

# **T H E S E U S**

## **Tank-Vehicles with Maximum Attainable Safety through Experimental Accident Simulation**

### **Final Summary Report**

**Technical Inspection Board (TÜV) Rhineland, Traffic Safety Institute**

**Federal Institute for Materials Research and Testing (BAM)**

**DEKRA, Accident Research**

**Daimler-Benz AG, Research Institute Mercedes-Benz (F1)**

**Cologne University, Institute for Traffic Science**

**Federal Institute for Highway Research (BASt)**

**Anton Ellinghaus GmbH & Co. KG**

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## **Foreword**

In the spring of 1990, the Traffic Safety Institute of the Technical Inspection Board (TÜV) Rhineland in Cologne together with the Federal Institute for Materials Research and Testing (BAM) in Berlin were commissioned by the Federal Ministry for Research with performing the research project "Tank-vehicles with maximum attainable safety through experimental accident simulation (THESEUS)". The project was performed in cooperation with the following sub-contractors:

DEKRA, Accident Research, Stuttgart

Daimler Benz AG, Stuttgart

Cologne University, Institute for Traffic Science

Federal Institute for Highway Research (BASt), Bergisch Gladbach

Anton Ellinghaus GmbH & Co. KG, Beckum

The Final Summary Report on the THESEUS Project details the methods, test procedures and mathematical methods applied during the course of the work and includes examples of significant results as well as the conclusions drawn from the great number of individual results. Further, a detailed partial report containing the individual results was prepared for each work package. These partial reports may be obtained on request from the following institutions:

### **Evaluation of accident data:**

DEKRA, Unfallforschung, 70560 Stuttgart

TÜV Rheinland e.V., Institut für Verkehrssicherheit, 51101 Köln

### **Vehicle-vehicle crash:**

DEKRA, Unfallforschung, 70560 Stuttgart

### **Overturn test:**

TÜV Rheinland e.V., Institut für Verkehrssicherheit, 51101 Köln

### **Tank-deformation simulation:**

Daimler Benz AG, Forschungsinstitut Mercedes-Benz (F1), 70546 Stuttgart

### **Investigation of tank components:**

BAM, Unter den Eichen 87, 12205 Berlin

**Tilt test:**

DEKRA, Unfallforschung, 70560 Stuttgart

**Drive test:**

TÜV Rheinland e.V., Institut für Verkehrssicherheit, 51101 Köln

**Simulation of driving dynamics:**

Daimler Benz AG, Forschungsinstitut Mercedes-Benz (F1), 70546 Stuttgart

**Benefit-cost:**

Universität Köln, Institut für Verkehrswissenschaften, Universitätsstr. 22, 50937 Köln

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## Brain trust

The final summary report was discussed by a brain trust convened by the BMBF. The beneficiaries express their gratitude for the valuable suggestions and constructive collaboration. Members of the brain trust were:

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Sasse	Mineralölwirtschaftsverband e.V. (Association of the oil industry)
Triebel	Ministry for Urban Development NRW

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