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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)

Fourteenth session  
Geneva, 26-30 January 2009  
Item 4 of the provisional agenda

PROPOSALS FOR AMENDMENTS TO THE REGULATIONS ANNEXED TO ADN

Pump-room below deck

Transmitted by the Government of Germany<sup>1,2</sup>

1. At the 12<sup>th</sup> session of the Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways, document ECE/TRANS/WP.15/AC.2/2008/3 (proposals for amendments to the

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<sup>1</sup> Distributed in German by the Central Commission for the Navigation of the Rhine (CCNR) under the symbol CCNR/ZKR/ADN/WP.15/AC.2/2009/1.

<sup>2</sup> In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.7 (b)).

regulations annexed to ADN – Protection of the aquatic environment – Note by the Secretariat) was discussed. Paragraph 14 of this document, *inter alia*, lists the criteria for column 14 of table C for determining whether or not a pump-room is permitted below deck. It says:

Column (14) Determination of whether a pump-room is permitted below deck

No – All substances with T in column (3b) with the exception of substances of Class 2.

Yes – All other substances.

2. The wording "... with the exception of substances of Class 2" allows for two interpretations:

- (a) The pump-room below deck is permitted for all substances of Class 2, i.e. also for substances with T in the classification code;
- (b) The pump-room below deck is prohibited for all substances of Class 2, i.e. also for substances without T in the classification code.

3. The current status is as follows: table C currently contains 29 entries for substances of Class 2:

- (a) Pump-room below deck permitted: 26 substances (UN No. 1010 (3 times), 1011, 1012, 1020, 1030, 1033, 1055, 1063, 1077, 1083, 1086, 1912, 1965 (9 times) 1969, 1978 and 9000), with UN 9000 AMMONIA, ANHYDROUS, REFRIGERATED having a T in the classification code;
- (b) Pump-room below deck prohibited: 2 substances (UN Nos. 1038 and 1040), with UN 1038 ETHYLENE, REFRIGERATED LIQUID having no T in the classification code;
- (c) No data in column 14: one substance (UN 1005).

4. The question then is how the wording "... with the exception of substances of Class 2" is to be interpreted. Germany favours the second variant according to which the pump-room below deck is prohibited for all substances of Class 2, i.e. also for substances having no T in the classification code. This decision is based on the following rationale:

- (a) The provision prohibiting a pump-room below deck for substances with toxic properties (T in the classification code) is justifiable and reasonable from the point of view of safety. The aim is to protect the ship's crew from intoxication in the case of leakages. Germany is of the opinion that there is no reason why this should not also apply to substances of Class 2, that is gases, with toxic properties;
- (b) In order for liquids to create a hazardous situation (risk of intoxication or explosion) in the case of leakage, these liquids have to evaporize first. Such a hazardous situation occurs considerably faster in the case of leakage of gases. Thus, the time

span between the gas detection system triggering the alarm at 20 per cent of the lower flammable limit and reaching the flammable range may be considerably shorter than in the case of liquids with a correspondingly lower vapour pressure;

- (c) The majority of gas detection systems use catalytic combustion detectors. These detectors react to increased gas/vapour concentrations with a certain delay. Another problem is that in the case of a sharp increase of the concentration, as may be the case with leakages of gases, the catalytic combustion detector is overworked and no longer provide a useable signal.

5. In conclusion, it is to be noted that, irrespective of which interpretation is favoured as the result of the discussion by the Joint Meeting, there is a need to make amendments with regard to the entries in table C. The Government of Germany would be willing to translate the results of the discussion into a formal proposal.

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