

INF. 7

15 November 2023

Original: Deutsch

RID: 16th Session of the RID Committee of Experts' standing working group
(London, 20 to 23 November 2023)

Subject: Status of the research project of the German Centre for Rail Traffic Research: Simulation-based investigation of the surge behaviour in tanks

Information from Germany

1. At the 13th session of the RID Committee of Experts' standing working group (Geneva/hybrid, 15 to 18 November 2021), the representatives of Germany had explained that the German Centre for Rail Traffic Research at the Federal Railway Authority (DZSF) was applying for research work on the effects of surge movements in rail transport. This work was also to include tank-wagons and ISO tank-containers, see also paragraphs 37 to 39 of the [Final report of the 13th session of the RID Committee of Experts' standing working group \(Geneva/hybrid, 15 to 18 November 2021\)](#).
2. At the 19th session of the RID Committee of Experts' working group on tank and vehicle technology, Germany had informed the meeting with its informal document [INF.2](#) that the research project was to be awarded in 2023, see also paragraphs 6 to 8 of [the Final report of the 19th session of the RID Committee of Experts' working group on tank and vehicle technology \(Berne/hybrid, 22 November 2022\)](#).
3. In June 2023, the DZSF awarded the research project to DB Systemtechnik GmbH. DB Systemtechnik GmbH started its work on the project on 1 August 2023. The first work package, which consisted of research, was concluded on 6 November 2023 with an interim report.
4. Project details:
 - Contractor: DB Systemtechnik GmbH
 - Start of project: 1 August 2023
 - End of project: 31 July 2025
 - Project period: 2 years
 - Project objective: Calculation of the surge behaviour of liquids in shells and their impact on the vehicle dynamics of freight wagons

5. Work packages:
 - WP1: Research of applicable rules and regulations and modelling methods
 - WP2: Development and implementation of a multi-physics simulation model
 - WP3: Preparation and conduct of tests on model validation
 - WP4: Derivation of a simplified calculation approach

 6. Germany will keep the RID Committee of Experts' standing working group and the RID Committee of Expert's working group on tank and vehicle technology informed on the progress of the work.
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