

**OTIF**



**ORGANISATION INTERGOUVERNEMENTALE POUR  
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN  
INTERNATIONALEN EISENBahnVERKEHR**

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

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**OTIF/RID/CE/GT/2011-A**

**13 December 2011**

Original: German

**TO THE GOVERNMENTS OF THE MEMBER STATES OF OTIF**

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**Report of the 12<sup>th</sup> meeting of the RID Committee of Experts'  
Working Group on Tank and Vehicle Technology**

(Hamburg, 6 and 7 October 2011)

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1. The 12<sup>th</sup> session of the RID Committee of Experts working group on tank and vehicle technology was held in Hamburg on 6 and 7 October 2011 at the invitation of GATX.
2. The following countries took part in the discussions at this meeting: Belgium, Czech Republic, France, Germany, Netherlands, Switzerland and the United Kingdom. The International Union of Railways (UIC), the International Union of Private Wagons (UIP), the Association of the European Rail Industry (UNIFE) and the European Chemical Industry Council (CEFIC) also took part (see Annex II in document OTIF/RID/CE/GT/2011-A/Add.1).

### **Chairmanship of the working group**

3. As decided at the 44<sup>th</sup> session of the RID Committee of Experts (see report OTIF/RID/CE/2007-A, paragraph 108), Mr Rainer Kogelheide (Germany) chaired the working group and Mr Arne Bale (United Kingdom) was the deputy chairman.

### **Item 1: Approval of the agenda**

4. The provisional agenda contained in the invitation (document A 81-03/501.2011) was adopted.

### **Item 2: Approval of the report of the 11<sup>th</sup> session of the working group on tank and vehicle technology (Berne, 18 and 19 May 2010)**

5. The second draft of the report of the 11<sup>th</sup> session of the working group on tank and vehicle technology (Berne, 18 and 19 May 2010), which could not be completed owing to various contradictory requests for amendments, was adopted as follows:

- Paragraph 8: the Secretariat's original wording was maintained.
- Paragraph 9:

The beginning of the first sentence was amended to read as follows:

"The representative of Germany said that based on the moderately positive result of ERA's cost/benefit analysis concerning derailment detectors, ERA was asked to check whether ...".

The second sentence was amended as proposed by the representative of ERA:

"The representative of ERA stated that ERA would inform the working group as soon as possible about available results from the derailment studies."

- Paragraph 37: the second sentence proposed by the United Kingdom was deleted.

### **Item 3: Detection of derailments**

6. It was recalled that ERA had held two workshops in Lille on the study on the prevention and detection of derailments produced by Det Norske Veritas (DNV) (6 May 2011 and 29 September 2011). At the last workshop, ERA asked to receive comments on the reports DNV had produced so far within two weeks.
7. Part B3 of the study sets out and compares the ten safety measures which DNV considered to be the most efficient. Preventive measures which prevent a derailment were in the top part, and in contrast, measures which minimise the effects of derailments were in the middle part. In the comparison between whether to equip with derailment detectors all freight wagons, all dangerous goods wagons or all wagons determined by the RID Committee of Experts for the carriage of the most dangerous goods, it emerged that the selection made by the RID Committee of Experts demonstrated the best cost-benefit ratio.

8. The representative of Germany pointed out that the three measures listed in Table 9 above the derailment detector for certain RID wagons only concerned the rolling stock, not the infrastructure. This meant that a large number of infrastructure measures had a worse cost-benefit ratio. He therefore asked whether it would not be sensible to maintain the decision of the RID Committee of Experts in order to intercept derailments caused by the infrastructure. In general, a combination of different measures should also be considered.
9. As the various measures proposed each concerned all freight traffic, but only some of them were relevant to the transport of dangerous goods, the question arose as to what the order of priority would be for dangerous goods transport.
10. The representative of UIC drew the meeting's attention to three points. The first concerned the efficacy of the various preventive measures proposed in Part B3 of the study in conjunction with Annex B2 of the study, which showed the list of derailments taken into account in the DNV study. It was not the intention to call into question the risk model, but it was important to note that in practice, the efficacy of the preventive measures would vary from country to country, as they had been developed on the basis of average values, while the proportions of the causes of derailments differed depending on the country.
11. UIC's second comment concerned paragraph 11.0 of B3 of the study, particularly point 11.2.2, which dealt with protective measures. DNV's conclusions and recommendations only concerned measure M1a – Derailment detectors on all freight wagons. There was no conclusion or recommendation concerning protective measures M1a – Derailment detectors on all dangerous goods wagons and M1a – Derailment detectors on wagons for very dangerous substances as defined by the RID Committee of Experts, and no justification was given for this lacuna. However, in the cost/benefit analysis, these two measures were more interesting.
12. The third comment concerned the efficacy of measure P13 – WLID/WIM for the carriage of dangerous goods. This measure seemed less attractive for tank-wagons than for other freight transport. However, this did not mean that the measure was of no use for tank-wagons, as the device enables the detection of defects on a vehicle other than possible loading anomalies. It would be worth examining more closely the efficacy of this measure for the safety of dangerous goods transport.
13. Various delegations pointed out that for some countries which already had a high density of fixed installations, e.g. hot box detectors, measures involving the rolling stock might be interesting in order to improve safety. The political aspect of this problem was also referred to, as the general public did not understand why sometimes derailments are not noticed and why derailments with serious consequences continue to occur, even though derailment detection technology is available.
14. With regard to the comment in brackets in paragraph 5.3.1.3 of part B3 of the study ("Additional benefits could be for example requiring a lesser density of installation of HABD"), the working group advised great caution, as these detection devices were used not just to establish defects in the roller bearings, but also to establish whether the brakes had locked. It was suggested in the working group that in the DNV report, refitment with plastic bearings and other measures that already exist should be addressed and assessed more clearly.
15. With regard to paragraph 11.2.2 of part B3 of the study, the representative of UNIFE observed that false alarms were only mentioned in connection with derailment detectors, although these may be of significance in connection with all the other measures. With the new derailment detectors with higher trigger thresholds, no false alarms had been recorded since 2004, so the negative effects of a false alarm referred to in the study were no longer relevant. He also asked the meeting to consider whether prior indication to the driver's cab that a derailment had occurred would cause the driver to act differently, as in such cases the transport undertaking would by no doubt prescribe that the train be brought to an immediate halt.

16. As no further information would be available until November, it was recommended that the 50<sup>th</sup> session of the RID Committee of Experts should only discuss this briefly. At the next meeting but one of the RID Committee of Experts, there should then be a discussion on the possible inclusion of other dangerous goods and a date for introducing derailment detection. As a single measure did not seem appropriate to reduce the risk of derailments significantly, the RID Committee of Experts should not be prevented from taking a decision in favour of derailment detectors.

#### **Item 4: Drip leaks**

##### Checklists

*Informal document:* INF.2 (CEFIC)

17. The representative of CEFIC introduced his informal document containing checklists for the top/bottom filling and top/bottom discharge of tank-wagons. He explained that the aim of these checklists was only to avoid drip leaks and did not contain any other items to be checked before handing over for carriage. The checklists were basically used to ensure that tank-wagons were leaktight on both sides and that no more of the product remained between the **second (external shut-off device)** and **third** closing devices (**usually a screw-threaded cap**). Within the European Chemical Industry Council, these checklists were considered as recommendations in the context of "responsible care".
18. The representative of the Netherlands pointed out that the study by the German Federal Institute for Materials Research and Testing (BAM) contained recommendations that were not to be found in the checklist, e.g. maintaining torque when closing, the types of valves and sealings to be used. He added that a visual inspection was not sufficient, as this would only serve to establish any leaks that were occurring before carriage commenced.
19. After the discussion, the working group recommended including a note with the obligations of the filler and unloader to say that the **minimum guidelines for checking the leaktightness** of the closing devices were **contained in the** CEFIC checklists.
20. The national representatives were asked to check the work steps set out in the checklists and to send the CEFIC representative any proposals for amendments so that he could submit an official document to the 50<sup>th</sup> session of the RID Committee of Experts.
21. The working group agreed that the checklists presented were not static and that if problems arose, they would have to be updated if need be.

##### Tank-wagon leaks found in Italy

*Informal document:* INF.1 (Italy)

22. As no representative of Italy was present, this document was not dealt with further. The document set out requirements for mandatory documentation of the leaktightness checks carried out after filling or discharge.
23. **The representative of France responded to the criticisms raised in the document from Italy (cf. Annex I). She explained that some control measures had been taken at the end of 2010 at the Lavera loading site and at the last marshalling yard before the border and that since January 2011, no other incidents had been notified. On the other hand, she asked that reciprocal work be carried out in Italy for empty, uncleaned wagons entering France, which were always the cause of incidents (missing or torn-off plugs and flanges).**

**Item 5: Accident reports**

24. The representative of the Netherlands explained that the results of the investigation into the accident that occurred in Barendrecht on 24 September 2009 were available in Dutch. He added that the results had not indicated any impact on dangerous goods law, so it had been decided not to submit the final report.
25. The representative of Switzerland pointed out that the cases in which an accident report had to be sent to the OTIF Secretariat were not clear from RID 1.8.5.2, and announced a proposal on this matter for the RID Committee of Experts.

**Item 6: Any other business**Entity in Charge of Maintenance (ECM)

*Informal document:* INF.3 (UIP)

26. To clarify the question of who is responsible for the maintenance of freight wagons, the concept of the Entity in Charge of Maintenance (ECM) was introduced into Directive 2008/110/EEC, according to which an ECM has to be designated for every freight wagon. Each ECM is then registered in a European vehicle register.
27. The certification principles, which are currently being developed by the European Railway Agency (ERA), also contain requirements for ECMs that maintain dangerous goods wagons. These ECMs must demonstrate their knowledge and procedures in relation to dangerous goods in order, for example, to ensure tank inspections. This means that once the transitional period has expired, only certified ECMs may organise the maintenance of dangerous goods wagons.
28. As, according to RID, the operator of a tank-wagon is responsible for maintaining the tank and its equipment, the representative of UIP wished to use his informal document to initiate a discussion on how the obligations could in future be divided between the operator of a tank-wagon and the ECM, as it was not necessarily the case that the ECM and the operator were one and the same.
29. After the discussion the working group decided that the European regulations did not contradict RID, but could be used to describe in more detail the activities that were not described in more detail in RID. If a detailed examination of the requirements for ECMs contained in Commission Regulation 445/2011 revealed that these requirements were sufficient within the meaning of RID, a note could be included in RID to say that the provisions of RID are deemed to be met if the Commission Regulation is applied. **However, the representative of the Netherlands was sceptical about such a note.**
30. The majority of the working group was also of the opinion that it was not necessary to divide the obligations between the tank-wagon operator and the ECM, as the operator could agree contractually with the lessee which obligations the lessee had to carry out and that if the lessee were also acting as an ECM at the same time, he also had to be qualified accordingly. If necessary, an additional paragraph along the lines of 1.4.3.7.2 could be included in the obligations of the operator to say that if the operator makes use of the services of other participants, he must take appropriate measures to ensure that the requirements of RID have been complied with.

Equipment of new build tank wagons and other dangerous goods wagons with a handbrake that can be handled from the platform

*Informal document:* INF.4 (UIP)

31. For tank-wagons and other wagons for the carriage of dangerous goods, UIC leaflets 573 and 535-3 in principle require hand brakes that can be operated from the platform/gangway. At present, this requirement is to be found in paragraph 4.2.4.1.2.8 of the applicable TSI. At ERA's request, the new version of this TSI no longer contains any requirements on this, because this is an operational matter rather than a requirement relating to the rolling stock.
32. In its informal document, the UIP raised the question of the background to the requirement in the UIC leaflets, which made it more difficult to employ innovative braking systems that can be operated from the side, although not from the platform/gangway. Although the UIC leaflets were no longer legally binding, some approval authorities considered them to reflect the state of the art.
33. According to UIC this requirement had originally been included in the UIC leaflets to **improve the safety of certain shunting operations (e.g. hump-shunting from the hump in marshalling yards which were not automated and fly-shunting). The hand brake, which was prescribed particularly for tank-wagons, was still used at some railway sites, as well as for immobilising wagons and groups of wagons.**
34. The working group asked UIC firstly to clarify this question within the association. UIP could then return to this issue in an official document. If it should emerge from UIP's enquiries **that a hand brake on the platform was necessary for dangerous goods wagons in particular**, it would have to be **considered for inclusion** in RID, since the UIC leaflets were no longer binding and it had been deleted from the new version of the TSI.

EN Standards EN 14432 and EN 14433

35. In the past, the problem of the mandatory application of standards EN 14432 and EN 14433, which contain requirements for dangerous goods tank equipment, had been dealt with in the RID/ADR/ADN Joint Meeting's tank working group (see esp. paragraphs 32 to 37 of report ECE/TRANS/WP.15/AC.1/122/Add.1 (OTIF/RID/RC/2011-A/Add.1) and paragraphs 18 to 22 of report ECE/TRANS/WP.15/AC.1/124/Add.2 (OTIF/RID/RC/2011-B/Add.2)).
36. While a small majority of the tank working group had been in favour of including a transitional provision, this transitional provision, which would have enabled the continued use of equipment not conforming to the standards fitted to tank-wagons in 2011, was rejected by a small majority at the Joint Meeting (Geneva, 13 – 23 September 2011) (see paragraphs 9 to 13 of report ECE/TRANS/WP.15/AC.1/124 (OTIF/RID/RC/2011-B)).
37. Bearing in mind the different number of States that had signed the corresponding multilateral agreements RID 7/2011 and ADR M 241, which seemed to indicate that there was a major practical problem for rail transport, the representative of UIP announced that he would return to this issue in an official document at the 50<sup>th</sup> session of the RID Committee of Experts.

Risk assessment

38. The representative of UIC reminded the meeting that at the 47<sup>th</sup> session of the RID Committee of Experts (Sofia, 16-20 November 2009), he had announced a document arguing that as a result of various developments in the rail sector, such as the Rail Safety Directive (Directive 2004/49/EC), the setting up of the European Railway Agency and Chapters 1.9 and 1.11 of RID, it could be demonstrated that there was equivalence with the requirements of the Seveso II Directive (see report OTIF/RID/CE/2009-A, paragraphs 129 to 132). In the meantime, there

was a document summarising equivalences and differences, which at the moment was still being analysed.

39. The working group thanked the representative of UIC for drafting this document, which would be very useful for those working at the interface between the law on incidents, dangerous goods and railways. In the area of general rail safety, it might also further understanding of the call for derailment detectors. The meeting thought it important that UIC should make this support resource available.
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### **Commentaires de la France au document informel INF.1**

Le document présenté par l'Italie appelle plusieurs remarques :

1. Ce document est présenté comme faisant partie des mesures urgentes à prendre suite à l'accident de Viareggio. Les causes officielles de cet accident n'ayant pas encore été déterminées, il ne peut y avoir de lien établi, mais l'on sait de manière sûre qu'il ne s'agit pas de fuites de gouttes.
2. Les éléments présentés dans ce document, à travers l'étude des fuites de gouttes survenues entre le 1<sup>er</sup> juillet 2009 et les 31 décembre 2010, nécessitent quelques commentaires :
  - Il ressort que 85% des événements se sont produits sur des transports ayant leur origine à l'étranger et 40% sont liés à des wagons entrés par le point frontière français de Vintimille.
  - Une analyse détaillée du tableau joint au document, montre que sur les 20 événements attribués à la frontière de Vintimille dans la note, 12 seulement se sont réellement produits sur ce site. Les 8 autres sont des événements qui sont survenus plusieurs heures après le passage à Vintimille et donc après la vérification faite à la frontière.
  - Sur 12 événements, 3 n'ont pas été communiqués au conseiller à la sécurité de l'entreprise ferroviaire française, ce qui pose problème pour y remédier.
  - La majorité des événements survenus sont liés à des fuites au niveau du trou d'homme (8 cas), 4 cas sont liés à des fuites sur la phase gazeuse, 3 sont liés à des brides défailtantes (fuite robinet Klinger) et 1 cas est lié à un bouchon fileté.
  - Les détenteurs de wagons sont VTG (surtout) et ERMEWA.
  - Selon le document de l'Italie, la cause des fuites serait due à :
    - Une maintenance de routine peu attentive en ce qui concerne les joints et l'étanchéité au niveau des boulons,
    - Des chargements et déchargements réalisés par du personnel pas assez formé, ni sensibilisé.
3. Ce problème a déjà été soulevé à la dernière réunion du groupe de travail, et la France, comme elle s'y était engagée a fait un travail de fond sur ce dossier qui concerne le trafic de gaz entre la France et l'Italie.

Les mesures qui ont été prises sont les suivantes :

- Des contrôles ferroviaires ont été organisés en décembre 2010 sur le site du triage de Miramas (dernier triage avant la frontière) ainsi que chez le chargeur à Lavera (site industriel). Ces contrôles n'ont rien donné et le matériel a été vérifié conforme.
- Le conseiller à la sécurité de la SNCF a établi des courriers aux chargeurs afin de les sensibiliser à ce problème récurrent.
- Une réunion a été organisée avec les principaux détenteurs de wagons (VTG et ERMEWA) pour vérifier le suivi de la maintenance effectuée sur les wagons signalés. Les détenteurs ont apporté la preuve que cette maintenance a bien été réalisée.

Le résultat de toutes ces mesures est que depuis janvier 2011 il n'y a plus d'incident de fuites de gouttes signalés par l'Italie.



4. Par contre, la France a également réalisé, avec l'aide de la SNCF, une étude approfondie sur le problème des mêmes wagons qui reviennent à vide, non dégazés, d'Italie.

Le constat est le suivant :

- En 2009 16 rapports RID ont été adressés à TRENITALIA dont 11 pour boulons et écrous de brides manquants ou desserrés, notamment en provenance de la gare de CASTEL-GUELFO (à 8 reprises).
- En 2010, 12 rapports RID ont été adressés à TRENITALIA dont 5 pour boulons et écrous de brides manquants ou desserrés. Ces envois avec défauts provenaient notamment de PORTOGRUARO (5 rapports), DOMEGLIARIA (3 rapports) et APRILIA (2 rapports). Un événement a même généré une fuite sur la phase gaz due à des boulons desserrés sur bride.
- En 2011 jusqu'à ce jour, 7 rapports RID ont été envoyés à TRENITALIA dont 3 pour problèmes sur brides défailtantes.

Ce chiffre est inquiétant puisque la campagne de gaz entre la France et l'Italie vient à peine de commencer (octobre-avril).

La France souhaite donc profiter de l'opportunité donnée par le document de l'Italie pour demander qu'un travail réciproque sur les retours à vide à destination de la France soit réalisé.

Le principal opérateur ferroviaire – la SNCF – ayant mis en place depuis plusieurs années déjà, un tableau d'enregistrement de tous les événements affectant le transport de marchandises dangereuses sur le territoire français, cette base de donnée peut, et on l'a vu dans le point précédent, donner des indications précises sur les axes de travail : relation concernée, chargeur ou destinataire concernés, détenteur de wagon concerné, voire wagon concerné puisque les n° de wagons figurent sur cette base.

Cette méthode présente l'avantage de cibler géographiquement les trafics posant problème et d'y faire apporter très rapidement des corrections, puisque les intervenants selon 1.4 du RID sont clairement identifiés.

De plus, la mise en place de contrôles ferroviaires, dont les choix sont orientés à travers la même base de données, va permettre de verrouiller un peu plus le respect des prescriptions du RID, dans la mesure où tout contrôle positif donnera lieu à l'établissement d'une contravention.

C'est la raison pour laquelle la France estime que la mise en place systématique d'une checklist telle que proposée par l'Italie n'est pas la solution la plus appropriée dans la mesure où elle ne fait qu'acter matériellement la responsabilité des intervenants – qui est déjà clairement établie au 1.4 du RID – mais qu'elle n'apporte pas de garantie sur la vérification réellement effectuée.

Un système de contrôle de la bonne application du RID – assorti de contravention en cas de manquement – réalisé par les Etats membres nous semble apporter plus de garantie sur le respect de la législation au regard de la sécurité des transports.

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