

**OTIF**



**ORGANISATION INTERGOUVERNEMENTALE POUR  
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN  
INTERNATIONALEN EISENBAHNVERKEHR**

**INTERGOVERNMENTAL ORGANISATION FOR INTER-  
NATIONAL CARRIAGE BY RAIL**

**INF. 9**

11 November 2011

(English only)

**RID: 50<sup>th</sup> Session of the Committee of Experts on the Transport of Dangerous Goods**  
(Malmö, 21 – 25 November 2011)

**Subject: Safety checks on tanks**

**Discussion paper transmitted by Italy**

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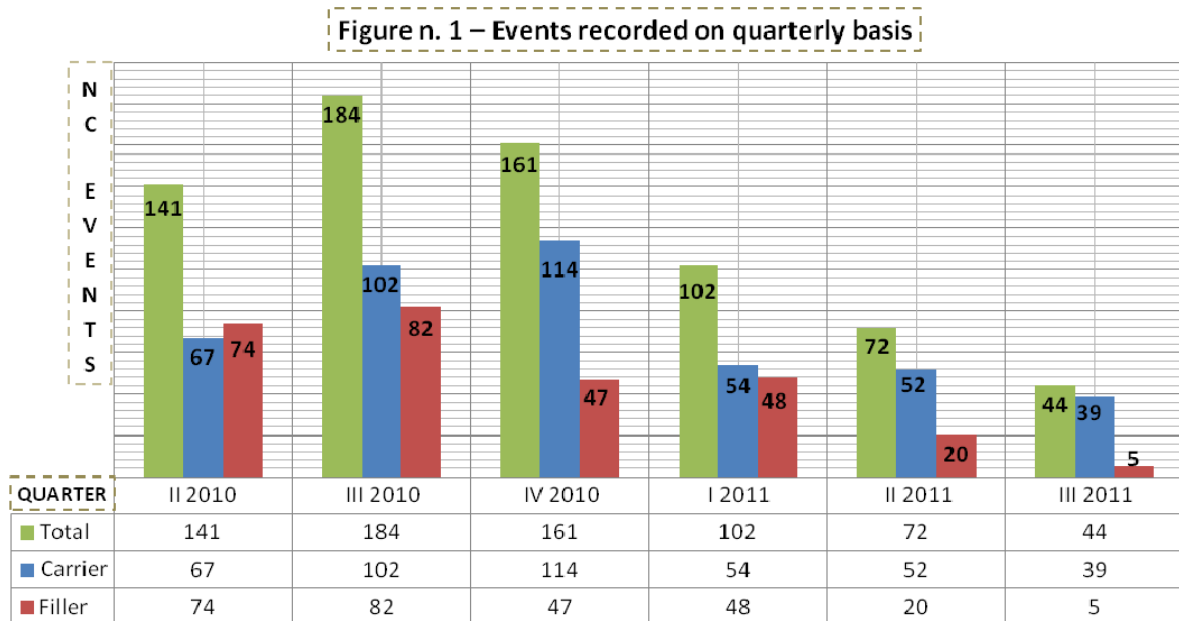
## **Introduction**

1. At recent meetings of the RID Committee of Experts (49<sup>th</sup> session in Luxembourg) and the RID/ADR Joint Meeting (2011 autumn session), Italy illustrated the measures taken to improve the compliance of rail tank-wagons with RID in order to reduce the leakage phenomenon, and the reasons that had led to these measures, which was circulated in a document dealing with "checklists".
2. It was also explained that after a huge increase of incidents involving leaks recorded between 2008 and 2009, the Italian operators' associations, railway undertakings and the Infrastructure Manager were invited to a formal meeting with the Italian Competent Authority in order to find a solution for this problem.
3. At the end of this meeting all the operators agreed on the need for a specific provision requiring that all tanks should be checked and that the result of these inspections should be available during transport in a traceable form.
4. Four model checklists have been developed according to the dangerous goods classes (Class 2 and classes 3 to 6, 8, 9) and the operator (filler/unloader and carrier), requiring specific actions for each case. A sample of these models and relevant measures can be found in Annex III to the report OTIF/RID/CE/2010-B.

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## Current Situation

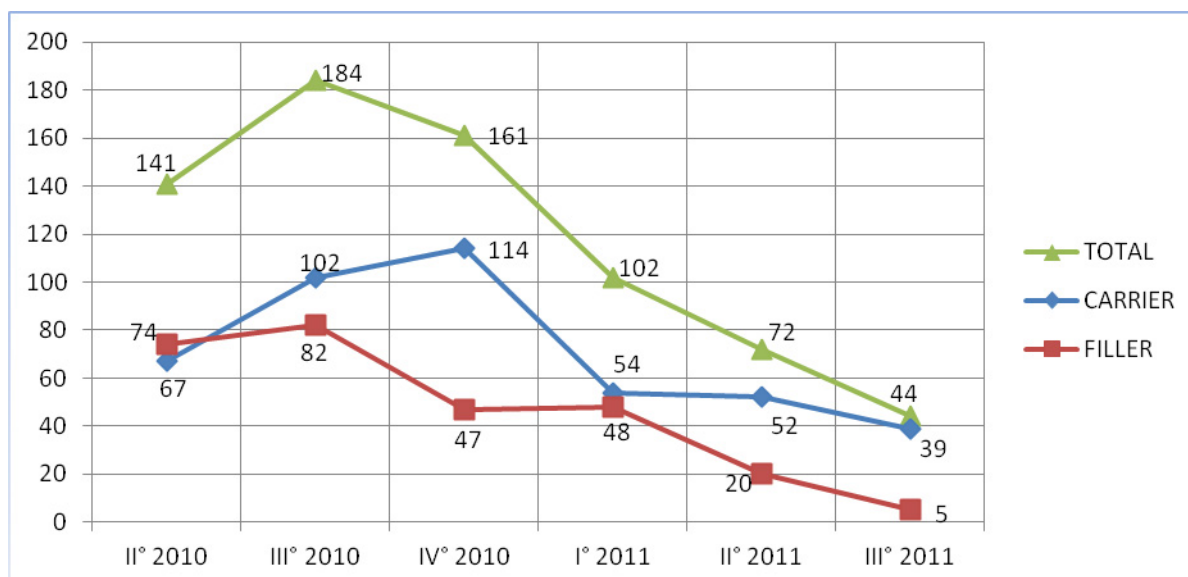
5. The checklist requirement has been applied since 1 April 2010. Starting on that date, operators record quarterly all the inspections carried out and the results, so that the Italian Authority can monitor the situation.
6. The following diagram shows the number of cases recorded as not complying (N.C.) with RID, arranged according to filler/unloader and carrier, and the total number of cases of non-compliance.



7. The following table compares the number of N.C. cases with the number of inspections carried out, including both foreign and domestic traffic.

| Quarter      | TOTAL         |            | CARRIER       |            | FILLER       |            |
|--------------|---------------|------------|---------------|------------|--------------|------------|
|              | Inspections   | N.C.       | Inspections   | N.C.       | Inspections  | N.C.       |
| II° 2010     | 31807         | 141        | 26640         | 67         | 5167         | 74         |
| III° 2010    | 31302         | 184        | 25411         | 102        | 5891         | 82         |
| IV° 2010     | 33678         | 161        | 27421         | 114        | 6257         | 47         |
| I° 2011      | 37092         | 102        | 29953         | 54         | 7139         | 48         |
| II° 2011     | 30726         | 72         | 25025         | 52         | 5701         | 20         |
| III° 2011    | 28805         | 44         | 24389         | 39         | 4416         | 5          |
| <b>Total</b> | <b>193410</b> | <b>704</b> | <b>158839</b> | <b>428</b> | <b>34571</b> | <b>276</b> |

8. From the analysis of these elements we can point out some conclusions concerning the dimensions and distribution of the phenomenon. The main one is related to population size: disregarding the 2<sup>nd</sup> and 3<sup>rd</sup> quarter 2010, which should be considered as a start-up phase, since the 4<sup>th</sup> quarter 2010 we can observe a decreasing trend of N.C. cases, reduced by 76% in the 3<sup>rd</sup> quarter of 2011.



9. With regard to the filler, it should be stressed that in eighteen months, 276 tanks not in compliance with RID have been discovered; these have been refused or loaded only after the N.C. has been rectified. We would draw your attention to the fact that all these could have represented a serious danger if they had been used in rail transport without having been inspected.
10. The major defects recorded were the lack of tightness of valves, with consequential leakage of liquid, and the expiry dates of tanks being exceeded.
11. A further element that should be emphasised is that the fillers were already required under RID to check all the units to be filled, through the specific provisions of section 4.3.2.3.3, which apply to all dangerous goods, and 4.3.3.4, which only deals with the filling of liquid gases into tank-wagon, and those of chapter 1.4.
12. It should also be noted that the only other provision assigned to the filler in the checklist was to document these inspections and to report the relevant results on a specific document signed by the person who checked the tank. Other operators have to do the same. The fact is that the 82 events recorded in the 3<sup>rd</sup> quarter of 2010 was reduced to only 5 in the last quarter (3<sup>rd</sup> quarter of 2011).
13. According to RID 1.4.2.2.1, the carrier must ascertain that there is full compliance with the relevant provisions by means of representative checks. The sample sizes are defined in Appendix G to UIC leaflet 471-3 O, in accordance with the rules of standard ISO 2859 for RUs (railway undertakings) that decide to apply the above leaflet.
14. According to this standard and assuming a fleet of 160,000 units, which is equivalent to the total number of tank-wagons used on Italian railways in that period (April 2010 – September 2011), the carrier should only have to check 1250 units, in accordance with the third inspection level.
15. The RUs have informed us that from the time the checklists were introduced, 158,839 inspections have been carried out and that 428 units not fully complying with RID have been discovered.
16. Assuming even distribution, i.e. that just one unit out of every 370 does not meet all the provisions of RID, using the sampling methods in the UIC leaflet 471-3 O, only 4 tanks would have been refused for transport, allowing the remaining wagons to continue their journey. This means that with the sample check, more than 400 N.C. wagons would have been allowed to travel on the railways.

17. It emerges from the report of the national railway undertaking that of 330 wagons refused for transport, 160 were wagons coming from abroad (about 50%). These wagons have posed a real danger for the countries they have transited.

### **Conclusions**

18. The Italian Authority considers that it must be ensured that all tanks used for carriage of dangerous goods by rail fully comply with RID, as required by RID 7.5.1 and also that a strict system of documented controls should be developed.
  19. Some essential principles to be considered for this purpose are:
    - Identification of standard and specific controls to be carried out;
    - Record of inspection (type and personnel);
    - Transmission of confirmation (by e-mail if necessary) that the tank has been checked and is able to be transported;
    - Retention of information and documentation.
  20. The Italian Authority would like to hear the RID Committee of Experts' comments in order to identify a shared solution to this problem which could facilitate a control system designed especially for international rail transport.
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