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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)

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

Self-contained protection systems master plan

Transmitted jointly by the European Barge Union (EBU), the European River Sea Transport Union (ERSTU) and the European Skippers Organization (ESO)[1], [2]

Self-contained protection systems without markings

Introduction

1. The river police in a member State have brought to light the fact that many tank-vessels are equipped with self-contained protection systems that fail to indicate the explosion groups (or subgroups) which they cover.

2. It may thus be concluded that there is a fault in the system.

[1] Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/2016/38.

[2] In accordance with the draft programme of work of the Inland Transport Committee for 2016-2017 (ECE/TRANS/2016/28/Add.1 (9.3)).

According to the principles of ADN, when the list of substances on the vessel according to 1.16.1.2.5 is drawn up, classification societies should compare the equipment on board with the requirements for the cargo.

This connection has been established for electrical equipment in 9.3.x.51.3, with a corresponding note in the model certificate of approval (ADN 8.6.1.4, part 9) and a transitional period, but a clear requirement is lacking for self-contained protection systems.

As a result, there is uncertainty about the criteria used by classification societies when they draw up vessels' lists of substances and certificates of approval.

3. The inland navigation industry considers that ADN should establish a clear legal basis in this field as well, with construction requirements, including a transitional period and a note in the certificate of approval.

4. The results presented by the informal working group on explosion protection on tank vessels address the above concerns in general terms, but not entirely. In addition to the decisions that will be taken for the implementation of anti-explosion protection, the industry would like to see the necessary supplementary measures taken:

Proposal 1

5. The inland navigation associations call upon all ADN contracting States, through a multilateral arrangement, to allow the companies concerned to have until the next renewal of the certificate of approval after 1 January 2017 to equip their vessels with marked self-contained protection systems.

For self-contained protection systems assembled prior to 1 January 2001, it will be sufficient to keep on board the corresponding inspection certificate of the competent authority (for example, Physikalisch-Technische Bundesanstalt, PTB). (See transitional requirement under 1.2.1).

Self-contained protection systems with markings

Introduction

6. There is also a fault in the system for self-contained protection systems with markings.

Clearly, not only have classification societies faced some general uncertainty when issuing the lists of substances on vessels according to 1.16.1.2.5; they also have deliberately placed protection levels IIB3 and IIB, required in column (16) of Table C for electrical equipment, at the same level.

The reasons for this approach may be attributable to the fact that:

- In sea-going navigation, protection level IIB3, and
- In inland navigation, protection level IIB3 (according to the volume of cargo carried)

are considered sufficient for 97 per cent of all goods.

7. Taking stock of the situation with tank-vessel navigation, we can see that a clear majority of the currently installed self-contained protection systems — when they have markings — provide protection level IIB3. If it was necessary to replace all the equipment

to move to protection level IIB, approximately 900 vessels would be affected. Protection level IIB is currently used for less widespread applications (for example, for cofferdams).

8. In principle, the availability on the market of self-contained protection systems appropriate for all uses and providing protection level IIB should not pose a problem in the medium term. However, we currently do not know how much time will be required to design such systems and for the approval procedure, nor do we know how much time will be required for their manufacture and assembly. There is also the question of whether the cross-sectional area of the cables is sufficient or whether more extensive refitting will be required on board the vessels.

9. Cooperation between the inland navigation industry and shore facilities is urgently required. The loading or unloading rate must be verified and adapted if the maximum experimental safe gap is modified. At this stage, the shore facilities do not seem willing to embark on such cooperation.

10. In two States, the inland navigation industry attempted to obtain information about the equipment at shore facilities. It was found that no shore facilities had IIB equipment, notwithstanding the fact that, obviously, substances requiring IIB equipment under column (16) of Table C were handled there. We do not know how much time will be required to clarify these issues.

11. For a large number of mixtures, about 140 ADN entries, protection level IIB is required for safety reasons, as the data are lacking. It is of course possible for monitoring bodies to carry out tests and checks, but time is required. For mixtures whose compositions may often vary, it is impossible in practice to make provision for a new monitoring procedure each time.

12. The inland navigation industry will deal with the limitations on the lists of substances on vessels. As a limitation on the lists of substances on vessels can result in a loss of flexibility, and taking into account the large number of aspects still to be specified, the industry requests that an appropriate amount of time should be granted and that the adaptation of the lists of substances on vessels should be considered only as a last resort.

Proposal 2

13. For the equipping of tank-vessels with self-contained protection systems in accordance with column (16) of Table C, the inland navigation associations propose taking up the transitional period that applies to the protection level for electrical equipment.

N.R.M. from 1 January 2017

Renewal of certificate of approval after 31 December 2014

3.2.3.1 Table C: column (16)	Explosion group/subgroup for self-contained protection systems on board vessels and on shore	N.R.M. from 1 January 2017 Renewal of the certificate of approval after 31 December 2014

Justification

14. The situation is currently very unclear. It can be brought into line with the law only through the concerted action of all the stakeholders. The burden of taking measures cannot be borne alone by the inland navigation industry, which is hardly responsible for the current

situation. The handling facilities too must consider the problem and, with the industry, draw up concepts and strategies to take action.

As a deadline extension for bringing electrical equipment into line with protection level IIB has been granted until 2024, the same should apply to self-contained protection systems, if protection level IIB is required for such systems.