

Contents

Part I Means of Transport and Maintenance

Effects of Braking Characteristics on the Longitudinal Dynamics of Short Passenger Trains	3
Cătălin Cruceanu, Camil Ion Crăciun and Ioan Cristian Cruceanu	
The Behavior of the Traction Power Supply System of AC 25 kV 50 Hz During Operation	35
Radovan Doleček, Ondřej Černý, Zdeněk Němec and Jan Pidanič	
Systems Approach to the Analysis of Electromechanical Processes in the Asynchronous Traction Drive of an Electric Locomotive	67
Pavel Kolpakhchyan, Alexander Zarifian and Alexander Andruschenko	
The Aspects of Modernization of Diesel-Electric Locomotives and Platform for Transportation of Railway Switches in Lithuanian Railways.	135
Lionginas Liudvinavičius and Stasys Dailydka	
Systems Approach to the Organization of Locomotive Maintenance on Ukraine Railways	217
Eduard Tartakovskiy, Oleksander Ustenko, Volodymyr Puzyr and Yurii Datsun	

Part II Infrastructure and Management in Rail Transport

Systematic and Customer Driven Approach to Cost-Efficiently Improving Interlocking and Signaling in Train Transport	239
Jörn Schlingensiepen, Florin Nemtanu and Marin Marinov	
Train Protection Systems in Different Railway Gauges	273
Lionginas Liudvinavičius and Aleksander Śladkowski	

**Modeling of Traffic Smoothness for Railway Track Closures
in the Rail Network** 319
Grzegorz Karoń

**Assessment of Polish Railway Infrastructure and the Use
of Artificial Intelligence Methods for Prediction of Its Further
Development** 361
Bogna Mrówczyńska, Maria Cieśla and Aleksander Król

**Dynamic Optimization of Railcar Traffic Volumes
at Railway Nodes** 405
Aleksandr Rakhmangulov, Aleksander Śladkowski, Nikita Osintsev,
Pavel Mishkurov and Dmitri Muravev