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

Cologne, March 1995

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The Federal Ministry of Education, Science, Research and Technology

BMBF

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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
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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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Cologne, March 1995

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:

Name	**Institution**
Bäumler	HUK-Verband
Cichowicz	Raab Karcher Spedition Umschlag GmbH
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Hahn	MAN Nutzfahrzeuge GmbH
Hole	Federal Ministry for Transport
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Unbereit	Hoyer GmbH
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