

Inhalt

Development of Maglev and Linear Drive Technology for Transportation in Japan	11
<i>E. Masada, The University of Tokyo, J</i>	
High-Speed Magnetic Levitation System TRANSRAPID	17
<i>U. Wiescholek, Federal Ministry of Education, Science, Research and Technology, Bonn, D</i> <i>D. Rogg, W. J. Mayer, Dornier System Consult, Friedrichshafen, D</i>	
Magnetic Levitation System on the Route from Berlin to Hamburg – Planning, Financing, State of Project	25
<i>H. C. Atzpodien, H. Christoph, Magnetschnellbahn-Planungsgesellschaft mbH, Schwerin, D</i>	
The Status of the Technical Development for the Yamanashi Maglev Test Line	31
<i>H. Nakashima, Railway Technical Research Institute, Tokyo, J</i> <i>A. Seki, Central Japan Railway Company, Tokyo, J</i>	
Superspeed Maglev System Transrapid – System Description	37
<i>L. Miller, Thyssen Industrie Henschel AG, München, D</i>	
SWISSMETRO – High Speed Underground Transportation System Propulsion, Levitation and Guiding System	45
<i>M. Jufer, A. Cassat, N. Macabrey, Swiss Federal Institute of Technology, Lausanne, CH</i>	
The Development of HSST-100L	51
<i>T. Seki, HSST Development Corporation, Tokyo, J</i>	
Status of the Maglev Development in Korea	57
<i>I.-K. Kim, H.-K. Chung, M.-H. Yoo, Korea Institute of Machinery and Metals (KIMM), Daejon, ROK</i>	
The Levitation System of the Superspeed Maglev System TRANSRAPID	63
<i>S. Ellmann, Thyssen Henschel Magnetfahrtechnik, München, D</i>	
The TRANSRAPID Propulsion System – Development and Test Results	71
<i>U. Henning, P. G. Kamp, J. Hochleitner, Siemens AG, Erlangen, D</i>	
Fail-Safe Computer-aided Operations Control Systems for the Transrapid Maglev High-speed Railway	81
<i>S. Burkert, H. Eilers, V. Freitag, R. Knigge, Siemens AG, Brunswick, D</i>	
Guideways for High Speed Magnetically Levitated Train Systems – TRANSRAPID	87
<i>H. Falkner, TU Braunschweig, D</i> <i>E. Grossert, IBF Dr. Falkner GmbH, Braunschweig, D</i>	
Status of the Safety Certification Process of the TRANSRAPID System	95
<i>J. Blomerius, TÜV Rheinland, Cologne, D</i>	
The TRANSRAPID Test Facility Between System Development and System Application	103
<i>L. Baur, MVP GmbH, München D</i>	

Design Elements and Quantitive Results of Synchronous Longstator Linear Motors for High-speed Magnetic Trains Taking the TRANSRAPID Test Facility in Emsland as an Example	113
<i>R. Fürst, Industrienanlagen-Betriebsgesellschaft mbH, Lathen, D</i>	
Reducing the Sound Emission of TR 07 and Effects on the German Regulation „Schall-Transrapid“	121
<i>K.-P. Schmitz, C. Wolters, Industrienanlagen-Betriebsgesellschaft mbH, Lathen, D</i>	
Total Test Operation of HSST-100 and Planning Project in Nogaya	129
<i>M. Fujino, Chubu HSST Development Corporation, J</i> <i>T. Mizuma, Traffic Safety & Nuisance Research Institute, MOT, J</i>	
The Correspondence to the Practical Application for Normalconducting Magnetic Levitation Vehicle Systems in Japan	135
<i>T. Mizuma, A. Matsumoto, Traffic Safety and Nuisance Research Institute, Tokyo, J</i> <i>E. Masada, The University of Tokyo, Tokyo, J</i>	
A Study on Stable Levitation of Permanent Mangnet Transportation System with Coreless Linear Synchronous Motor	139
<i>H. Hiwaki, M. Watada, S. Torii, D. Ebihara, Musashi Insitute of Technology, Tokyo, J</i>	
The Effect on the Multipolar Electromagnet for the Levitation of Thin Iron Plate	145
<i>H. Osabe, M. Watada, S. Torii, D. Ebihara, Musashi Institute of Technology, Tokyo, J</i>	
An Integrated Maglev System	151
<i>K. Davey, American Maglev Inc. USA; T. Morris, R. Zowarka, Center for Electromagnetics, USA</i> <i>J. Weldon, Parker Kinetic Designs, USA; D. M. Rote, Argonne National Laboratory, USA,</i> <i>J. Schaaf, BDM Federal, USA</i> <i>(The paper was not available by the date of printing)</i>	
Dual-Keel Electrodynamic Maglev System	153
<i>J. He, D. M. Rote, Z. Wang, H. T. Coffey, Argonne National Laboratory, Argonne, USA</i>	
Sensorless Magnettically Levitated System with Reduced Observer	159
<i>T. Friedrich, G. Henneberger, Chr. Ress, RWTH Aachen, D</i>	
Magnetic Design in a MAGLEV System	163
<i>K. Davey, American MAGLEV Inc., Edgewater, USA</i>	
A Fuzzy Control Technique for a Magnetically Levitated System	169
<i>G. Lo Verso, C. N. R. Ce.RI. S.E.P., Palermo, I</i> <i>M. Trapanese, Università di Palermo, I</i>	
A Linear Maglev Guide for Machine Tools	173
<i>K.-D. Tieste, K. Popp, University of Hannover, D</i>	
The Anti-Vibration Durability of Persistent Current Switch for the Maglev Vehicle	179
<i>K. Nemoto, Railway Technical Research Institute, Tokyo, J</i> <i>T. Yamashita, K. Sasaki, Toshiba Corporation, Tokyo, J</i>	
Deenergizing Method of Superconducting Magnets for Maglev in an Emergency	183
<i>A. Kishikawa, K. Nemoto, Railway Technical Research Institute, Tokyo, J</i>	

Analysis of Persistent Current in the Superconducting Magnets on an EDS Maglev Vehicle for High-Speed Passenger Transport	189
<i>T. Azukizawa, Toshiba Corporation, J</i>	
Thermal Analysis of Track Based Coils	195
<i>K. Davey, American Maglev, Edgewater, USA</i>	
<i>R. Zowarka, Center for Electromagnetics, USA</i>	
Magnetic Levitation Systems using a High-Tc Superconducting Bulk Magnet	203
<i>H. Ohsaki, H. Kitahara, E. Masada, The University of Tokyo, J</i>	
The Potential for EMS Maglev using High Temperature Superconductors	209
<i>R. Goodall, C. MacLeod, A. El-Abbar, Loughborough University, UK</i>	
<i>H. Jones, R. Jenkins, University of Oxford, UK</i>	
<i>A. Campbell, University of Cambridge, UK</i>	
HT_c Superconductors Calculation Model and Possible MAGLEV Applications	217
<i>H. Weh, H. Pahl, H. Hupe, A. Steingröver, H. May, TU Braunschweig, D</i>	
Levitation Force and Remanent Field Measurements of HTSC	223
<i>H.-G. Kürschner, B. Lehdorff, H. Piel, Institut für Materialwissenschaften, Wuppertal, D</i>	
<i>(The paper was not available by the date of printing)</i>	
Single Domain Melt Textured YBCO Cylinders for magnetic Levitation and Permanent Magnet Applications	225
<i>J. Mora, M. Carrera, X. Granados, J. Fontcuberta, S. Piñol, V. Gomis, F. Sandiumenge, X. Obradors, Institut Ciència de Materials de Barcelona, E</i>	
Development of the Superconducting Maglev Vehicles on Yamanashi Test Line	233
<i>K. Takao, M. Yoshimura, N. Tagawa, Y. Matsudaira, K. Nagano, Central Japan Railway Company, Tokyo, J</i>	
<i>A. Inoue, Railway Technical Research Institute, Tokyo, J</i>	
PWM Converter and Inverter System Yamanashi MAGLEV Test Line.....	239
<i>J. Kitano, S. Yokoyama, Central Japan Railway Company, Tokyo, J</i>	
<i>H. Ikeda, S. Kaga, Railway Technical Research Institute, Tokyo, J</i>	
<i>T. Matsuura, Y. Tagami, Mitsubishi Electric Corporation, Kobe, J</i>	
Train Radio System using Leaky Coaxial Cable for the Yamanashi Maglev Test Line	245
<i>H. Uenae, Japan Railway Construction Public Corporation, Tokyo, J</i>	
<i>K. Matsumoto, W. Watanabe, Central Japan Railway Company, Tokyo, J</i>	
<i>T. Nakamura, Y. Matto, Mitsubishi Electric Corporation, Hyogo, J.</i>	
Technological Development of the Guideway in the JR MAGLEV System	251
<i>K. Sakamoto, Railway Technical Research Institute, Tokyo, J</i>	
<i>T. Noda, M. Oishi, Central Japan Railway Company, Tokyo, J</i>	
<i>T. Itoh, Japan Railway Construction Public Corporation, Tokyo, J</i>	
Framework for Technical Assessment in JR Maglev	257
<i>A. Seki, T. Akahoshi, Central Japan Railway Company, Tokyo, J</i>	
<i>T. Furuki, Railway Technical Research Institute, Tokyo, J</i>	

The Maglev Bogie System and its Development	261
<i>H. Seino, K. Kato, M. Azakami, H. Yoshioka, Railway Technical Research Institute, Tokyo, J</i>	
<i>H. Oshima, Central Japan Railway Company, Tokyo, J</i>	
Development of New Superconducting Magnets for the Yamanashi Test Line	267
<i>M. Terai, S. Inadama, Central Japan Railway Company, Tokyo, J</i>	
<i>H. Tsuchishima, E. Suzuki, T. Okai, Railway Technical Research Institute, Tokyo, J</i>	
Approach to Reducing Heat Load of Superconducting Magnets for Maglev Trains	275
<i>H. Akagi, T. Yamaguchi, Y. Jizo, Mitsubishi Electric Corporation, Hyogo, J</i>	
<i>M. Terai, M. Shinobu, Central Japan Railway Company, Tokyo, J</i>	
<i>H. Tsuchishima, Railway Technical Research Institute, Tokyo, J</i>	
The Development of the Wheel Disc Brake System for Maglev Vehicles	281
<i>H. Takizawa, K. Watanabe, Railway Technical Research Institute, Tokyo, J</i>	
<i>Y. Taoka, Sumitomo Precision Products Co. Ltd., Hyogo, J</i>	
Test Run of Combined Propulsion, Levitation and Guidance System in EDS Maglev	289
<i>T. Murai, T. Fujimoto, S. Fujiwara, Railway Technical Research Institute, Tokyo, J</i>	
Calculation for the Performance of a Superconducting Air-cored Linear Synchronous Motor with Unbalanced Excitation	295
<i>X. Wen, S. Xu, Chinese Academy of Sciences, Beijing, PRC</i>	
A Direct Feeding Algorithm for digitally Controlled Linear Induction Motors	301
<i>G. Celentano, E. Pagano, Universtiy Federico II of Napoli, I</i>	
Influence of Operating Parameters on Application of Long-Stator Traction Systems	307
<i>A. Stephan, Institut für Bahntechnik GmbH, Dresden, D</i>	
<i>M. Marschollek, TU Berlin, D</i>	
<i>P. Mnich, Institut für Bahntechnik GmbH, Berlin, D</i>	
Analysis of a Simplified Vector Controller for a Linear Induction Motor	317
<i>G. Gentile, S. Meo, Università di Napoli, I</i>	
<i>A. Ometto, N. Rotondale, Università di L'Aquila, I</i>	
<i>M. Scarano, Università di Cassino, I</i>	
Armature Current Unbalance Detection using On-board Probe Windings for the Stator On-Line Diagnostics of EMS Maglev Systems	323
<i>A. Di Gerlando, S. Fortuna, I. Vistoli, Politecnico di Milano, I</i>	
Position Control of a Magnetically Suspended Carrier with a Permanent-Excited Synchronous Machine	333
<i>Chr. Reuber, D. Rödder, G. Henneberger, RWTH Aachen, D</i>	
The Shielding against the Magnetic Field of H-100 Vehicle	343
<i>T. Amano, T. Mizuma, Traffic Safety and Nuisance Research Institute Ministry of Transport, Tokyo, J</i>	
Linear Inductive Power Transmission	349
<i>J. Meins, TU Braunschweig, D</i>	

Contactless Induction Energy Transmission System for High Speed Vehicles – Application to Swissmetro	355
<i>N. Macabrey, M. Jufer, P. Germano, Swiss Federal Institute of Technology, Lausanne, CH</i>	
Guideway Configuration Taking into Account Vehicle/Guideway Dynamics	363
<i>M. Gelles, Thyssen Industrie AG Henschel, Kassel, D</i>	
<i>F. X. Pichlmeier, G. Schwindt, Thyssen Industrie AG Henschel, München, D</i>	
Structural Dynamics in Guideway Equipment Components of the Maglev Technique	375
<i>Th. Stoffel, P. Mnich, TU Berlin, D</i>	
DISPOS – An Intelligent Assistent System for High Speed Maglev Train Traffic Control	395
<i>J.-O. Müller, F. Voit, E. Schnieder, TU Braunschweig, D</i>	
Train Radio System Using Millimeter-Waves for the Superconducting Maglev System	405
<i>H. Niikura, H. Yamamura, Railway Technical Research Institute, Tokyo, J</i>	
<i>K. Yamakawa, Central Japan Railway Company, J</i>	
<i>H. Uenae, Japan Railway Construction Public Corporation, J</i>	
<i>K. Homma, NEC Corporation, J</i>	
Moving Block System of Maglev Type HSST – Train Control System Based on Inductive Communication line	411
<i>F. Hashimoto, S. Takase, Kyosan Electric Mfg. Co. Ltd., Yokohama, J</i>	
Guidelines for Integrating RAM Assessment into the Design Stage of the Maglev Project: A Case Study	419
<i>G. Cosulich, M. Fracchia, A. Mariscotti, G. Sciutto, Università di Genova, I</i>	
<i>S. Fortuna, Politecnico di Milano, I</i>	
Reliability Analysis and prognosis of the Operation Command Technique for the High-Speed Maglev Transrapid	427
<i>G. Khurdok, Dornier System Consult, D</i>	
<i>W. Oehlmann, H. Traub, Siemens AG, D</i>	
Non-Contact Guideway-Surveying Systems and their Use in an Application Route	433
<i>Chr. D'Souza, A. von Gabler, AEG Schienenfahrzeuge, D</i>	
A Three-Dimensional Finite Element Analysis Method for Maglev-Vehicle/Guideway Interaction	445
<i>M. R. Chowdhury, J. C. Ray, U. S. Army Engineer, USA</i>	
<i>(The paper was not available by the date of printing)</i>	
Three-Dimensional Finite Element Analysis of a U. S. Maglev System Concept	447
<i>M. R. Chowdhury, J. C. Ray, U. S. Army Engineer, USA</i>	
<i>(The paper was not available by the date of printing)</i>	
Transient Stability in EDS-Maglev Vehicles: Analytical Approach	449
<i>M. Andriollo, G. Martinelli, A. Morini, A. Scuttari, University of Padova, I</i>	
Transient Stability in EDS-MAGLEV Vehicles: Numerical Simulation.....	455
<i>M. Andriollo, G. Martinelli, A. Morini, A. Scuttari, University of Padova, I</i>	

Performance Evaluation of Combined Active and Passive Damping in Electrodynamic Suspension Systems	461
<i>B. Brunelli, D. Casadei, G. Serra, A. Tani, Università degli Studi di Bologna, I</i>	
Influence of Mechanical and Electromagnetic Disturbance on the Running Characteristics of the Superconducting Maglev System	467
<i>S. Ohashi, K. Higashi, H. Ohsaki, E. Masada, The University of Tokyo, J</i>	
Optimization of the Crash Behaviour of the Magnetic-Levitation Train Transrapid	473
<i>M. Borrmann, H.-J. Diekhoff, IABG mbH, Ottobrunn, D</i>	
Preparation for the High Speed Maglev Project in China	477
<i>S. Xu, X. Wen, Chinese Academy of Sciences, Beijing, PRC</i>	
High-Temperature Superconductors for Innovative Applications	483
<i>P. Görnert, W. Gawalek, Institut für Physikalische Hochtechnologie e. V. (IPHT), Jena, D</i>	
Test Results of MLU002N in Miyazaki	489
<i>T. Sasaki, K. Takahashi, Railway Technical Research Institute, Tokyo, J</i>	
Hybrid Magnets for the Integrated Propulsion and Levitation Concept	495
<i>H. Weh, I. Hahn, A. Steingröver, TU Braunschweig, D</i>	
The Transrapid Test Facility in Emsland – Task, Technology, Results	503
<i>H.-P. Friedrich, MVP gmbH, München, D</i>	