Fire Safety in Buses and Coaches

97th GRSG
October 20-23, 2009

Richard Damm
Content

(1) Objective
(2) Fire Incident near Hannover, Nov. 2008
(3) Measurements and Planning
Objective

Improve fire safety in buses and coaches.
Fire Incident near Hannover

04 Nov. 2008 on a motorway near Hannover
20 fire victims
Year of first registration of the coach: 2003

Investigation resulting in a survey report for the department of public prosecution was finalized in July 2009.

Two additional survey reports (for bus manufacturer and insurance company) are awaited.
Fire Incident near Hannover

Sources: www.stern.de
Fire Incident near Hannover

Conclusion of the survey report of the public prosecution department:

Fire was caused by a shortcut of the electric cable harness in a cable channel in the luggage compartment near the toilette.

The fire flashed over from the toilet to the passenger compartment when the toilet door was opened.

The result was an explosive increase of the fire into the passenger compartment (approx. 20 min after the fire started).
Measurements and Planning

- Fire / Smoke Detection Systems
- Cable Test
- Repel Test for Insulation Materials
- Burning Behaviour of Materials
- (Smoke / Toxicity)
Measurements and Planning

- Fire / Smoke Detection Systems
  GRSG/2008/22 and GRSG-96-22 Rev.1 on fire detection systems in engine compartments was adopted at the May 2009 GRSG-session (approx. 70% of fires in b & c in Germany start in the eng. comp.)

Detection systems for compartments are under investigation. Proposal is planned to be submitted to GRSG in 2010.
Measurements and Planning

- Cable Test
- Repel Test for Insulation Materials
  GRSG/2009/14 and GRSG-97-27 and consolidated version (GRSG-97-32)
Measurements and Planning

- Burning Behaviour of Materials
  GRSG/2009/14, proposal on interior burn rate tests is postponed till May 2010 GRSG session
Measurements and Planning

- **Smoke / Toxicity**
  A national research project will start in the beginning of 2010.
### Accident Data (Germany)

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<th>Year</th>
<th>Total</th>
<th>Mopeds</th>
<th>Motorcycles</th>
<th>Passenger cars</th>
<th>Buses, coaches, tr. buses</th>
<th>Goods vehicles</th>
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Source: Key road transport statistics for Germany and Europe, BMVBS, July 2009