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Inland Transport Committee

Working Party on the Transport of Dangerous Goods

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Item 5 (a) of the provisional agenda

**Proposals for amendments to annexes A and B of ADR:
construction and approval of vehicles**

Comments on document 2023/1 – Rear Protection of Vehicles

Transmitted by the Government of the Netherlands

Introduction

1. The Netherlands appreciates the effort of the United Kingdom to produce document 2023/1. However, our view is that it is very questionable if the proposal will bring the expected benefits. For the Netherlands this topic needs further consideration and development.

Background

2. The interpretation concerns in particular the point where the distance of 100 mm from the bumper to the rearmost part of the tank needs to be determined. Is the rear of the bumper to be explained as the rear of the vehicle, or rear of the bumper profile when standing at the rear of the vehicle?

3. The current wording of the requirement in 9.7.6 of ADR is very old, and it is fair to state that it is not unambiguous enough anymore. Also, the term “tank” may not have been as clearly defined in the past as it is now.

4. The general approach to be followed, is to question what needs to be protected. The answer to that question is that the containment of the substance should be protected, which is the shell and not the tank.

5. If considering types of tanks, the proposal in document 2023/1 will in particular punish tanks for chemicals made of stainless steel. These tanks are in most cases thermal insulated, and the insulation is also part of a tank. It is just these tanks that are less prone to rupture as the ends of these tanks are deeply formed to resist pressure that can absorb a lot of energy by deformation without rupture, because stainless steel is used that is very pliable. In comparison, tanks for the carriage of liquid petroleum products with relative flat ends in aluminium, without insulation, are more at risk but are allowed effectively less distance between the rear of the vehicle and the rear of the tank end than insulated stainless steel chemical tanks.

6. In addition to the above, the reference made in paragraph 6 of document 2023/1 to the report of the Working Group on Tanks specifically addressed vacuum insulated tanks and no other tank types. Breach of the insulation of the tank would lead to an increase of pressure and discharge by the safety valves but would not lead to a rupture of the shell.

7. As no strength requirements are given in the proposal for the bumper itself, the thickness of the profile of the bumper that need to be added to the actual distance from the rear of the vehicle, will be kept to a minimum. In fact, manufacturers that will fit substantial bumpers will be punished by the proposed place of measuring the distance because of limits in maximum dimensions of the vehicle.

8. A particular concern needs to be given to the fitting of special tank bumpers at the top of the tank end in addition to the underrun protection. Practice showed that the supports to the chassis frame of these bumpers tend to rupture the tank on impact by bending inwards into the tank end.

9. The assumption that increasing the distance from the rear of the bumper to the tank does not restraint the capacity is not realistic. Due to stringent vehicle dimensions in the European Union, tanks will have to become either larger in diameter and shorter, if at all possible, resulting in reduced stability or increase in diameter is not possible less product may be carried, and more transport movements required. Both resulting in higher risks of accidents.
