

Mirosław Antonowicz: 65 Years of OSJD Activities in Eurasia

The Organisation for Co-Operation between Railways (OSJD) is an international organisation established on the basis of the “Provisions on the Organisation for Cooperation between Railways” international agreement. The year 2021 is significant for the OSJD since the Organisation celebrates 65 years of its existence. The past years were a period of constant development of the OSJD, full of important events and changes, both within the Organisation itself and in the economic and geopolitical situation of the regions in which it functions. The OSJD has always been focused on the development and improvement of railway transport in Eurasia through the development and improvement of transport corridors and the harmonization of transport law. It is one of the major organisations in the railway sector, actively operating and cooperating with other important international organisations functioning in the railway transport sector, such as the International Union of Railways (UIC), the International Rail Transport Committee (CIT), and the Intergovernmental Organisation for International Carriage by Rail (OTIF), whose task is to promote, cooperate, develop, improve, and facilitate international railway transport as a means of transport that could meet the challenges in terms of mobility and sustainable transport. As part of this cooperation, the OSJD is focused on the constant improvement of railway transport through the simplification of border procedures and the harmonisation of transport documents, which is exemplified by the common CIM/SMGS consignment note. The purpose of this article is to outline the main tasks and roles of the Organisation in the development of railway transport in Eurasia in recent years.

Keywords: OSJD, railway transport, international organisations, Eurasia, consignment note

Marek Graff: Rolling Stock Manufacturers and New Rail Vehicles in Poland

Ten rolling stock manufacturers were operating in Poland in 2020. These were both domestic enterprises (Pesa, Newag) as well as branches of foreign concerns (Siemens, Bombardier, Alstom, Stadler). A similar division can be deemed conventional since the aforementioned enterprises employ mostly Polish specialists or managers – and work with Polish subcontractors. On the other hand, Polish manufacturers use mainly imported components in the production process. The range of the currently manufactured rolling stock is quite wide – from multiple units to locomotives with electric and diesel drives, adapted to run on both standard and broad gauge tracks. Polish plants also manufacture underground train-sets, mostly for export. New rolling stock orders placed by operators are carried out with the support of EU funding programmes.

Keywords: rolling stock manufacturers, Poland, PKP

Andrzej Massel: Experimental Tracks and Their Role in Testing of Rolling Stock and Railway Infrastructure

To speed up the deployment of innovative solutions in rail transport, while ensuring their required quality, dedicated testing grounds are used in some European and non-European countries. Such testing grounds include, in particular, experimental tracks and a special group of them are experimental loops districts. One advantage of such advanced infrastructure is the

availability of conditions comparable to those on railway lines but with no impact on the performance of transport tasks, the availability of the same conditions for comparative tests and the continuity of tests, which considerably shortens their duration and accelerates the results. The article describes the parameters of the experimental tracks in use, and compares and classifies them in the context of the feasibility of different types of testing.

Keywords: experimental track, experimental loop, tests, rolling stock, infrastructure

Paweł Podleśko, Tomasz Warsza: **Organisational and Financial Determinants for the Metropolitan Rail Transport Implementation in Poland with Potential Improvement Prospects**

The article addresses the issue of financing and organising metropolitan rail transport. It identifies challenges for this segment, which include the absence of organisational and funding obligations on the part of metropolitan government structures. It describes the forms of vertical co-operation which are legally permissible for local government units and identifies the drawbacks in this respect. It cites the examples of management of the metropolitan railway transport in Poland, operated despite the existing restrictions. The absence of complete legal and financial instruments providing metropolis with legal certainty in the organisation of metropolitan transport is identified. Specific solutions are recommended, referring to information on dealing the described problem outside Poland.

Keywords: public transport organisation, rail transport, metropolitan areas, integration of offers+, combined ticket

Agata Pomykała: **Polish Regional and Long-Distance Railway Transport During the COVID-19 Pandemic**

The purpose of this article is to present the changes that took place on the market of passenger transport by rail in the first year of the COVID-19 pandemic caused by SARS-CoV-2. Particular attention has been paid to the railway passenger transport in Poland. Two segments of this transport sector are presented: regional (represented by the POLREGIO company) and long-distance (represented by the PKP Intercity company). An analysis of the available data shows that irrespective of the segment, the year 2020 was characterized by significant reductions in terms of transport, which reached the lowest volumes in April and May, and the financial results of PKP Intercity were worse than in previous years; however, the share of POLREGIO in the market of passenger transport by rail increased. For the purpose of the article, literature and other available sources have been researched and analytical and synthetic methods have been applied. In addition to text, drawings are included.

Keywords: railways, regional railway transport, long-distance railway transport, COVID-19

Andrzej Zbieć: **Aerodynamic Phenomena Caused by the Passage of a Train. Part 2: Pressure Influence on Passing Trains**

In the series of articles describing the aerodynamic phenomena caused by the passage of a train, the effects of a train running at high speed on itself, on other trains, on objects

on the track and on people are characterized. This impact can be of two types – generated pressure and slipstream. Apart from the literature analysis, the author’s research is also taken into account. The second part presents the effect of pressure changes on the front and side surfaces of passing trains. Conclusions concerning side windows and windscreens in high-speed railway vehicles and older type railway vehicles with lower allowable speeds and the possibility of using various rolling stock on the same lines are presented.

Keywords: rolling stock, high-speed railways, aerodynamic phenomena