Informal document INF.1, INF.2 and INF.3 and, if an agreement is reached, forward them to the Administrative Committee for adoption at its seventh session.

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