

## Economic Commission for Europe

### Inland Transport Committee

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

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30 April 2014

### **Flexible bulk containers (FBC) - Requirements as regards driving stability of vehicles carrying BK 3 containers (FBCs)**

**Transmitted by the Government of Germany**

#### *Summary*

**Reference documents:** ECE/TRANS/WP.15/221 paragraphs 23 - 26 and Annex I  
ECE/TRANS/WP.15/AC.1/134 paragraphs 35 – 38  
ECE/TRANS/WP.15/222  
INF.5/Rev.1

#### **Information**

Within the framework of the discussion on the inclusion of the new FBC provisions in ADR, it was demanded, due to serious doubts as to the driving stability of vehicles carrying FBCs, that a tilt test be performed as required under the provisions of paragraph 9.7.5.2 of ADR for certain tank vehicles to allow for a better assessment of the situation.

Therefore, tests in accordance with ECE Regulation No. 111 were performed on the tilting table of a recognised testing institute in Russia (see document ECE/TRANS/WP.15/INF.18 of the 95th session) using a modern HGV with four axles loaded with two FBCs. The FBCs used for the tests were full and the weight of the HGV was below its maximum permissible weight. The achieved tilt table angle of 19 degrees fell short of the 23 degrees required under ECE Regulation No. 111.

A subsequent assessment of the test results by German experts concluded that a tilt angle of 23 degrees with two fully loaded FBCs was inherently impossible and that sufficient driving stability could only be achieved by additional ADR requirements.

Germany is of the opinion that, with a view to safety, a well-founded solution to the situation described above would be to use vehicles already equipped with electronic driving stability systems in accordance with ECE Regulation No. 13.

The stability of the vehicle in all driving situations, i.e. also when navigating curves, is reliably ensured by these tested systems which are established on the market. Moreover, these systems will become mandatory within the EU for all new vehicles in 2014.

With these electronic driving stability systems, it is possible to considerably enhance driving safety by means of dynamic control, i.e. control in accordance with the specific loading conditions, speed etc.

It has to be noted, however, that only the interaction of effective load securing and an electronic stability system can ensure safe carriage.

Another possibility would be to considerably restrict the carrying capacity of the vehicle concerned or to considerably reduce the speed limit for the carriage of FBCs (in a previous IDGCA document, it was suggested to restrict the speed to not more than 50 km/h). However, for practical and economic reasons, this does not seem to be a helpful approach; this is why no alternative proposal is presented in this regard.

## **Proposal**

Insert a second sentence in paragraph 7.5.7.6.1 of ADR:

- 7.5.7.6.1 Flexible bulk containers shall be carried within vehicles with rigid sides and ends that extend at least two-thirds of the height of the flexible bulk container. **The vehicles used for carriage shall be equipped with an electronic stability control system approved in accordance with ECE Regulation No. 13.**
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