OTIF

ORGANISATION INTERGOUVERNEMENTALE POUR LES TRANSPORTS INTERNATIONAUX FERROVIAIRES

ZWISCHENSTAATLICHE ORGANISATION FÜR DEN INTERNATIONALEN EISENBAHNVERKEHR

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TO THE GOVERNMENTS OF THE MEMBER STATES OF OTIF

Final report of the RID Committee of Experts working group on tank and vehicle technology (London, 6 and 7 April 2006)

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1. At the invitation of the UK Department for Transport (DfT), the 7th meeting of the RID Committee of Experts' Working Group on Tank and Vehicle Technology was held on 6 and 7 April in London.

2. The following States took part in the discussions at this meeting: Belgium, the Czech Republic, France, Germany, Netherlands, Poland, Sweden, Switzerland, Spain and the United Kingdom. The International Union of Railways (UIC) and the International Union of Private Wagons (UIP) were also represented.

Chairmen

3. As already decided at the first session, Mr. H.-J. Kellerhaus (Germany) chaired the meeting and Mr. A. Bale (United Kingdom) was vice-chairman.

Adoption of the agenda

4. The provisional agenda contained in the invitation (document A 81-03/503.2006) was adopted. For the next meeting, it was decided to change the numbering of the documents so that there would be no confusion between the documents for different meetings.

ITEM 2 a): Derailment detection

Document: INF. CH 1

5. The representative of Switzerland introduced his document, which set out developments and the current status of the derailment detectors that have been put into service in Switzerland. He explained that for the derailment detector, a tolerance range of 5 g would have to be maintained because of the possibility of oscillations in the main brake pipe pressure, **possible** temperature fluctuations **and manufacturing tolerances**. Thus because of the falsely activated detectors, both the lower and the upper threshold had been increased by 1.5 g. If the trial with the derailment detectors set at these values yielded a positive result, Switzerland would propose an amendment to UIC leaflet 541-08.

6. In the subsequent discussion, the positions that had already been expressed at the sixth meeting were repeated (see document A 81-03/503.2005, paragraph 7). It was again pointed out in particular that fitting wagons with mechanical derailment detectors can only be prescribed if, due to the negative effects on all railway operations, false activations can be ruled out, and if it has been proved that derailment can be detected with certainty even with the higher threshold values.

7. As the RID Committee of Experts alone can only take a decision on the use of mechanical/pneumatic derailment detectors on wagons for the carriage of dangerous goods and as an infrastructure is necessary for using electronic derailment detectors, and this infrastructure will be used for other purposes and is therefore within the competence of the European Railway Agency (ERA), co-operation with ERA in this area was again called to mind. In addition, such co-operation is necessary because consideration must also be given to fitting other wagons with derailment detectors. For the future work, the working group considered it vital that ERA give its views on the use of telematics.

8. It was decided to continue to pursue developments concerning mechanical-pneumatic derailment detectors in Switzerland. At the next meeting of the working group, there should also be a discussion on electronic derailment detectors with industry representatives. National representatives were asked to let the Secretariat have the names of industry contacts who could be invited to this meeting.

ITEM 2 b): Measures to prevent and limit damage from the overriding of buffers

Methods for measuring the effectiveness of sandwich covers

9. The representative of Germany was asked to submit a more developed document containing considerations on a test method and the future work. This document should also contain an estimate of the costs of the tests required.

Measures for tank-containers

10. This item will remain on the agenda of the next meeting of the working group. A decision will then be taken on whether this subject should continue to be pursued.

ITEM 3 a): Telematics

Documents: INF. D 1, INF. IAT, INF. CH 2

11. Document INF. D 1 contained an extract from the final report of the German Working Group on Tank and Vehicle Technology of February 2002, setting out the status of the discussion on the subject of "telematics". Document INF. IAT contained a report on the EUREKA Project "LOG-CHAIN TRANCELOG SAFETY", setting out the possibilities for monitoring railway vehicles and their loads via satellite. Lastly, document INF. CH 2 contained some fundamental considerations concerning telematics that seem important for the future work.

12. In addition, the representative of Germany provided information on the current status of the EU's MITRA Project (**M**onitoring and **I**ntervention for the **Tra**nsportation of Dangerous Goods) (see also document A 81-03/503.2005, paragraph 22). This project comprised the following main elements: vehicle location, two or three dimensional visualisation of the scene of the accident, retrieval of additional information concerning the vehicle and load, integration of dangerous goods databases for substance-related data, "transfer" of a transport operation between two control centres in order to permit uninterrupted monitoring, **also beyond national borders,** raising an alarm via panic buttons, sensors or external signals. In addition to information on the dangerous goods being carried, the emergency services receive information on the precise location of the accident and can arrange rapid evacuation if necessary. By taking into account weather data, assessments can also be made as to how the effects of an accident may spread.

13. The working group welcomed this project (see also document A 81-03/503.2005, paragraph 23), **as a range of research projects and the telematics solutions currently used in practice often only include specific applications, and to some extent these only apply to one mode of transport. This is an obstacle to the formation of an uninterrupted intermodal chain of information and surveillance, which is essential in the carriage of dangerous goods. But a forward-looking method of resolving this problem should place prevention at the centre of a framework of actions, as well as the limitation of damage by means of direct and appropriate measures in the event of damage occurring. The representative of Germany** therefore said he was willing to prepare a discussion paper for the next session of the RID Committee of Experts setting out **the requirements of a telematics system from the point of view of dangerous goods and** the possible participants and the benefit for these participants. **After suitable discussion in the RID Committee of Experts, this discussion paper should then be sent to the Joint Meeting, as such a system is only of use if it can be applied to all modes of transport.**

ITEM 3 b): Reducing the speed of complete train-loads of dangerous goods

Document: INF. D 2

14. Document INF. D 2 contained an extract from the final report of the German Working Group on Tank and Vehicle Technology of February 2002 setting out the status of the discussion on the subject of "reducing the speed of complete train-loads of dangerous goods".

15. The working group agreed that section 1.9.2 b) of RID already provided Member States with the possibility of laying down speed restrictions at certain points, **evidence of** the need **of** which must be **provided** in accordance with section 1.9.3 of RID. As no separate networks are available in Europe for passenger and freight traffic, a general speed restriction for complete train-loads of dangerous goods would have considerable negative effects on passenger and freight transport, as in addition to increased energy consumption and wear and tear, an increase in braking and accelerating operations would also lead to an increased risk. For these reasons, the working group did not support a general speed reduction. It recommended that this issue be deferred until new proposals **containing quantitative assessments of the advantages and disadvantages** could be submitted.

ITEM 3 c): By-passing built-up areas and stations

Document: INF. D 3

16. Document INF. D 3 contained an extract from the final report of the German Working Group on Tank and Vehicle Technology of February 2002 setting out the status of the discussion on the subject of "by-passing built-up areas and stations".

17. The working group also agreed on this item that section 1.9.2 b) of RID already gives Member States the possibility of requiring built-up areas to be by-passed if **evidence of** the need for this is **provided** in accordance with section 1.9.3 of RID. However, in this case, a risk comparison should be carried out in order to avoid the by-pass route leading to an increased risk, for example because of numerous level crossings. In many cases, it would only be possible to by-pass built-up areas by building new lines. The working group recommended that this issue be deferred until new proposals **containing quantitative assessments of the advantages and disadvantages** could be submitted.

ITEM 3 d): Emergency management and dangerous goods atlas

Document: INF. D 4

18. Document INF. D 4 contained an extract from the final report of the German Working Group on Tank and Vehicle Technology of February 2002 setting out the status of the discussion on the subject of "emergency management and dangerous goods atlas".

19. The working group considered the subject of "emergency management" to have been dealt with, as the obligations of the participants were already covered sufficiently in 1.4.1.1 and 1.4.1.2 and in the new 1.4.2.2.5 and in the amended 1.4.3.6 of the 2007 edition of RID, and in many States, implementation of these provisions had already begun.

20. The working group considered the dangerous goods atlas as a possible working tool to enable the emergency services to receive targeted training on the dangerous goods carried in their area. The data that the carrier will have to provide to the infrastructure manager in accordance with 1.4.2.2.5 as it will enter into force on 1 January 2007 could be used to produce such a dangerous goods atlas. The working group recommended not to include any specific provisions in RID, as some States already had national rules concerning civil protection.

ITEM 4 a): Drip leaks

Document: INF. NL 1

21. Document INF. NL 1 contained answers to various questions that had been raised at the last meeting of the working group on the subject of drip leaks (see document A 81-03/503.2005, paragraph 26). In order that he could amend his original proposal, the representative of the Netherlands wished to have the working group's advice on whether a pressure test should be prescribed for internal shut-off devices and whether emptying the filling and discharge devices after filling or discharge should be prescribed.

Document: INF. D 5

22. Document INF. D 5 contained a report on the ascertainment of drip leaks in Germany. The representative of Germany considered that a majority of substance leaks could be avoided if **the provisions of 4.3.2.3.4 and of section 1.4.3 were made clearer, the aim being not to allow any residues of the load to remain in the filling and discharge devices.**

23. Several delegations confirmed that drip leaks had also been discovered in their countries. However, they were of the view that these were minor problems that could also be resolved on an individual basis. If additional provisions were to be incorporated into the regulations, only the protective aim should be formulated, but not individual measures which, in addition, were not applicable to all valve design types.

24. It was also pointed out that with the 2007 amendments to RID/ADR, 6.8.2.2.2 would specify that the last shut-off device must be leakproof to the extent that the substance is retained without leakage. Up to now, the last shut-off device has to some extent been interpreted only as a dust-proof closure.

25. The working group was of the view that more detailed investigations should be carried out on the classes involved and the quantities that leak in relation to the quantities carried. It would also have to be investigated whether technical failures or human error were involved. In connection with this, it should be checked whether the provisions for the filler in 1.4.3.3 (f) and in 4.3.2.3.3 and 4.3.2.3.4 of RID were sufficient or whether clarification should be provided on the complete emptying of the filling and discharge devices.

ITEM 4 b): Position of the wagon in the train (barrier wagon rule)

Document: INF. S 1

26. Document INF. S 1 stated that following a cost/benefit analysis, the barrier wagon rules that existed in Sweden before 2000, and which went beyond the requirements of RID, had been revoked. As a supplement to the rule in 7.5.3, it has been **prescribed since 2000 for domestic** carriage in Sweden that two-axle barrier wagons **have** to be loaded.

Document: INF. OTIF 1

27. Document INF. OTIF 1 set out the discussion that was held in 1994 and 1995 on further-reaching rules concerning barrier wagons.

28. The working group's view was that before this problem was dealt with in more depth, it should await the discussion that was taking place in a new Joint Meeting working group on the subject of BLEVE (Boiling Liquid Expanding Vapour Explosion) and other catastrophic situations.

29. UIC said it was prepared to carry out a study on the advantages and disadvantages of barrier wagons in a train composition.

Next meeting

30. Agenda items 4 c) to 4 f), which were not dealt with at this meeting, were deferred to the next meeting in April 2007. Germany said it was prepared to hold the next meeting of the working group in Munich, where various railway technology undertakings were based.

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Annex 1

LIST OF PARTICIPANTS

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