OTIF

ORGANISATION INTERGOUVERNEMENTALE POUR LES TRANSPORTS INTERNATIONAUX FERROVIAIRES

ZWISCHENSTAATLICHE ORGANISATION FÜR DEN INTERNATIONALEN EISENBAHNVERKEHR

INTERGOVERNMENTAL ORGANISATION FOR INTERNATIONAL CARRIAGE BY RAIL

INF.2

11 April 2014

Original: German

RID: **3rd Session of the RID Committee of Experts' standing working group**
(Berne, 20 and 21 May 2014)

Subject: **Report on incidents in the carriage of dangerous goods in accordance with RID 1.8.5 (Hamburg-Billwerder, 3 July 2013)**

Information from Germany

---

1. On 3 July 2013, an incident occurred in Hamburg-Billwerder when a tank-container was being transshipped (by crane) from a road vehicle onto a carrying wagon. The crane operator failed to set the tank-container directly onto the attachment pins on the carrying wagon, and when turning, touched the supporting frame on the carrying wagon. The tank-container's fittings cabinet was bent upwards and the load leaked. See also the attached report on incidents in the carriage of dangerous goods in accordance with RID 1.8.5 (Annex 1) and an extract from a report by the German Federal Office of Railways (Eisenbahn-Bundesamt) dated 4 July 2013 (Annex 2).

2. The container carrying wagon was a so-called "pocket wagon" (design type 743). This wagon design type is also used especially for loading trailers. It has a supporting frame for the trailer's kingpin.

3. However, this construction seems to cause problems when loading tank-containers. In this case, once the tank-container had been placed on the carrying wagon, there was only 20 cm gap between the tank and the support frame.

4. If you consider the view the crane operator has and the movement of the tank-container on the crane's suspension cables (caused by movement of the crane or wind or surging movements), repetition of such an incident cannot be ruled out.

Tel. (+41) 31 – 359 10 17 • Fax (+41) 31 – 359 10 11 • E-Mail info@otif.org • Gryphenhübeliweg 30 • CH – 3006 Berne/Bern

5. In terms of further investigations, the question arises

   – as to whether internal operating instructions issued by individual private transshipment facilities are sufficient to prevent such incidents in future?

     (Note: These instructions say that when loading onto pocket wagons of design type 743, tank-containers must be loaded on such that the fittings are toward the middle of the wagon.)

   – or whether, for loading tank-containers onto these particular container carrying wagons, separate handling provisions should also be prescribed in Part 7 of RID?

6. Germany would be pleased to hear the opinion of other States on this so that the next steps could be agreed.

Annex 1

1. Mode	
X Rail Wagon number (optional): **3180 451 2082-7**	□ Road Vehicle registration (optional): …….....
2. Date and location of occurrence	
Year: **2013** ..... Month: **July** ..... Day: **03** ..... Time: **19.40**….....	
□ Station □ Shunting/marshalling yard **X** Loading/unloading/transhipment site Location / Country: …..... or □ Open line Description of line: ……..... Kilometres:	Road □ Built-up area □ Loading/unloading/transhipment site □ Open road Location / Country: ….....
3. Topography	
□ Gradient/incline □ Tunnel □ Bridge/Underpass □ Crossing	
4. Particular weather conditions	
□ Rain □ Snow □ Ice □ Fog □ Thunderstorm □ Storm Temperature: ... °C	
5. Description of occurrence	
□ Derailment/Leaving the road □ Collision □ Overturning/Rolling over □ Fire □ Explosion **X** Loss □ Technical fault Additional description of occurrence: **Damage caused by crane transshipment** ..... ……..... ……..... ……..... ……..... ……..... ……..... …….....	

6. Dangerous goods involved

UN Number[1]	Class	Packing Group	Estimated quantity of loss of products (kg or l)[2]	Means of containment[3]	Means of containment material	Type of failure of means of containment[4]
2282	**3**	**III**	**1500 l**	**14**		**1**

[1] For dangerous goods assigned to collective entries to which special provision 274 applies, also the technical name shall be indicated.

[2] For Class 7, indicate values according to the criteria in 1.8.5.3.

[3] Indicate the appropriate number
1 Packaging
2 IBC
3 Large packaging
4 Small container
5 Wagon
6 Vehicle
7 Tank-wagon
8 Tank-vehicle
9 Battery-wagon
10 Battery-vehicle
11 Wagon with demountable tanks
12 Demountable tank
13 Large container
14 Tank-container
15 MEGC
16 Portable tank

[4] Indicate the appropriate number
1 Loss
2 Fire
3 Explosion
4 Structural failure

7. Cause of occurrence (if clearly known)

□ Technical fault

□ Faulty load securing

X Operational cause (rail operation)

□ Other: ……

8. Consequences of occurrence

Personal injury in connection with the dangerous goods involved:

□ Deaths (number: .....)

□ Injured (number: .....)

Loss of product:

X Yes

□ No

□ Imminent risk of loss of product

Material/Environmental damage:

□ Estimated level of damage ≤ 50,000 Euros

□ Estimated level of damage > 50,000 Euros

Involvement of authorities:

□ Yes →
- □ Evacuation of persons for a duration of at least three hours caused by the dangerous goods involved
- □ Closure of public traffic routes for a duration of at least three hours caused by the dangerous goods involved

X No

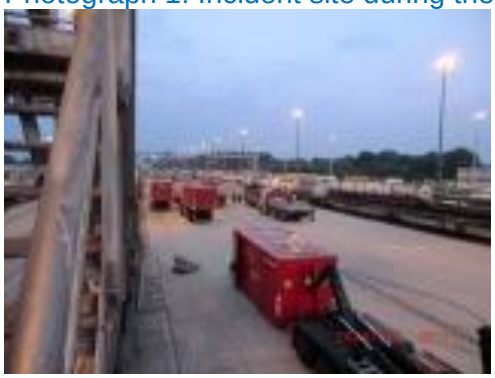
If necessary, the competent authority may request further relevant information.

Annex 2

Extract from the Eisenbahn-Bundesamt (EBA) report (Hamburg/Schwerin branch) dated 4 July 2013

On 4 July 2013, the Hamburg-Billwerder transshipment station informed EBA of a leaking tank-container (incident: 3 July 2013 at about 7.40 pm). Around 2,400 litres of hexanol had leaked and the Hamburg fire brigade had responded with a large number of emergency response teams.

Photograph 1: Incident site during the emergency response



When EBA staff arrived at the incident site at about 10.00 on 4 July 2013, initial enquiries revealed the following:

1. On 3 July 2013, tank-container ANHU 235 159 – 0, loaded with 25,800 kg 30 UN 2282 HEXANOL, 3, III, was to be transshipped from a road vehicle onto a carrying wagon.

2. The crane operator failed to set the tank-container directly onto the attachment pins, and when turning, touched the supporting frame on the carrying wagon. The fittings cabinet was bent upwards and the load leaked.

3. The fire brigade was unable to take effective measures to seal off the leak on the carrying wagon.

4. A replacement tank-container was requested and the load was pumped into this replacement.

5. A trailer was used to bring the damaged tank-container onto a drip collection device.

Photograph 2: Tank-container in the drip collector next day

Photograph 3: Close-up of the fittings cabinet bent upwards

Photograph 4: Damaged weld seam

As no further measures could be taken in situ, the empty, uncleaned tank-container was taken to the workshop (by lorry) to be repaired.

The water police (competent authority) was notified and the transport operation took place in accordance with ADR 1.4.2.2.4.

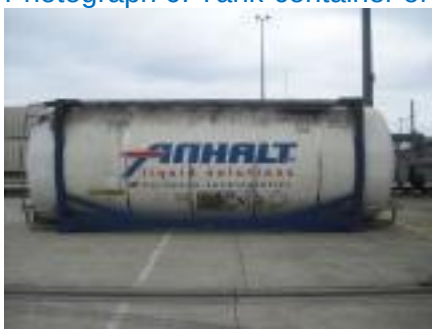
The competent authority in Hamburg responsible for ensuring compliance with the CSC Convention was also notified and is supervising the repair work.

The damaged parts were removed in the workshop. The buckling on the valve attachment plate was clearly visible.

Photograph 5: Valve unit (attachment plate is buckled)

In order to clarify the question of whether it was simply human error or problems with the loading method that caused the incident, on 4 September 2013, EBA staff had a meeting at Billwerder with the people involved. An operator provided a tank-container of the same construction, on which the tank itself protruded over the container frame **on both sides** (so-called swap tank-container).

Photograph 6: Tank-container of same construction



The tank-container was loaded onto a container carrying wagon, which was also the same construction as the one involved in the incident. This wagon design type is also used for loading trailers (so-called pocket wagon).

Photograph 7: Illustrative photograph – Loading a trailer onto a pocket wagon

Photograph 8: Pocket wagon of same construction

Photograph 9: At the front, an attachment pin for receiving the load unit can be seen and in the background, the supporting frame for receiving the kingpin of the trailer.

Photograph 10: Crane operator's view of the loading operation

After the tank-container has been placed onto the carrying wagon, it can be seen that there is only a 20 cm gap between the tank and the supporting frame.

Photograph 11: Close-up view – Distance between tank-container/support frame – here: 20 cm

If you consider the view the crane operator has and the movement of the tank-container on the crane's suspension cables (caused by movement of the crane or wind or surging movements), repetition cannot be ruled out.

All those involved agreed that appropriate precautions must be taken here to prevent a repetition of this incident.

Those involved informed EBA that there was already a set of operating instructions for this: All tank-containers (i.e. not just the so-called swap tank-containers) should, without exception, be loaded onto pocket wagons (design type 743) in such a way that the fittings are toward the middle of the wagon. All crane operators were notified of this rule in an official training session and they confirmed this with their signature. In addition, the other terminals belonging to this operator were informed of the incident and the rule that had been decided.

Whether further-reaching precautions might have to be taken will depend on the success of the measure taken.