

OTIF



**ORGANISATION INTERGOUVERNEMENTALE POUR
LES TRANSPORTS INTERNATIONAUX FERROVIAIRES**

**ZWISCHENSTAATLICHE ORGANISATION FÜR DEN
INTERNATIONALEN EISENBahnVERKEHR**

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

**Secrétaire général
Generalsekretär
Secretary General**

A 81-03/504.2007

25 September 2007

**To the delegates of the RID Committee of Experts' working group on tank
and vehicle technology**

**Invitation to a special meeting in Berlin
12 October 2007**

Par souci d'économie, le présent document a fait l'objet d'un tirage limité. Les délégués sont priés d'apporter leurs exemplaires aux réunions. L'OTIF ne dispose que d'une réserve très restreinte.

Aus Kostengründen wurde dieses Dokument nur in begrenzter Auflage gedruckt. Die Delegierten werden daher gebeten, die ihnen zugesandten Exemplare zu den Sitzungen mitzubringen. Die OTIF verfügt nur über eine sehr geringe Reserve.

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.

As agreed at the 8th session of the RID Committee of Experts' working group on tank and vehicle technology (Munich, 14 and 15 June 2007), at the invitation of Germany a derailment test will take place on **12 October 2007** in Berlin. The purpose of the test will be to demonstrate that the derailment detector trips reliably at speeds between 35 and 40 km/h (see paragraph 12 of report OTIF/RID/CE/GT/2007-A). In connection with this, a draft proposal from Germany to the RID Committee of Experts proposing the inclusion of a provision in RID to fit tank-wagons with derailment detectors will also be discussed (see paragraph 13 of the report).

The following programme is planned for 12 October 2007:

1. From 09.00, the test will be carried out on a loaded test vehicle. The test will take place in Berlin-Schöneeweide (see Annex 1 for details of how to get to the test site).

A brief explanation of the test specifications is attached at Annex 2.

For legal reasons, participants are asked to note the following:

Participants may attend the test voluntarily. Neither the organiser nor OTIF can accept liability for loss, damage or injury.

2. Following the tests, participants will meet at the Berlin branch office of the Federal Railway Authority
Steglitzer Damm 117
12169 Berlin
(see Annex 3 for details of how to get to the branch office)
3. Presentation on the test and, where appropriate, on the results of the test by the Technical University of Berlin and Knorr Brakes
4. Presentation by the representative of Germany on a draft proposal for the next session of the RID Committee of Experts
5. Discussion
6. Any other business

It should be pointed out that a test using an empty test vehicle will be carried out on 11 October 2007 from 09.00 at the address shown under 1. Working group participants also have the opportunity of attending this test as well.

Simultaneous interpretation into English will be provided at the working group meeting (points 3 to 6).

For organisational purposes, please announce your attendance informally by contacting jochen.conrad@otif.org (Telefax +41 31 3591011).

The following websites are recommended for hotel reservations and further information: www.hrs.de and www.berlin.de.

Yours faithfully



p.p. Dr. Gustav Kafka
(Deputy to the Secretary General)

How to reach the test site



From Berlin Main Station (Berlin-Hauptbahnhof), Berlin East Station (Berlin-Ostbahnhof):

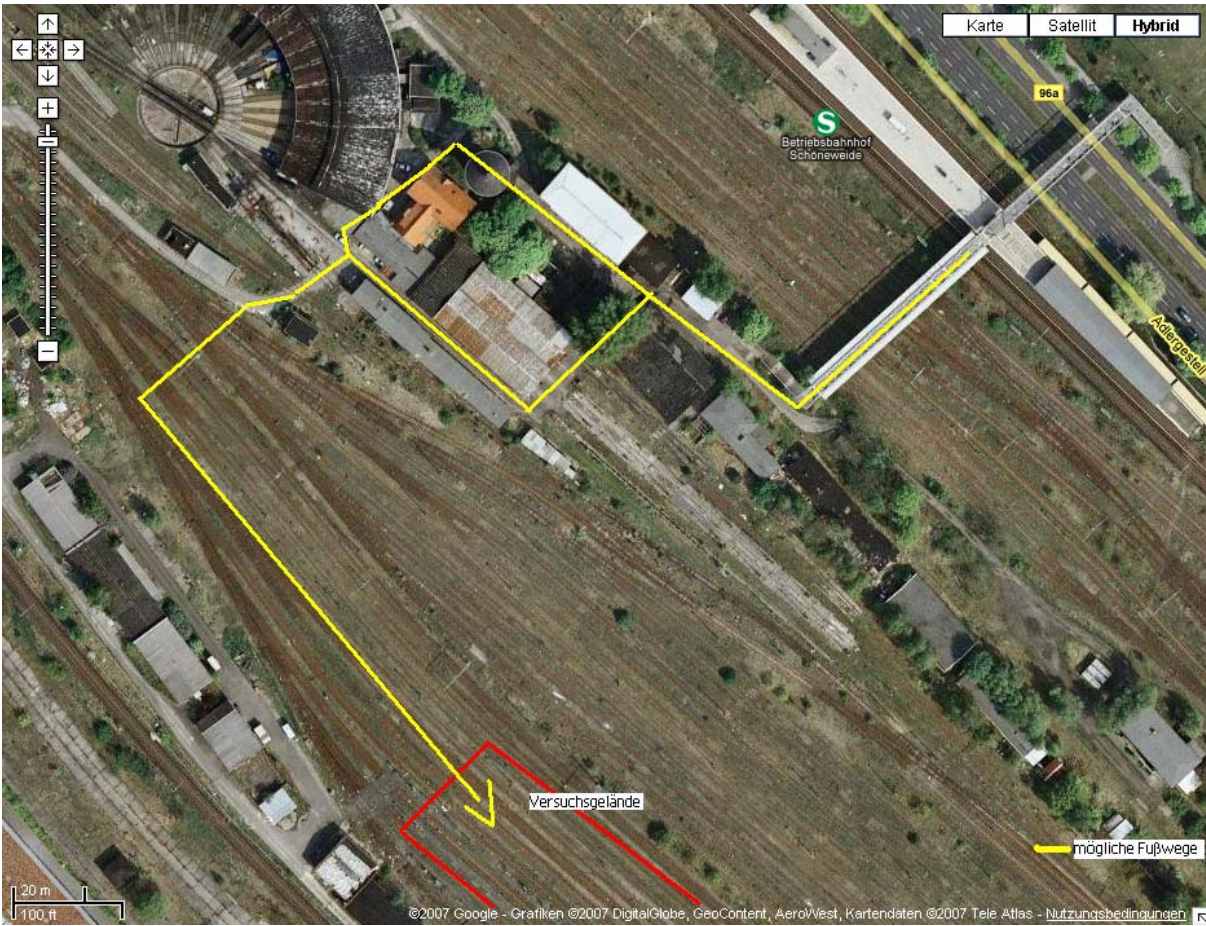
The best way to reach the test site is by S-Bahn line S 9 (towards Berlin-Schönefeld), getting off at the stop called “Betriebsbahnhof Schöneweide”. From there, cross over the pedestrian bridge and then a few steps further will bring you to the test site.

From Berlin-Schönefeld airport:

The best way to reach the test site is by S-Bahn line S 9 (towards Berlin-Spandau), getting off at the stop called “Betriebsbahnhof Schöneweide”. From there, cross over the pedestrian bridge and then a few steps further will bring you to the test site.

From Berlin-Tegel airport:

From Berlin-Tegel airport, the best way to reach the test site is by bus TXL towards Mollstraße/ Prenzlauer Allee. At Berlin-Hauptbahnhof, change onto S-Bahn line S9 towards Berlin Schönefeld and get off at the stop called “Betriebsbahnhof Schöneweide”. From there, cross over the pedestrian bridge and then a few steps further will bring you to the test site.



Derailment test with EDT 101

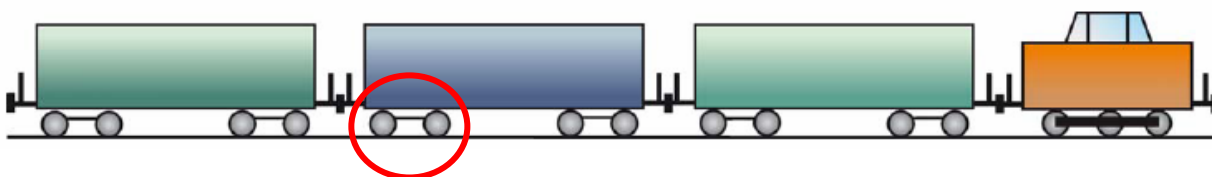
1 Test set-up

1.1 Aim of the test set-up

- To demonstrate the functional capability of the EDT 101
- To gain knowledge of how goods wagons perform in the event of a derailment

1.2 Test conditions

One of the trailing bogies of a loaded goods wagon will be made to derail while moving at as high a speed as possible ($v \geq 35$ km/h). The vehicle to be derailed will be located in the train composition in order to achieve a realistic scenario. The derailment will be caused by means of two assister bars, the ends of which lead into the ballast bed. In order to protect the locomotive from a goods wagon that might overturn, a barrier wagon is placed between the locomotive and the wagon that is to be derailed.



2 Vehicles

Three tank-wagons (type Rt500) with Y25 bogies will be used. The vehicle to be derailed will be filled with 50 m^3 of water in order to represent the loaded condition of 80 t total weight. The barrier and guiding wagons will not be filled.

2.1 Tank-wagon



The maximum permissible speed of the wagons is $v_{\max} = 100$ km/h and the maximum load capacity of the tank is 50 m^3 , at a permissible axle load of 20 t. The distance between the bogies is 7120 mm and the total length of the wagon is 12590 mm.

2.2 Locomotive

V60 (BR 346) from HVLE AG

(Length over buffers 10880 mm, mass in running order 60 t, drive configuration hydraulic, output 478 kW, tractive effort on starting 198 kN, maximum speed 60 km/h)

3 Line

The test track is located in Berlin-Schöneeweide.

3.1 Track

The test will take place on a cross-sleeper track with ballast, concrete sleepers and rail head S49. Derailment apparatus: a third and fourth rail will be fixed to the existing rail with the help of a double ribbed plate in the space between the sleepers. The additional rails terminate at the end of the 200 m long acceleration section and the bogie that is to be derailed will be guided onto the concrete sleepers and the ballast. In order to represent the slipping action of the wheel from the rail, the ends of the additional rails will be tapered off in this area.

3.2 Acceleration section

Arithmetically, in order to achieve the desired final speed of $v_e = 45$ km/h with a V 60 locomotive, an acceleration section of around 150 m is required. The track is completely straight. The first test will be carried out on the first day with an empty vehicle in one direction over the acceleration section and the second test will be carried out in the other direction with a load. As it is possible that following the derailment, the adjacent concrete sleeper track might no longer be usable, the change of direction ensures that a total of at least two tests can be carried out.

3.3 Other apparatus

To be able to rerail the derailed wagon after the test and to lift it by the back bogie into the test track at the beginning, a guided railway crane will be used. This crane is normally used by DB Netz emergency technology to salvage damaged tank-wagons. If the track and vehicle so allow, the test can be repeated as often as desired on the second day.

The test will be filmed by two laterally placed video cameras. Various accelerometers will be fitted to the derailing vehicle to record the vehicle's performance during the derailment.

**Federal Railway Authority
Berlin branch office**



Telephone: (0 30) 77 007 - 0
Telefax: (0 30) 77 007 - 101
Steglitzer Damm 117
12169 Berlin

How to reach the Berlin branch office:

From Tegel Airport by bus 109 or X9 to underground station Jakob-Kaiser-Platz, then take underground line U 7 towards Rudow (Britz-Süd) and get off at Yorckstraße station, leave the station in the direction of travel, turn left approx. 10 metres to Yorckstraße S-Bahn stop (wooden steps), take S-Bahn line S 2 towards Blankenfelde or Lichtenrade and get off at Attilastraße. The Berlin branch office is on the right hand side.

Deutsche Bahn – Zoologischer Garten (zoo) by S-Bahn line S 3, S 5, S 7, S 75 or S 9 towards Friedrichstraße, then S-Bahn line S 2 towards Blankenfelde or Lichtenrade and get off at Attilastraße. The Berlin branch office is on the right hand side.