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**Economic Commission for Europe****Inland Transport Committee**

4 January 2018

**Working Party on the Transport of Dangerous Goods**

English

**Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)****Thirty-second session**

Geneva, 22-26 January 2018

Item 5(b) of the provisional agenda

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

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**Anti-explosion protection during transshipment and transport from heated loaded substances of UN number 3256****Transmitted jointly by the European Barge Union (EBU), the European River-Sea-Transport Union (ERSTU) and the European Skippers Organization (ESO)**

1. In a dimension of yearly several 100,000 tonnes cargoes of the UN number 3256 are transported cross-border between different locations in Belgium, Germany and the Netherlands. The relevant line entries from table C from Chapter 3.2.3 are attached as Appendix 1. In column 16 of Table C, autonomous protection systems of explosion Group II B are required. These cargoes are loaded consistently in a temperature range between 80 ° Celsius and 90 ° Celsius.
2. In the context of the discussion on autonomous protection systems, it has been noticed that the currently available and installed flame arresters as well as pressure relief valves and vacuum valves of the explosion Group II B are only approved for use in a temperature range up to 60 ° Celsius. For loading temperatures above 60 ° Celsius there is no approval for these fittings.
3. According to the statements of various manufacturers of such systems, it is unclear whether and by when autonomous protection systems of explosion Group II B can be developed for use in elevated temperature ranges and offered market-ready. Therefore, it is not possible to retrofit the ships used in this market area neither to use of other ships.
4. The use of the vessels currently operating in this field is no longer possible in compliance with the anti-explosion- regulations required by ADN since the findings referred to in paragraph 2. The missing transport options have already led to a stoppage of production.
5. In case of transshipment and transport of heated loaded substances of the UN number 3256 (all 7 line entries in table C of ADN in section 3.2.3; the cargoes are listed in Appendix 1), the temperatures can regularly fall in the range from 80 ° to 90 ° Celsius, depending on the requirements of the terminals.
6. Currently, investigations are carried out regarding the required explosion group or sub-group for cargoes with the largest volumens falling under the line entries UN 3256. In column 16 of table C, the current ADN still requires equipment according to explosion Group II B. Any changes could only come into effect with the ADN 2021.

7. In the current situation, certain tankers are allowed to transport cargoes of the UN number 3256 in accordance with their product list according to 1.16.1.2.5 or the multilateral agreement M 018. But there is a contradiction between these lists issued by the recognised classification societies and the actual valve temperature approval. Therefore, in these cases, in spite of entry in the product list of ships the transport is not legally compliant due to the temperature boundary of this equipment.

8. The existing uncertainties in ADN require clarification. Until a clarification in ADN is possible, the associations of inland waterway transport ask the Contracting States of ADN for measures which on one hand lead to an adequate explosion protection and on the other hand provide legal certainty. The associations of inland waterway transport propose the following:

9. Regarding cargoes of the UN 3256 (all line entries), during transshipment and transport with temperatures above 60 ° Celsius the tanks and terminals may be inerted in order to provide an adequate anti-explosion protection as alternative to the anti-explosion protection equipment required by the ADN.

Inerting demands the following from the involved parties:

(a) Before starting the loading procedure with UN 3256 all tanks must be inerted completely.

(b) During the transport and the loading and unloading procedures the percentage of oxygen in the inerted tanks must not exceed 5 %.

(c) The percentage of oxygen must be detected before and after the loading procedure as well as after unloading.

(d) During the transport an overpressure of at least 2 mbar must be held, monitored and documented.

(e) During the filling of the tanks the displaced inert gas must be discharged out of the tanks to the landside facility via a venting piping. The inert gas must not set free to the open atmosphere.

(f) During the unloading procedure from UN 3256 as much nitrogen must be added, as much is needed to obtain the required complete inerting of the tanks.

(g) The transport documents must indicate the inerting of the tanks.

(h) If after unloading of UN 3256 a switch to another product is foreseen, for which according to section 3.2.3 ADN table C column (17) an anti-explosion protection is needed, the autonomous protection systems must be installed orderly before starting the loading procedure without hazard for the involved persons.

| (1)<br>UN-Nummer<br>oder Stoffnummer | (2)<br>Benennung und Beschreibung   | (20)<br>zusätzliche Anforderungen<br>oder Bemerkungen |
|--------------------------------------|---|---|
| 3256                                 | ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60°C, at or above its flash-point  | 7; 27<br>*siehe 3.2.3.3                               |
| 3256                                 | ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60°C, at or above its flash-point (CARBON BLACK REEDSTOCK) (PYROLYSIS OIL) | 7   |
| 3256                                 | ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60°C, at or above its flash-point (PYROLYSIS OIL A)                        | 7   |
| 3256                                 | ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60°C, at or above its flash-point (RESIDUAL OIL)                           | 7   |
| 3256                                 | ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60°C, at or above its flash-point (MIXTURE OF CRUDE NAPHTHALINE)           | 7   |
| 3256                                 | ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60°C, at or above its flash-point (CREOSOTE OIL)                           | 7   |
| 3256                                 | ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S., with flash-point above 60°C, at or above its flash-point (Low QI Pitch)                           | 7   |