

TRANSAERO

A European Initiative on Transient Aerodynamics for Railway System Optimisation

Bearbeitet von

Burkhard Schulte-Werning, Remi Gregoire, Antonio Malfatti, Gerd Matschke

1. Auflage 2002. Buch. xiii, 379 S. Hardcover

ISBN 978 3 540 43316 3

Format (B x L): 17,8 x 25,4 cm

Gewicht: 1640 g

[Weitere Fachgebiete > EDV, Informatik > Professionelle Anwendung > Computer-Aided Design \(CAD\)](#)

schnell und portofrei erhältlich bei



Die Online-Fachbuchhandlung beck-shop.de ist spezialisiert auf Fachbücher, insbesondere Recht, Steuern und Wirtschaft. Im Sortiment finden Sie alle Medien (Bücher, Zeitschriften, CDs, eBooks, etc.) aller Verlage. Ergänzt wird das Programm durch Services wie Neuerscheinungsdienst oder Zusammenstellungen von Büchern zu Sonderpreisen. Der Shop führt mehr als 8 Millionen Produkte.

Contents

I. General	1
D. KNÖRZER: Technology Acquisition Through the Research Framework Programmes of the European Union	3
B. SCHULTE-WERNING: The TRANSAERO Project - Joint European Railway Research on Transient Aerodynamics	11
II. Side Wind Effects	25
G. MATSCHKE, C. HEINE: Full Scale Tests on Side Wind Effects on Trains. Evalution of Aerodynamic Coefficients and Efficiency of Wind Breaking Devices	27
H. LIENHART: Wind Monitoring System for Full Scale Tests on Trains	39
C. BAKER: The Wind Tunnel Determination of Crosswind Forces and Moments on a High-Speed Train	46
C. FAUCHIER, E. LE DEVEHAT, R. GREGOIRE: Numerical Study of the Turbulent Flow Around the Reduced Scale Model of an Inter-Regio	61
W. KHIER, M. BREUER, F. DURST: Numerical Computation of 3-D Turbulent Flow Around High-Speed Trains Under Side Wind Conditions	75
G. MATSCHKE: WP1 Side Wind Effects: Summary and Conclusions.....	87
III. Trains Passing Effects	99
G. MANCINI, A. MALFATTI: Full Scale Measurements on High Speed Train ETR 500 Passing in Open Air and in Tunnels of Italian High Speed Line.....	101
T. JOHNSON, S. DALLEY: 1/25 Scale Moving Model Tests for the TRANSAERO Project.....	123
T. BERENGER, A. KESSLER, R. GREGOIRE: Part 1: Panel Method Applied to the Prediction of Unsteady Effects Caused by High-Speed Trains Passing, in the Open Air and in Tunnels	136
T. BERENGER, R. GREGOIRE: Part 2: Panel Method Applied to Problems of European High-Speed Train Interoperability	148

K. PAHLKE: Application of the Standard Aeronautical CFD Method FLOWer to Trains Passing on Open Track	160
R. GREGOIRE: TRANSAERO Work Package 3: Trains Passing Effects - Summary and Conclusions	170
IV. Pressure Wave Effects	185
G. MATSCHKE, C. HEINE: Full Scale Tests on Pressure Wave Effects in Tunnels.....	187
V. BOURQUIN, M. MONKEWITZ, P. MONKEWITZ: Reduced-Scale Experiments for Railway Applications.....	196
M. BELLENQUE, T. KAGEYAMA: Reduced Scale Simulation of the Compression Wave Generated by the Entry of a High-Speed Train into a Tunnel	206
K. PAHLKE: Application of the Standard Aeronautical CFD Method FLOWer to ETR 500 Tunnel Entry	217
J.-M. RETY, R. GREGOIRE: Numerical Simulation of the Pressure Wave Generated when a Train Enters a Tunnel.....	225
J.-M. RETY, R. GREGOIRE: Numerical Investigation of Tunnel Extensions Attenuating the Pressure Gradient generated by a Train Entering a Tunnel	239
A. VARDY, J. BROWN: An Overview of Wave Propagation in Tunnels	249
V. BOURQUIN, C. GILLIERON, P. MONKEWITZ: Experimental Analysis of the Propagation of Pressure Waves in Tubes	267
M. BELLENQUE, T. KAGEYAMA: Train Tunnel Geometry Effects on the Compression Wave Generated by a High-Speed Train	276
M. REITERER, K. EHRENDORFER, H. SOCKEL: Experimental Investigations of the Micro Pressure Wave	290
H. SOCKEL, M. REITERER, K. EHRENDORFER, P. PESAVA, V. BENDIXEN: Measures for the Reduction of the Micro Pressure Wave	302
K. EHRENDORFER, M. REITERER, H.SOCKEL: Numerical Investigations of the Micro Pressure Wave	321
M.J.-P. WILLIAM-LOUIS, R. GREGOIRE: 1-d Calculations of Pressure Fluctuations Outside and Inside a Pressure Sealed High-Speed Trainset Travelling Through Tunnels.....	342

H.-J. WORMSTALL-REITSCHUSTER: 1-d Calculations of Pressure Change due to Passage of an ETR 500 Through the Terranuova LeVille Tunnel	358
B. SCHULTE-WERNING, G. MATSCHKE: TRANSAERO Work Package 4: Pressure Wave Effects – Summary and Conclusions -	367