OTIF

ORGANISATION INTERGOUVERNEMENTALE POUR LES TRANSPORTS INTERNATIONAUX FERROVIAIRES

ZWISCHENSTAATLICHE ORGANISATION FÜR DEN INTERNATIONALEN EISENBAHNVERKEHR

INTERGOVERNMENTAL ORGANISATION FOR INTERNATIONAL CARRIAGE BY RAIL

OTIF/RID/CE/GT/2007-A

20 August 2007

Original: German

TO THE GOVERNMENTS OF THE MEMBER STATES OF OTIF

Final report of the RID Committee of Experts' Working Group on Tank and Vehicle Technology

(Munich, 14 and 15 June 2007)

For reasons of cost, only a limited number of copies of this document have been made. Delegates are asked to bring their own copies of documents to meetings. OTIF only has a small number of copies available.

Tel. (++41) 31 - 359 10 17 • Fax (++41) 31 - 359 10 11 • E-Mail info@otif.org • Gryphenhübeliweg 30 • CH - 3006 Berne/Bern

1. At the invitation of the German Federal Ministry of Transport, Building and Urban Affairs (BMVBS), the 8th session of the RID Committee of Experts' working group on tank and vehicle technology was held on 15 June 2007 in Munich. **On the day before the working group meeting, a workshop entitled "Telematics applications in the intermodal transport of dangerous goods" was organised by BMVBS. The presentations given at this workshop can be downloaded from:**
http://www.bmvbs.de/Verkehr/Gefahrgut/Veranstaltungs-dokumentationen-,2925.1000785/Gefahrgut-Workshop-Telematikan.htm?global.back=/Verkehr/Gefahrgut/-%2c2925%2c0/Veranstaltungs-dokumentationen.htm%3flink%3dbmv_liste%26link.sKategorie%3d.

2. The following States took part in the discussions at this meeting: Belgium, Germany, France, Netherlands, Austria, Sweden, Switzerland, Czech Republic and the United Kingdom. The European Commission and the European Railway Agency (ERA) were also represented. In addition, the International Rail Transport Committee (CIT), the International Union of Railways (UIC), the International Union of Private Wagons (UIP) and the Union of European Railway Industries (UNIFE) also took part (see Annex).

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.

ITEM 1: Approval of the agenda

4. The provisional agenda contained in the invitation (document A 81-03/501.2007) was adopted.

ITEM 2 a): Derailment detection

5. In a presentation (see document OTIF/RID/CE/GT/2007/1, English only), the representative of ERA set out the statistical data from 2004 and **2005.** If the need to reduce the risk of derailments arose, ERA would investigate the following points:

   – construction, maintenance and **inspection** of rolling stock and infrastructure;

   – operating regulations;

   – **requirements for** staff training **and the maintenance of professional competence**;

   – the Organisation's safety management system **and the regulatory systems**;

   – hot axle box or derailment detection equipment on board the rolling stock or at the trackside.

   Currently ERA had no basis to initiate work on measures to reduce the level of risk of derailment. However, ERA would examine the most efficient and economic way to implement appropriate changes as part of the work on Technical Specifications for Interoperability (TSI), if consideration of the following points indicated the need to reduce risk:

   1. Is there any analysis of the need to reduce the risk of derailments involving dangerous goods, including comparison of the different transport modes?

   2. Would improvements in RID reduce the consequences in the event of a derailment?

   3. Is there documentation that calls for a reduction in the level of risk in the railway system – by how much?

He added that in future, the Agency would also include a dangerous goods specialist among its staff.

6. The representative of ERA confirmed that **there** was **no requirement for derailment detection in the TSI for freight wagons. In the presentation it was explained that the Agency has at present no reason to include this requirement in the TSI. According to this TSI, freight wagons for the transport of dangerous goods must also fulfil RID requirements. If** the RID Committee of Experts **decided to include** requirements for derailment detectors on dangerous goods wagons **in RID, then freight wagons for the transport of dangerous goods would have to fulfil these requirements.**

7. The representative of Belgium was **of the view that** derailment detectors on **individual** dangerous goods wagons would only resolve part of the problem, as other wagons in the same train composition could **derail without being detected and cause the derailment of other wagons. She also emphasised that** container carrying wagons, which **carried all types of containers, would not be fitted with detectors when dangerous goods were being carried**.

8. In presentations given at the workshop on “telematics applications in the intermodal transport of dangerous goods”, which had been held the day before the working group, representatives of Swiss Railways (SBB) and Oerlikon-Knorr Eisenbahntechnik (OKE) had explained that the mechanical pneumatic derailment detectors with the modified tripping thresholds were no longer subject to false activation. In trials carried out with ONCF (Office national des chemins de fer du Maroc) in Morocco, it had been demonstrated that despite the modified tripping thresholds **(9.0 +/- 2.5 g instead of 7.5 +/- 2.5 g)**, the derailment detectors tripped reliably. An accident in Cornaux (Neuchâtel) had shown that in accidents, derailment detectors could reduce the extent of the damage. In this particular accident, wagons without derailment detectors had derailed before the derailment detector on a following wagon tripped as a result of the damaged track.

9. The representatives of Belgium and Sweden were concerned that the original tests had not been carried out using the new tripping values. In addition, tests should be carried out using different train compositions and at different temperatures.

10. The representative of OKE pointed out that the new settings were also within the range of accelerations **originally** laid down by UIC. For this reason, UIC had also maintained the approval for the derailment detector with modified tripping values. However, he did concede that the upper threshold **of 10 g that had originally been set** would be exceeded at very low temperatures.

11. For the representative of Austria, the tripping of derailment detectors in tunnels still constituted a deficiency, as **one would still have to wait until the derailment detector that had been activated had vented the main brake pipe. Only then would the detector return to its initial setting so that the train could leave the tunnel. However, it would only be possible to continue the journey after a derailment without the detector tripping again if the derailment detector were to be deactivated by closing the associated stop cock. The representative of Austria also doubted that forced braking was always the best solution if a derailment occurred. The presentations at the workshop had shown that the wagons concerned run very stably provided no other circumstances occurred to change this. Rapid braking, together with the accordion effect of the wagons could bring about such circumstances, while a locomotive driver who has been alerted could react appropriately to the situation.**

12. Following this discussion, the working group recommended to the RID Committee of Experts to include provisions in RID 2009, in the context of a pilot project, for fitting tank-wagons/ battery wagons with derailment detectors, without prescribing specific systems (mechanical/

pneumatic, electronic). The locomotive driver had to receive a clear signal indicating that a derailment had occurred. The venting of the main brake pipe was considered to be a clear signal. This measure should only apply to new-build tank-wagons/battery-wagons for the carriage of certain groups of substances, which had yet to be established. **However, before that could be done,** it would have to be proved in trials that the derailment detector tripped reliably at speeds between 35 and 40 km/h. **After two to four years, it should be checked what the effects of this pilot project were in practice and which groups of substances derailment detectors should be prescribed for.**

13. The representative of Germany said he was prepared to draft a proposal along these lines for the RID Committee of Experts, but the working group should examine it first.

14. The representative of OKE assured the meeting that the necessary tests would be carried out as soon as possible, with the participation of the members of the working group.

15. The representative of Sweden **feared that there might be false activations at low temperatures. His concerns were based on the stiffness of the sub-frame in conditions of severe frost. He asked for data established on the basis, for example, of tests or other investigations that confirmed that cold conditions did not cause false tripping (because of the associated disruptions to traffic and problematical recovery operations) and that the detectors also tripped reliably when a derailment occurred at low temperatures.**

16. The representative of UIP saw the need for a long introductory phase in order to avoid a situation where only one manufacturer's products could be fitted.

ITEM 3 a): Dangerous goods telematics

17. At its last meeting (Berne, 26 - 30 March 2007), the RID/ADR/ADN Joint Meeting had decided to set up an ad hoc working group to establish the terms of reference, a programme of work and a procedure for a future standing working group. This ad hoc working group will meet on 23 and 24 August at the invitation of Germany.

18. The representative of the Netherlands wanted it to be set out in the terms of reference that the forwarders would be kept informed of the progress of the work.

19. For the time being, the working group postponed dealing with the subject of dangerous goods telematics, pending the discussion at the Joint Meeting for all the European land modes. The working group would then come back to this subject if rail-specific requirements had to be established for specifications on what has to be done and how.

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

20. In a detailed presentation, the representative of UIC presented the results of his investigations into the subject of barrier wagons, which he would also submit to the RID Committee of Experts in a formal document.

21. He noted that different States have different barrier wagon rules in place for domestic transport. In Sweden, for example, **it had been prescribed until the end of 2006 that two-axle** barrier wagons **had to** be loaded. In the United Kingdom, there is a very complex list of dangerous goods that are incompatible in a train composition. In Italy, barrier wagons are required behind the locomotive in order to protect the locomotive driver. In Poland, Romania and Hungary, barrier wagons are also used for braking purposes.

22. He explained that an analysis of 1110 accidents had not been able to provide proof that a protection distance would have reduced the scale of an accident. In particular, it had not been possible to establish whether the potential risk also constituted an actual risk.

23. He referred to the additional costs that arose as a result of low wagon and train productivity (maximum train length) and to the increase in marshalling movements. Also, it was not clear at present which trains barrier wagons should be prescribed for (only for trains moving between marshalling yards or also for trains moving between the customer and the marshalling yard).

24. Following an analysis of the advantages and disadvantages, his view was that for reasons of operational efficiency, the barrier wagon rule in 7.5.3 should not be extended.

25. The representative of CEFIC warned against shifting traffic to the roads if additional barrier wagon rules led to an increase in carriage charges. **In response to this, the representative of UIP pointed out that the barrier wagon would have to be loaded in order not to increase the risk of it lifting up. This would make it more difficult to provide suitable wagons and would lead to increased costs.**

26. The representative of the Netherlands explained that an alternative to barrier wagons might be only to approve the carriage of certain compatible substances in the same train composition.

27. The majority of the working group saw no need for further action above and beyond the existing rule in RID 7.5.3, as the UIC study had shown that barrier wagons did not improve safety.

ITEM 5 a): Drip leaks

28. This agenda item was deferred to the next meeting so that a discussion could then be held on the basis of the results or interim results, which would be available by then, of the research project being carried out by the German Petroleum Industry Association (see report of the 43rd session of the RID Committee of Experts, OTIF/RID/CE/2006-A, paragraph 23). The Member States were requested to notify the causes of any drip leaks that were detected in the meantime.

ITEM 5 b): Four-axle wagons

29. The representative of UIC pointed out that the statement contained in informal document INF. 6a) from the 42nd session of the RID Committee of Experts, according to which the risk of derailment for two-axle wagons was in principle greater than for bogie wagons, was incorrect. In the UIC-ERRI study referred to, which was carried out in 1999 and 2000, it had simply been established that if the speed was increased from 100 to 120 km/h, the suspension system used previously was not stable enough.

30. This item would not be pursued until new documents were submitted (see also the report of the 42nd session of the RID Committee of Experts, A 81-03/501.2006, paragraph 79).

ITEM 5 c): Evaluation of the letters and research reports sent by the Association of American Railroads (AAR)
ITEM 5 d): Reports on incidents in the carriage of dangerous goods in accordance with section 1.8.5 of RID
ITEM 5 e): Tank-wagon Handbook

31. These agenda items were deferred to the next meeting.

ITEM 5 f): Monitoring the main brake pipe/air brake check

32. At the next meeting, this agenda item should be discussed in depth on the basis of a presentation given by Dr Walter (Knorr Brakes) at the workshop on “telematics applications in the intermodal transport of dangerous goods”.

Annex 1

Name	Vertretene Stelle/ body represented	Address	Telefon/Phone	Fax	E-mail
Lambermont, Michel	Belgium (Min.)	Service Public Fédéral Mobilité et Transports Service de Sécurité et d'Interopérabilité Ferroviaire Bureau 5B13 Rue du progrès, 56 BE – 1210 Bruxelles	+32-2-277-3915	+32-2-277-4055	michel.lambermont@mobilit.fgov.be
Bailleux, Caroline	Belgium (Min.)	Service Public Fédéral Mobilité et Transports Service de Sécurité et d'Interopérabilité Ferroviaire Rue du progrès, 56 BE – 1210 Bruxelles	+32-2-277-3916	+32-2-277-4055	Caroline.Bailleux@mobilit.fgov.be
Kellerhaus, Hermann-Josef	Germany (Infraserv Logistics GmbH)	Infraserv Logistics GmbH Industriepark Höchst Gebäude G 515 DE – 65926 Frankfurt/Main	+49-69-305-5539	+49-69/305-17372	Hermann-Josef.Kellerhaus@Infraserv.com
Rein, Helmut	Germany (Min.)	Bundesministerium für Verkehr, Bau und Stadtentwicklung – Referat A 33 – Robert-Schuman-Platz 1 DE – 53175 Bonn	+49-228-300-2640	+49-228-300-807-2640	helmut.rein@bmvbs.bund.de
Hoffmann, Alfons	Germany (Min.)	Bundesministerium für Verkehr, Bau und Stadtentwicklung – Referat A 33 – Robert-Schuman-Platz 1 DE – 53175 Bonn	+49-228-300-2645	+49-228-300-807-2645	alfons.hoffmann@bmvbs.bund.de
Ulrich, Armin	Germany (BAM)	Bundesanstalt für Materialforschung und -prüfung Unter den Eichen 87 DE – 12205 Berlin	+49-30-8104-1326	+49-30-8104-1327	armin.ulrich@bam.de

Name	Vertretene Stelle/ body represented	Address	Telefon/Phone	Fax	E-mail
Döring, Ingo	Germany (BAM)	Bundesanstalt für Materialforschung und -prüfung Arbeitsgruppe II.21 Unter den Eichen 87 DE – 12205 Berlin	+49-30-8104-3407	+49-30-8104-1226	ingo.doering@bam.de
Braun, Franz	Germany (EBA)	Eisenbahn-Bundesamt – Referat 33 – Vorgebirgsstraße 49 DE – 53119 Bonn	+49-228-9826-352	+49-228-9826-9352	braunf@eba.bund.de
Goldberg, Claus	Germany (EBA)	Eisenbahn-Bundesamt – Referat 31 – Vorgebirgsstraße 49 DE – 53119 Bonn	+49-228-9826-568	+49-228-9826-9568	goldbergc@eba.bund.de
Pfauvadel, Claude	France (Min.)	Ministère des Transports Mission du Transport des Matières dangereuses Arche sud FR – 92055 Paris la Défense Cedex	+33-1-40818766	+33-1-40811065	claude.pfauvadel@equipement.gouv.fr
Tiemersma, Klaas	Netherlands (Min.)	Ministry of Transport, Public Works and Water Management Directorate-General for Civil Aviation and Freight Transport Unit Safety Postbus 20904 NL – 2500 EX Den Haag	+31-70-351-1581	+31-70-351-1479	klaas.tiemersma@minvenw.nl
Maks, J.J. (Hans)	Netherlands (IVW)	Transport and Water Management Inspectorate Netherlands Rail Inspectorate St. Jacobsstraat 16 PO Box 1511 NL – 3500 BM Utrecht	+31-70-4562911	+31-30-2363199	Hans.Maks@ivw.nl
Krammer, Othmar	Austria (Min.)	Bundesministerium für Verkehr, Innovation und Technologie Sektion II – Abt. ST8 – Gefahrgut und Containersicherheit Hetzgasse 2 AT – 1030 Wien	+43-1-71162-65-5880	+43-1-71162-65-5725	othmar.krammer@bmvit.gv.at

Name	Vertretene Stelle/ body represented	Address	Telefon/Phone	Fax	E-mail
Södergren, Christer	Sweden (SRV)	Swedish Rail Agency Järnvägsstyrelsen Borganäsvägen 26 P.O. Box 14 SE – 78121 Borlänge	+46-243-4460-21	+46-243-4460-05	Christer.Sodergren@jvs.se
Björse, Jonatan	Sweden (SRV)	Swedish Rescue Services Agency Dangerous Goods & Seveso SE – 651 80 Karlstad	+46-76-808-7080	+46-54-13-5620	jonatan.bjorse@srv.se
Le Fort, François	Switzerland (BAV)	Departement für Umwelt, Verkehr, Energie und Kommunikation Mühlestraße 6 CH – 3003 Bern-Ittigen	+41-31-324-1209	+41-31-324-1248	francois.lefort@bav.admin.ch
Schwab, Hans	Switzerland (SBB)	Schweizerische Bundesbahnen SBB Division Infrastruktur Sicherheit/Betriebsprozesse Mittelstraße 43 CH – 3000 Bern 65	+41-31-20-4429	+41-31-20-2009	hans.schwab@sbb.ch
Tomkova, Pavlina	Czech Republic (Min.)	Ministry of Transport of the Czech Republic Department for Railway and Combi-nated Transport Nábrezi Ludvika Svobody 12 P.O. BOX 9 CZ – 110 15 Praha 1	+420-225-131-194	+420-225-131-355	pavlina.tomkova@mdcr.cz
Ruzicka, Karel	Czech Republic (Rail Dept.)	Drázní úrad (Tschechisches Bahnamt) Wilsonova 300/8 CZ – 121 06 Praha 2	+420-602-668891		ruzicka@du-praha.cz
Hájek, Vladimir	Czech Republic (Rail Dept.)	Drázní úrad (Tschechisches Bahnamt) Wilsonova 300/8 CZ – 121 06 Praha 2	+420-2-246153-07	+420-2-246153-02	hajek@du-praha.cz
Hájek, Stanislav	Czech Republic (CD)	Ceské dráhy, a.s. Tschechische Bahnen AG Generální reditelství/Generaldirektion Odbor 21 K Vápence (býv. areál DOM) CZ – 530 02 Pardubice	+420-972-322-096		Hajek.Stanislav@cdcargo.cz

Name	Vertretene Stelle/ body represented	Address	Telefon/Phone	Fax	E-mail
Bale, Arne	U.K. (Scientifics Limited)	Scientifics Limited Ashridge Business Centre Berkhamsted House 121 High Street UK – Hertfordshire HP4 2DJ	+44-1442-871273	+44-1442-878869	london@scientifics.com
Lentz, Kurt	ERA	Europäische Eisenbahnagentur (ERA) Safety Unit 160 Boulevard Harpignies BP 20392 FR – 59307 Valenciennes Cedex	+33-327096579	+33-327096679	kurt.lentz@era.europa.eu
Laakso, Erkki	EU COM	Europäische Kommission Energy and Transport DG Directorate J Security – Protection of persons, goods and installations Unit J4 Transport of dangerous goods & Intermodal security Rue de la Loi 200 / Wetstraat 200 BE – 1049 Bruxelles	+32-2-296-1906	+32-2-295-2697	Erkki.Laakso@ec.europa.eu
Conrad, Jochen	OTIF	Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr (OTIF) Gryphenhübeliweg 30 CH – 3006 Bern	+41-31-359-1017	+41-31-359-1011	jochen.conrad@otif.org
Dr. Orhan, Murad	CEFIC (BASF)	BASF Aktiengesellschaft GUS/DT – J660 DE – 67056 Ludwigshafen	+49-621-60-71972	+49-621-60-6671972	murad.orhan@basf.com
Krieg, Max	CIT	Internationales Eisenbahntransport-komitee (CIT) Weltpoststraße 20 CH – 3015 Bern	+41-31-35001-95	+41-31-35001-99	mkrieg@cit-rail.org
Hirsch, Holger	UIC (Railion Deutsch-land AG)	Railion Deutschland AG Gefahrgutmanagement (VUG/L.RBS 2) Rheinstraße 2 DE – 55116 Mainz	+49-6131-15-62138	+49-6131-15-64864	Holger.Hirsch@railion.com

Name	Vertretene Stelle/ body represented	Address	Telefon/Phone	Fax	E-mail
Heintz, Jean-Georges	UIC (SNCF)	Société Nationale des Chemins de Fer (SNCF) 34, Rue du Commandant Mouchotte FR – 75699 Paris Cedex 14	+33/1-5325-3028	+33/1-5325-3067	jean-georges.heintz@sncf.fr
Kogelheide, Rainer	UIP (GATX)	GATX Rail Germany GmbH Herrengraben 74 DE – 20459 Hamburg	+49-40-36804-8232	+49/40-36804-114	Rainer.Kogelheide@gatx.de
Cossic, Emmanuel	UIP (Ermewa)	Sté ERMEWA Le Stratège 172 rue de la République FR – 92817 Putaux	+33/1-49076827		ecossic@ermewa.fr
Behrends, Victor	UNIFE (Knorr-Bremse)	Knorr-Bremse Group Systeme für Schienenfahrzeuge GmbH Moosacher Straße 80 DE – 80809 München	+49-89-3547-1970	+49-89-3547-1982	victor.behrends@knorr-bremse.com
Guests:					
Dr. Walter, Manfred	Knorr-Bremse	Knorr-Bremse Systeme für Schienen-fahrzeuge GmbH Moosacher Str. 80 DE – 80809 München	+49-89-3547-1580	+49-89-35647-1580	Manfred.Walter@knorr-bremse.com
Buchmeier, Gerd	Knorr-Bremse	Oerlikon-Knorr Eisenbahntechnik AG Electronics ZRH-R/BCE4 Mandachstraße 50 CH – 8155 Niederhasli	+41-44-8523247	+41-44-8523277	gerd.buchmeier@knorr-bremse.com
Aubry, Christian	SBB	Schweizerische Bundesbahnen SBB Cargo AG Zentralbereich Rollmaterial / Engineering Wagen Elsässertor / Centralbahnstraße 4 CH – 4065 Basel	+41-512-290389	+41-512-290348	christian.aubry@sbbcargo.com
Prof. Dr. Hecht, Markus	TU Berlin	Technische Universität Berlin Fakultät V – Institut für Land- und Seeverkehr; Fachgebiet Schienen-fahrzeuge, Sekr. SG 14 Salzufer 17-19 DE – 10587 Berlin	+49-030-314-25150	-	Markus.Hecht@tu-berlin.de

Name	Vertretene Stelle/ body represented	Address	Telefon/Phone	Fax	E-mail
Luther, Doris	TU Berlin	Technische Universität Berlin Fakultät V – Institut für Land- und Seeverkehr; Fachgebiet Schienen-fahrzeuge, Sekr. SG 14 Salzufer 17-19 DE – 10587 Berlin	+49-30-314-25619	+49-30-314-22529	doris.luther@pptec.de
Interpreters					
Ashman, David	OTIF (Interpreter)	Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr (OTIF) Gryphenhübeliweg 30 CH – 3006 Bern	+41-31-359-1024	+41-31-359-1011	David.Ashman@otif.org
Küpper, Werner	OTIF (Interpreter)	PB 320 B – 2800 Mechelen 3	+32-475-270054	+32-2-5216730	werner.kupper@pandora.be