

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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(Brussels, 11 and 12 June 2009)

Subject: Monitoring the main brake pipe/air-brake check

Information transmitted by Germany

1. Introduction

With regard to monitoring the main brake pipe/air-brake check, at the last session of the RID Committee of Experts (Hamburg, 21 – 23 October 2008), the representative of the European Railway Agency (ERA) explained that in order to include new provisions in the TSIs (Technical Specifications for Interoperability), impact assessments and a cost/benefit analysis with regard to railway safety would have to be carried out. Before undertaking the corresponding extensive examination procedure, ERA still had to be provided with justification of the need for a specific measure and explanations of the aims for the dangerous goods sector.

The working group on tank and vehicle technology was mandated to collect together the findings from accidents that had occurred and to make them available to ERA so that it could initiate the necessary procedures (see also paragraphs 44 and 45 of the report of the 46th session of the RID Committee of Experts).

2. Extracts from previous reports of the dangerous goods bodies on the subject of monitoring the main brake pipe/air-brake check

Discussions in various dangerous goods bodies on the subject of monitoring the main brake pipe/air-brake check have now been going on for more than 10 years. The most important extracts from the reports of these bodies are set out below:

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.

2.1 Extract from the final report of the German national working group on tank and vehicle technology (as at February 2002)

"3.2 Monitoring the main brake pipe/air-brake check

Following the brake failure that caused the accident in Elsterwerda, the question arises as to how accidents caused by inadequate brake testing can be avoided in future. A long-term solution is certainly to be found in an electronic brake monitoring system such as EBAS. However, implementation of such systems cannot be expected in the near future.

One possible solution that would be feasible in the short term would be to compare pressure increase time when carrying out brake tests, as it takes much longer for the main brake-pipe of a train to fill than it does for the main brake-pipe of a locomotive.

As a first step the driver would receive a warning tone and warning signal to which he must respond.

It is conceivable that the signal could be linked to the driver's braking valve which would be locked if there was no response, but this is not practical on all locomotives (because of their design).

Concluding assessment/outlook

It is vital to monitor the operating pressure in the train's main brake-pipe. This should be combined with a test methodology that warns the locomotive driver when he performs the main brake test with closed air cocks, without, or with only a small part of, the train (time interval test based on the number of wagons attached or notification of brake air pressure of an individual wagon via train BUS device)."

2.2 Extract from the final report of the 5th session of the RID Committee of Experts working group on tank and vehicle technology (Duisburg-Wedau, 24 and 25 June 2004)

"ITEM 3e): Air brake check

43. The Chairman described a proposal from Professor Hecht (Technical University of Berlin), in which the passage through the main brake pipe could be checked by means of chronometric measurement of the pressure reduction.

44. Because of the different wagon design types, the representative of UIC considered that it was not technically possible to obtain a reliable result using chronometric measurement. On the other hand, the carrying out of brake tests was described in UIC leaflet 453.

45. It was agreed to remove this item of the agenda until new technical possibilities became available."

2.3 Extract from the final report of the 8th session of the RID Committee of Experts working group on tank and vehicle technology (Munich, 14 and 15 June 2007)

"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"."

Note. The presentation by Dr Walter (Knorr Brakes) is attached in Annex 1 (German

only).

2.4 Extract from the final report of the 44th session of the RID Committee of Experts (Zagreb, 19 – 23 November 2007)

"Monitoring the main brake pipe/air brake check

Document: OTIF/RID/CE/GT/2007-A (Secretariat), paragraph 32

86. The Chairman noted that this subject was of great significance to the whole of rail transport in Europe. The representative of ERA was therefore asked to check whether the Agency would be pursuing this subject in relation to all rail transport. If this were the case, there was no longer any need for the RID Committee of Experts to deal with this issue.

87. The representative of ERA assured the meeting that he would provide the working group on tank and vehicle technology with information as soon as possible."

2.5 Extract from the report of the 9th session of the RID Committee of Experts working group on tank and vehicle technology (Berne, 14 and 15 May 2008)

"ITEM 7: Monitoring the main brake pipe/air-brake check

28. The Chairman reminded the meeting that at its 44th session, the RID Committee of Experts had asked the representative of ERA to check whether the question of monitoring the main brake pipe could be followed up by his Agency in relation to all rail transport.

29. The representative of ERA explained that the Agency was currently examining the issue of the end of train device, although initially, this would be from the point of view of recognising the train from behind (end of train signal). He informed the meeting of the possibility for ERA to examine the issue in relation to "monitoring the main brake pipe" (see also paragraph 24) because this is a railway system issue. However ERA could not guarantee that this aspect would be dealt with in the interim report that was anticipated at the end of 2008 in the work programme for revising the TSIs.

30. The Chairman of the RID Committee of Experts again recalled that various accident assessments had shown that brake problems had led to serious accidents. This fact should result in an amendment to the TSI. Should the need for this not be recognised by ERA, the RID Committee of Experts would be compelled to continue its work on finding a solution for the dangerous goods sector. He wished to ensure that the RID Committee of Experts would have the opportunity of examining ERA's interim report before the final report was published. He would also make this wish known at the meeting of the European Commission's Interoperability Committee."

3. Findings from previous accidents in Germany

The result of an enquiry to the Federal Railway Office's accident database for 1996-2008 is attached in Annex 2 (German and English only). In this period, there were 13 accidents for which the note "defective brake check" was entered in the database.

Additional Note: The information contained in this list on the damage and injuries to persons and property corresponds partly to what was provided in the initial accident notifications/assessments. These data were not checked further after the event.