

## **Economic Commission for Europe**

### **Inland Transport Committee**

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

**103<sup>rd</sup> session**

Geneva, 6–10 November 2017

Item 9 of the provisional agenda

**Any other business**

**07 November 2017**

### **Information concerning an event occurred during carriage of dangerous goods according to 1.8.5**

#### **Transmitted by the Government of Romania**

#### **Occurrence summary**

On 10 June 2016 at 9.30 in the morning, during a transport of 840 pieces of empty and defective steel LPG cylinders, an event occurred.

A tractor with a semitrailer that was travelling from a warehouse to a LPG filling centre stopped in the inhabited area of Mihailesti (Buzau county) at km 80 on the national road DN 2/E 85 due to the overheated axle of the semitrailer.

The overheating was due to the seizure of the bearing of the respective wheel.

The overheating caused:

- the explosion of the tyre located on the centre of the triple axle of the semitrailer
- and
- the fire, which extended to the semitrailer floor and then to the LPG cylinders.

The fire engulfed the vehicles and the cylinders quickly, although the driver acted promptly using the fire extinguishers available on the semitrailer.

The road infrastructure and the electricity network were both affected.

The cause of the accident is clearly the technical problem on the vehicle, no human error having been found.

#### **Proposal**

We propose to examine different solutions in order to avoid the repetition of such events taking into account the scientific and technical progress in the field of vehicle equipment.

Some of the technical solutions are regulated at UN level and may be used for certain vehicles in order to avoid the fire or the overheating of axles or brakes.

## Annex 1

### Report on occurrences during the carriage of dangerous goods in accordance with RID/ADR section 1.8.5

| 1. Mode  |   |
|--|---|
| <input type="checkbox"/> Rail<br>Wagon number (optional)<br>.....  | <input checked="" type="checkbox"/> Road<br>Vehicle registration (optional)<br>.....  |
| 2. Date and location of occurrence   |   |
| Year: <b>2016</b>  | Month: <b>JUNE</b>  |
| Day: <b>10 (Friday)</b>  | Time: <b>09.30 A.M.</b>   |
| <u>Rail</u><br><input type="checkbox"/> Station<br><input type="checkbox"/> Shunting/marshalling yard<br><input type="checkbox"/> Loading/unloading/transshipment site<br>Location / Country: .....<br>or<br><input type="checkbox"/> Open line:<br>Description of line: .....<br>Kilometres: .....  | <u>Road</u><br><input checked="" type="checkbox"/> Built-up area<br><input type="checkbox"/> Loading/unloading/transshipment site<br><input type="checkbox"/> Open road<br>Location / Country: <b>Mihailesti, Buzau county,<br/>                 on E85 at km 80, Romania</b> |
| 3. Topography  |   |
| <input type="checkbox"/> Gradient/incline<br><input type="checkbox"/> Tunnel<br><input type="checkbox"/> Bridge/Underpass<br><input type="checkbox"/> Crossing   |   |
| 4. Particular weather conditions   |   |
| <input type="checkbox"/> Rain<br><input type="checkbox"/> Snow<br><input type="checkbox"/> Ice<br><input type="checkbox"/> Fog<br><input type="checkbox"/> Thunderstorm<br><input type="checkbox"/> Storm<br>Temperature: <b>22 °C</b>   |   |
| 5. Description of occurrence   |   |
| <input type="checkbox"/> Derailment/Leaving the road<br><input type="checkbox"/> Collision<br><input type="checkbox"/> Overturning/Rolling over<br><input type="checkbox"/> Fire<br><input checked="" type="checkbox"/> Explosion<br><input type="checkbox"/> Loss<br><input checked="" type="checkbox"/> Technical fault                                |   |
| Additional description of occurrence:<br><b>One of the wheels of the triple axle of the semitrailer was seized causing overheat and the explosion of the tyre.<br/>                 The fire that engulfed the vehicle and the cylinders arose shortly.<br/>                 The road infrastructure and the electricity network were both affected.</b> |   |

| 6. Dangerous goods involved   |          |               |   |                                     |                               |  |
|---|----------|---------------|---|-------------------------------------|-------------------------------|--|
| UN Number <sup>(1)</sup>  | Class    | Packing Group | Estimated quantity of loss of products (kg or l) <sup>(2)</sup>   | Means of containment <sup>(3)</sup> | Means of containment material | Type of failure of means of containment <sup>(4)</sup> |
| <b>UN 1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.</b>  | <b>2</b> | <b>F</b>      | <b>-</b>  | <b>1</b>                            | <b>STEEL</b>                  | <b>3</b>   |
| <sup>(1)</sup> For dangerous goods assigned to collective entries to which special provision 274 applies, also the technical name shall be indicated.   |          |               | <sup>(2)</sup> For Class 7, indicate values according to the criteria in 1.8.5.3.                         |                                     |                               |  |
| <sup>(3)</sup> Indicate the appropriate number<br>1 Packaging<br>2 IBC<br>3 Large packaging<br>4 Small container<br>5 Wagon<br>6 Vehicle<br>7 Tank-wagon<br>8 Tank-vehicle<br>9 Battery-wagon<br>10 Battery-vehicle<br>11 Wagon with demountable tanks<br>12 Demountable tank<br>13 Large container<br>14 Tank-container<br>15 MEGC<br>16 Portable tank   |          |               | <sup>(4)</sup> Indicate the appropriate number<br>1 Loss<br>2 Fire<br>3 Explosion<br>4 Structural failure |                                     |                               |  |
| 7. Cause of occurrence (if clearly known)   |          |               |   |                                     |                               |  |
| <input checked="" type="checkbox"/> Technical fault<br><input type="checkbox"/> Faulty load securing<br><input type="checkbox"/> Operational cause (rail operation)<br><input type="checkbox"/> Other:<br><p><i>A tractor with a semitrailer loaded with 840 pieces of LPG cylinders of 11 kg (empty or defective) that moved from the warehouse to the filling centre stopped in the inhabited area of Mihailesti due to the explosion of a tyre (on the triple axle of the semitrailer). The seizure of the bearing of the respective wheel cause overheats. The overheating caused the explosion of the tyre and the fire which extended to the semitrailer floor and then to the cylinders.</i></p>   |          |               |   |                                     |                               |  |
| 8. Consequences of occurrence   |          |               |   |                                     |                               |  |
| <u>Personal injury in connection with the dangerous goods involved:</u><br><input type="checkbox"/> Deaths (number: - )<br><input type="checkbox"/> Injured (number: - )<br><u>Loss of product:</u><br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No<br><input type="checkbox"/> Imminent risk of loss of product<br><u>Material/Environmental damage:</u><br><input checked="" type="checkbox"/> Estimated level of damage ≤ 50,000 Euros<br><input type="checkbox"/> Estimated level of damage > 50,000 Euros<br><u>Involvement of authorities:</u><br><input checked="" type="checkbox"/> Yes <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Evacuation of persons for a duration of at least three hours caused by the dangerous goods involved</li> <li><input checked="" type="checkbox"/> Closure of public traffic routes for a duration of at least three hours caused by the dangerous goods involved</li> </ul> <input type="checkbox"/> No |          |               |   |                                     |                               |  |

**Annex 2**

**Photos**

