

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

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**Report of the 11<sup>th</sup> meeting of the RID Committee of Experts'  
Working Group on Tank and Vehicle Technology**

**(Berne, 18 and 19 May 2010)**

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1. The 11<sup>th</sup> session of the RID Committee of Experts working group on tank and vehicle technology was held on 18 and 19 May 2010 at the headquarters of the Intergovernmental Organisation for International Carriage by Rail in Berne.
2. The following countries took part in the discussions at this meeting: Belgium, Czech Republic, France, Germany, Latvia, Netherlands, Switzerland and the United Kingdom. The European Commission and the European Railway Agency (ERA) were also represented. 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 (CE-FIC) also took part (see Annex II to document OTIF/RID/CE/GT/2010-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: Adoption of the agenda**

4. The provisional agenda contained in the invitation (document A 81-03/501.2010) was adopted.

### **Item 2: Derailment detection**

5. At the request of the European Commission, the RID Committee of Experts had decided at its 47<sup>th</sup> session to defer by two years the introduction of provisions into RID concerning the detection of derailments, which it had initially been planned to include in the 2011 edition of RID. The two year deferment period should be used to carry out by the end of 2011 the studies relating to the **prevention or** detection of derailments that would be undertaken by the European Commission and the European Railway Agency (ERA), the results of which should be communicated to the RID Committee of Experts (see also paragraphs 112 to 117 of the final report OTIF/RID/CE/ 2009-A of the 47<sup>th</sup> session of the RID Committee of Experts).
6. The representative of ERA informed the working group that the **Agency had launched the technical studies listed in the annex to informal document INF.9 of the 47<sup>th</sup> RID Committee of Experts' meeting (details are given in informal document INF.4 of the 48<sup>th</sup> RID Committee of Experts' meeting). The studies on decision-making processes in the context of safety/interoperability directives and RID, and the feasibility study on harmonising risk acceptability criteria would be carried out by the Commission services.** He added that for the time being, there were no interim results to communicate to the working group.
7. The representative of Germany asked the European Commission and ERA to confirm that the studies currently being carried out by ERA would really in fact lead to provisions on the detection of derailments being included in the regulations in 2013. The representative of ERA **reminded the working group that the results of the studies should be discussed in 2012 by the Joint EC Committee on Railway Safety and on Transport of Dangerous Goods in order to update and complement the EU position on freight train derailments, including TDG trains. Therefore, ERA could neither** anticipate the result of the **studies nor the result of these discussions.** He explained that the Agency was looking at the question of derailment from a global perspective. It was not just studying the various systems for detecting derailments and their effectiveness, it was also analysing the causes of derailments and the possibilities for **mitigating** and preventing the derailment of freight trains.
8. The representative of Germany drew attention to the fact that introducing provisions on the detection of derailments had been postponed because, among other things, the European Commission and ERA had claimed that the existing derailment detection systems did not function satisfactorily. He asked what the European Commission was doing to eliminate the disadvantages of the existing systems and to promote alternative systems. He emphasised that it

was essential to avoid postponing the introduction of provisions on the detection of derailments again if alternative systems were still not available in 2012. The representative of Switzerland shared Germany's concerns and asked the European Commission to define clearly the requirements that derailment detection systems had to meet. The representative of UNIFE supported this request and explained that the industry would not work on developing any new systems until the objectives had been clearly defined. In addition, the time needed to carry out tests and to complete the approval procedure would have to be taken into account.

9. **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 it was not rather counter-productive, in terms of making progress in the work, to limit application of derailment detectors only to freight wagons carrying very dangerous substances and whether it should not be extended to all freight wagons carrying dangerous goods. The representative of ERA stated that ERA would inform the working group as soon as possible about available results from the derailment studies.**
10. The working group invited the industry representatives to check whether and how the problem of the automatic braking of a train after a derailment is detected could be eradicated. The representative of UNIFE explained that if the driver had to be informed immediately of the derailment so that he could decide himself which was the best place to stop the train, the same technology should be used on freight trains as is already used on high-speed trains. However, the basic conditions for this system to function would be that all freight wagons would have to have an electricity supply and data transmission equipment.
11. The chairman asked the representative of ERA to keep the working group and the RID Committee of Experts informed of progress on the studies on the detection of derailments and asked the industry to continue to give thought to the different technical solutions. The representative of ERA invited the States and the industry to participate actively in the consultations that were being held in connection with the studies on the detection of derailments.

### **Item 3: Drip leaks**

Document: OTIF/RID/CE/GT/2010/3 (Germany)

12. At the last meeting of the working group, Germany had announced that it would submit a report to the next meeting on the results of the research project on the problem of drip leaks, which had been commissioned by the German Petroleum Industry Association.
13. In the meantime, this issue had been raised at the Joint Meeting, where various initial solutions had been discussed in the tank working group and, as a temporary solution, an alternative wording had been adopted in 1.4.3.3 (f) and 4.3.2.3.3.
14. The representative of Germany pointed out that the amended wording of 1.4.3.3 (f) and 4.3.2.3.3 was not a permanent solution to the problem of drip leaks. He particularly regretted that the tank working group had abandoned the sensible initial solutions, such as introducing working guidelines for filling and emptying facilities. This was why Germany did not anticipate continuing with the examination of this problem, but had said that it was prepared to support any initiative by States and the industry that might wish to continue to work on this subject.
15. Several delegations thought the new texts in 1.4.3.3 (f) and 4.3.2.3.3 did not make clear how the filler has to proceed to ensure that the closures are leakproof. In addition, in the discussions at the Joint Meeting, the possible repercussions on new participants had not been taken into account.

16. The representative of the Netherlands emphasised the importance of researching measures to ensure quality throughout the transport chain. If no appropriate solutions were found to improve quality assurance in the transport chain, technical solutions such as **checking the leak-proofness of closures by using (vacuum) pressure should be considered**.
17. The representative of CEFIC informed the working group that the German Chemical Industry Association had set up a national working group to look at the problem of drip leaks. This working group, which comprises representatives of the chemical and petroleum industries, among others, should examine more closely the filling and discharge processes. The representative of CEFIC pointed out that the results of this examination could perhaps lead to guidelines for fillers being drafted.
18. The representative of Germany informed the working group of his country's intention to carry out systematic checks, with the focus on the various aspects of these problems. The representative of France provided information on the French authorities' efforts to improve the situation in this area. By analysing the reports on incidents involving drip leaks, the competent authorities had been able not only to identify the causes of the drip leaks but also the fillers concerned, whom they contacted directly. As a result, the situation had improved. The working group took note of the measures taken by Germany and France. The effectiveness of these measures should be analysed at its future sessions.
19. The members of the working group said they would like to have more information on the results of the research project developed by the German Society for Petroleum and Coal Science and Technology (DGMK). As the report could only be ordered online from DGMK ([http://www.dgmk.de/downstream/link\\_publicationen.html](http://www.dgmk.de/downstream/link_publicationen.html)) and was not free of charge, the chairman would try to obtain a free copy and make it available to the OTIF Secretariat to distribute to members of the group.
20. The working group recognized the importance of the work on this subject to improve the current situation and encouraged Germany, France and the German Chemical Industry Association's working group to continue their efforts in this respect.

**Item 4: Transitional provisions in RID 1.6.3**

Document: OTIF/RID/CE/GT/2010/4 (Germany)

21. At the 47<sup>th</sup> session of the RID Committee of Experts, the working group was mandated to check the transitional provisions in RID 1.6.3, which did not make clear which construction requirements could be derogated from. The working group had been asked to check which transitional provisions could be deleted because they had become obsolete or because the tank-wagons or battery-wagons concerned had reached the end of their useful service life (see also paragraphs 22 to 24 of the final report OTIF/RID/CE/2009-A on the 47<sup>th</sup> session of the RID Committee of Experts).
22. In order to fulfil the working group's mandate, the representative of Germany had set out the results of the analysis of the transitional provisions specific to tank-wagons and battery-wagons in his document OTIF/RID/CE/GT/2010/4.
23. As the proposals in this document to amend or delete transitional provisions could also have repercussions for fixed tanks (tank-vehicles), demountable tanks, battery-vehicles and tank-containers, and as some of the transitional provisions reviewed were common to both modes of transport (RID and ADR), the working group requested that this matter should first be examined by the Joint Meeting's tank working group. For the next session of the tank working group, Germany said it was prepared to draft a document explaining the principles behind the proposed amendments. At the same time, the representative of Germany encouraged those States that disagreed with the principles proposed to submit their arguments in the form of informal documents at the next session of the tank working group.

**Item 5: Composition of dangerous goods trains to avoid a BLEVE**

Documents: OTIF/RID/CE/GT/2010/1 (Netherlands)  
OTIF/RID/CE/GT/2010/1/Add.1 (Netherlands)

24. The representative of the Netherlands informed the working group of his government's intention to set up a basic (rail) network for the carriage (by rail) of dangerous goods on a risk basis approach, which would take into account the composition of trains carrying dangerous goods, with the aim of avoiding the risk of a "hot" BLEVE. Analysis of risk assessments in the Netherlands had shown that the greatest risk of a so-called "hot" BLEVE, the effects of which were more harmful than those of a "cold" BLEVE, arose from trains composed of tank-wagons containing liquefied flammable gas placed next to tank-wagons containing highly flammable liquids. The Dutch government encouraged participants in the carriage of dangerous goods to make a commitment to compose trains in such a way that the distance between a tank-wagon filled with liquefied flammable gas and a tank-wagon containing highly flammable liquid is at least 18 metres ("hot BLEVE proof composition"). As a significant number of wagons carrying liquefied flammable gas in the Netherlands arrive from abroad, the representative of the Netherlands invited the members of the working group to reflect on the international aspect of this problem.
25. The representatives of UIC and Switzerland pointed out that the risk of a BLEVE should not be overestimated, given that up to now, there had not been any accidents accompanied by this phenomenon on the European rail network. In addition, the representative of Switzerland was of the view that the risk of a "hot" BLEVE could also be reduced if the requirement to fit energy absorption elements were extended to tank-wagons carrying flammable liquids.
26. Several delegations questioned the relevance of such a measure to improving safety. On the contrary, the members of the working group were of the view that more frequent marshalling movements could themselves generate additional risks of accidents and incidents.
27. The representative of UIC pointed out that **amending the rules on the composition of trains might come under** European Commission Regulation 352/2009 on the adoption of a common safety method on risk evaluation and assessment. **From 19 July 2010 this regulation would be applied to all significant technical changes affecting vehicles and to all significant changes concerning structural sub-systems. With respect to operational or organisational changes, this regulation remained voluntary until 1 July 2012.**
28. The working group decided to deal with this subject again once the results of the work of the Joint Meeting's informal working group on reducing the risk of a BLEVE were available.

**Item 6: Accident reports**

Report on the accident at Barendrecht (Netherlands)

Document: OTIF/RID/CE/GT/2010/2 (Netherlands)  
OTIF/RID/CE/GT/2010/2/Add.1 (Netherlands)

29. The working group took note of the preliminary report of the accident which occurred on 24 September 2009 in Barendrecht near Rotterdam. One of the drivers passed a red light and this was the cause of the frontal collision of two freight trains. In one of the two trains, seven tank-wagons filled with UN No. 1268 (petroleum distillates or petroleum products) had been fitted with energy absorption elements, even though the regulations do not prescribe them for this dangerous substance.

30. Following a comment by the representative of UIC, the representative of the Netherlands explained that the death of one person and the injuries suffered by another had not been caused by the dangerous goods being carried and that the accident report should be corrected accordingly.
31. From the information provided by the representative of the Netherlands, the chairman concluded that the energy absorption elements had functioned appropriately, i.e. they had only reacted once the impact speed was more than 12 km/h (see special provision TE 22 in 6.8.4 (b)). He also noted that this accident did not have any direct consequences for the regulations.
32. The representative of the Netherlands pointed out that the Dutch authorities would continue with their investigation of the accident and that the final results should be available some time this year.

Report on the accident near Stewarton (United Kingdom)

Informal document: INF.1 (United Kingdom)

33. The representative of the United Kingdom informed the working group of the accident that occurred near Stewarton on 27 January 2009. After a railway bridge collapsed, some wagons in a freight train carrying gas oil, diesel and kerosene (UN Nos. 1202 and 1223) derailed and overturned. Nearly 220 000 litres of diesel and kerosene leaked from **four of** the derailed wagons, causing considerable environmental damage. The analysis of the accident revealed that following the overriding of the buffers, the drawhooks punctured the tanks on **three of** the adjacent wagons.
34. The chairman pointed out that UIC leaflet 573 prescribes a minimum distance of 300 mm between the headstock plane and the most protruding point at tank extremity of the tank-wagon. As this distance could not be maintained in the United Kingdom because of the smaller loading gauge, alternative measures to protect against the overriding of buffers should be taken. **The chairman asked if such alternative measures were in place in the United Kingdom.**
35. The representative of the United Kingdom explained that the provision prescribing devices to protect against the overriding of buffers had been introduced into the regulations in 1980 for new tank-wagons and that the tank-wagons involved in this accident had been built in the end of the 1960s. With regard to tank-wagons built before 1980, only wagons intended for the carriage of liquefied gases and **wagons converted to carry** highly flammable liquids had had to be fitted with devices to protect against the overriding of buffers.
36. The UK Department for Transport had **received a recommendation from** the Rail Accident Investigation Branch to **evaluate the case for** extending the application of special provision TE 25 in 6.8.4 (b), which at present is only prescribed for very dangerous goods, to other dangerous goods. **Some delegates** and the chairman emphasised the **need for a** cost/benefit analysis in **considering** a possible extension of the scope **of this special provision.**
37. The representative of the Netherlands pointed out that **any consideration of** extending special provision TE 25 to other dangerous goods **at some point in the future** should be examined in conjunction with **the possibility of** extending the application of other technical measures, such as derailment detectors and energy absorption elements.
38. **No other delegation wanted to enter the discussion on whether special provision TE 25 should be extended to other dangerous goods. The chairman noted that the current scope of TE 25 had been agreed after careful consideration within the working group and at the RID Committee of Experts and little evidence had been presented to warrant a change.**



Measures taken by the Italian authorities after the accident in Viareggio

39. As the report on the Viareggio accident had not yet been published and the representatives of Italy had cancelled their participation shortly before the meeting, the working group was unable to discuss any potential consequential amendments to RID.
40. Nevertheless, the representative of UIC drew the working group's attention to the measures taken by the Italian National Rail Safety Agency (ANSF), such as additional checks of the closing devices on tank-wagons at Italian border stations, which were causing problems for railway undertakings.
41. The representative of France informed the working group of the decisions taken by ANSF for the carriage of dangerous goods by rail between Italy and France. She asked for the opinion of working group members on the validity of these decisions and the way in which Italy had acted. She thought it was necessary to investigate whether the way these additional measures were implemented (virtually immediate application or within very short deadlines) contravened Article 5 of Directive 2008/68/EC and RID 1.9.4. She also pointed out that the texts of the decisions referred to various paragraphs in RID which had not been correctly interpreted (e.g. 6.8.2.4.4). The text the representative of France prepared on this issue setting out the various decisions taken by ANSF is contained in Annex I to this report.
42. The representative of the European Commission informed the working group that the European Commission had begun an enquiry to establish whether Italy had contravened European law by implementing these additional measures. He regretted that the representatives of Italy were not present at this meeting to explain the reasons behind these decisions.

**Item 7: Tank-wagon Handbook**

43. At the last meeting of the working group, the States and organisations had been called upon to look at setting up an Internet platform containing information on the equipment and operation of tank-wagons (see also paragraph 21 of the report of the 10<sup>th</sup> meeting of the working group (OTIF/RID/CE/GT/2009-A)). No delegation spoke on this subject.
44. The working group noted that there had not been any progress concerning the work on the tank-wagon handbook. It decided to return to this topic when a specific proposal was submitted.

**Any other business**

45. The next session of the working group will be held on the basis of the discussions at the Joint Meeting on the transitional provisions, progress on ERA's studies concerning derailment detection and the availability of more detailed reports of the Barendrecht and Viareggio railway accidents.

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**Measures taken by the Italian authorities for the carriage  
of dangerous goods by rail between Italy and France**

(Communication from France)

France requests information and explanations with regard to the regulations in force (RID and others) concerning the decisions taken by the Italian authorities, particularly the Italian National Rail Safety Agency (ANSF) for the carriage of dangerous goods.

In the context of items 3 and 6 of the agenda of the working group on tank and vehicle technology, France wishes to share some information with the meeting's other Member States.

These decisions have had an impact on the carriage of dangerous goods in wagons between France and Italy since the beginning of 2010.

France was informed of the decisions unofficially either by wagon keepers or by railway undertakings, which were very surprised by such decisions and which did not understand either the basis or the justification for them in light of the current regulations.

The decisions taken with reference to the accident in Viareggio are as follows (this is not an exhaustive list)

- In future, the axles must be traceable and if not, the wagons will be subject to a 60 km/h speed restriction.
- By virtue of 6.8.2.4.4, exceptional checks will in future be required at the borders.
- In future, a checklist must be drawn up by all operators when loading and unloading; this must be done with effect from 21 April 2010 for the carriage of classes 2, 3, 4, 5, 6, 8 and 9.

The checklists must be attached to the CIM consignment notes if they are in paper form, and if they are in electronic form, they must be given to the train drivers in an envelope. If not, trains will not be accepted. This checklist is being requested by virtue of RID Chapter 1.4.

France wishes to have the opinion of the working group on tank and vehicle technology and doubtlessly also that of the RID Committee of Experts on these decisions, which do not seem to be in conformity with the regulations in force, but which must nevertheless be applied in Italy almost immediately, or which have already been applied.

France also wishes to know if the other Member States have been confronted with this type of requirements.

Lastly, France asks what procedures could be adopted if new decisions of this type were made mandatory?

According to RID 1.9.4, must not such decisions be notified in advance to the OTIF Secretariat so that it can bring them to the attention of the other Member States, and according to Article 5 of Directive 2008/68 concerning the transport of dangerous goods, must not the measures envisaged be notified to the Commission, so that the Commission can decide whether or not to authorise them for a limited period?

Clarification of these issues would be very useful.