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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)****Thirty-first session**

Geneva, 28-31 August 2017

Item 4 (b) of the provisional agenda

**Proposals for amendments to the Regulations annexed to ADN:
other proposals****Blending on board inland tankers****Submitted by FETSA with the support of Fuels Europe, EBU and ESO*,******Introduction**

1. During the January 2017 session of the ADN Safety Committee, FETSA introduced “Blending on board tank vessels” by means of informal document INF.15. In this informal document, a proposal was made to adapt ADN and add the activity of blending on board. Blending on board is a frequent cargo operation and not captured in ADN.
2. The aim of this proposal was to describe this type of loading operation in ADN, which leads to safe operations, transparency and assurance of providing correct information. FETSA had found support for this initiative from EBU, ESO as well as FuelsEurope.
3. During discussion of this informal document, it seemed that not all representatives were fully aware of the fact that blending is a common cargo operation, mainly executed in the sea harbours. Questions were raised and FETSA was asked to provide more information.

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** In accordance with the programme of work of the Inland Transport Committee for 2016–2017 (ECE/TRANS/2016/28/Add.1 (9.3.)).

4. Referring to informal document INF. 15 submitted at the thirtieth session and to the report on that session (ECE/TRANS/WP.15/AC.2/62, paras. 24-25), FETSA is happy to explain the topic extensively and to answer the questions that were raised.

I. Short summary of informal document INF. 15

5. For the industry involved in blending activities on board inland navigation tankers, there is need for clarification in AND regarding such activities. FETSA proposed the following definition of blending:

“Blending on board describes the mixing of two or more products resulting in one single final product and reflects only components being admixed as distinct from any chemical processing”.

6. In informal document INF. 15, part III (“Proposal”), detailed conditions were proposed in paragraph 7, items 1–9 to ensure safety, awareness, transparency and relevant corresponding documents with risk mitigating measures.

II. Scope of proposal

7. FETSA proposes the blending on board of inland navigation tankers to be allowed only when the following conditions are met.

A. Location

- The tanker is connected to a jetty of a filler location or to a sea vessel;
- Loading from shore or sea-going vessel via the inland navigation tanker’s appropriate permanent cargo line system connection only;
- When products are compatible, and the risk of a chemical reaction has been mitigated.

B. Handling

- All individual products making up the blend, including the blend itself shall be on the vessel’s substance list according to ADN 1.16.1.2.5;
- Prior to loading the blending operation is documented and communicated by the consignor to the filler as well as the carrier and executed by the filler(s) on instruction by and in cooperation with the carrier’s (barge) crew;
- Products are loaded one by one, batch by batch, one over the other;
- Product commingling in inland tanker cargo tanks occurs by gravity as distinct from any mechanical mixing by means of inland navigation tankers’ pumps;
- Cargo transfer from one cargo tank to the other (for other reasons than stabilizing and while moored) is out of scope.

C. Products

- Products include Class 3 and Class 9 liquid products which do not react with each other, e.g. Hydrocarbons, Petroleum Distillates, Bio-Fuels, Fuel Oil, Gasoil, Gasoline;

- The blend operation shall not create a chemical reaction.

III. Examples of blending operations

8. Examples, representing daily operations of blending on board of barges (with sub-variants) are:

(a) Gasoline and ethanol

(i) A barge ADN type C 2 2 loads 1200 m³ gasoline, UN 1203, GASOLINE, 3, PG II, N2,CMR,F in 5 cargo tanks 1, 2, 3, 4 and 5. Tanks are filled for 80 %.

The barge loads on the same jetty, with same manifold/shore connection directly afterwards 200 m³ of ethanol UN1170, ETHANOL, 3, PG II” on top of the gasoline, in the same barges tanks 1, 2, 3, 4 and 5.

Both products are on the barges product list. Ethanol is a frequently used (bio-) component of gasoline, which is a mixture anyway. Any possible chemical reaction is closed out. The final classification is still UN 1203, GASOLINE, 3, PG II, N2, CMR, F up to 10 vol. % of ethanol.

(ii) Above 10 % ethanol, the classification will change into: UN 3475, MIXTURE OF ETHANOL AND GASOLINE, 3, N2, CMR, F. The same procedure is applicable.

(b) Gasoil and Fatty Acid Methyl Esters (FAME)

(i) A barge, ADN type N 2 3 loads 1000 m³ gasoil, UN 1202, GASOIL, PG III, N2, CMR, F in cargo tanks 1, 2, 3 and 4 at filler A, Jetty 1. Tanks are filled for 70 %.

Afterwards, the barge has to sail to Jetty 2 of the same filler location, to load on top of the gasoil part of “FAME”; Fatty Acid Methyl Esters, are non-dangerous goods, often added as “bio-component”.

Within the technical specifications, the FAME is allowed to be part of the gasoil, the classification will not change.

(ii) The same as (i) but a second loading on top of the first loading happens at another filling location. The same procedure is applicable.

IV. Responsibility

9. It is the responsibility of the consignor to provide correct data of the blending plan, and correct classification in accordance with ADN 1.4.2.1. to both filler(s) and carrier. It is the joint responsibility of the filler and the carrier to complete the ADN checklist according to ADN 7.2.4.10 and ADN 8.6.3 regarding the loading procedure and informing the crew optimally. Carrier and filler have responsibilities in line with ADN 1.4.2.2. and 1.4.3.3 respectively.

V. Risk assessment

10. To ensure safety in the most independent and constructive way, the results of the proposal are treated as a “management of change” procedure. This means stakeholders estimate the risks of the operations and compare the outcome of the proposal with the current legislation, from the point of view and knowledge that blending operations are daily practice.

11. The risk assessment is described in informal document INF. 6, as approved by an external accredited safety manager. It shows that the proposal reaches lower risks in blending operations if applied.
 12. With a clear scope defining the blending operation on board of inland navigation tankers including clear responsibilities for participants, FETSA believes the blending operation can be included in the ADN.
 13. FETSA therefore asks the ADN Safety Committee to further discuss the details of the proposal in a working group of subject matter experts.
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