

OTIF



**ORGANISATION INTERGOUVERNEMENTALE POUR
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN
INTERNATIONALEN EISENBAHNVERKEHR**

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

INF. 8

11 November 2011

(Original: German)

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

**Subject: 12th session of the RID Committee of Experts' Working Group on Tank and Ve-
hicle Technology**
(Hamburg, 6/7 October 2011)

Note by the Secretariat

Please find below the draft report of the 12th session of the Working Group on tank and vehicle technology (Hamburg, 6 and 7 October 2011). Owing to the lack of time, it has not been possible to obtain approval of this draft from the working group participants, with the exception of paragraphs 6 to 16.

1. The 12th 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 I in document OTIF/RID/CE/GT/2011-A/Add.1).

Chairmanship of the working group

3. As decided at the 44th 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.

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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 11th 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 11th 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 HADB"), 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 50th 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 leakproof on both sides and that no more of the product remained between the first and second closing devices. 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 obligations with regard to checking the leakproofness of the closing devices were deemed to be met if the CEFIC checklists were utilised.
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 50th 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 leakproofness checks carried out after filling or discharge.
23. The representative of France criticised the fact that these measures by Italy had ostensibly been implemented in connection with the accident in Viareggio and even though an accident report was still not available, drip leaks could be ruled out as the cause of the accident. She also criticised the fact that the French authorities had not received any information on defects noted at French border stations, which would have enabled the dangerous goods safety advisors of the French undertakings concerned to be called in in good time.

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 businessEntity 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.
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 enable hump-shunting over the humps in marshalling yards that did not have track brakes at that time.
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 UIC's internal enquiries that this requirement was still justified, it would have to be included 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 50th session of the RID Committee of Experts.

Risk assessment

38. The representative of UIC reminded the meeting that at the 47th 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.
