

## SUMMARIES

### ARTICLES

#### **Marceli Lalik: Technical and Organisational Possibilities to Reduce Fuel Consumption in Railway Transport**

The article presents selected technical and organisational solutions to reduce consumption of diesel as traction fuel in railway vehicles. The aim of gradual reduction in the amount of diesel used in the global economy is not only to reduce the cost of its purchase, but above all, the need to reduce greenhouse gas emissions and improve air quality. The development of hydrogen technology and energy storage in batteries is a viable response to the trend towards non-carbon footprint in rail transport.

**Keywords:** railway transport, vehicle traction, diesel fuel

#### **Janusz Poliński: Autorack – a Proposal to Reactivate the Offer**

The article contains information on European offers of travellers' cars carriage in autoracks integrated into passenger trains. It describes applied solutions of carriages and loading terminals on standard gauge lines in: Poland, Germany, Austria, France, Italy, Czech Republic and Slovakia, as well as broad gauge lines in Finland, Russia and Ukraine. The historical aspect of the development of the offer and its withdrawal in selected countries is presented, furthermore, the countries in which the offer is currently being developed are indicated. In connection with the need to introduce emission limits for pollutants, electromobility plays an important role. The growing share of electrically powered cars in individual transport is related to the search for solutions supporting the development of electromobility in rail transport. The development of a new-generation autorack, which will enable the return of car transport with travellers in Poland, contributes to these activities.

**Keywords:** rail transport, electromobility, autorack, new rail transport offer

#### **Janusz Poliński: Railway Museum – What, Where and When?**

The functioning of railway museums and open-air museums requires a lot of systematic and orderly activities. It concerns both immovable and movable heritage exhibits, necessary funds for the functioning of the institutions, patronage of licensed operators and patronage of the state. The article reviews the existing exhibits as well as proposes a new location of the institution situated at Warszawa Główna railway station. It also discusses legal issues arising from the current law on museums and the law specifying

the functioning of rail transport after the restructuring measures. The article ends with conclusions and recommendations, the implementation of which should improve care for the preservation and maintenance of many historical technical and infrastructural solutions for future generations, as elements of the national cultural heritage.

**Keywords:** rail transport, railway museum, cultural heritage

### RESEARCH INFORMATION

#### **Iwona Wróbel: Northern Agglomeration Railway**

The information describes a project carried out at the Railway Track and Operations Department of the Railway Research Institute, concerning analyses of the Northern Agglomeration Railway (Północna Kolej Aglomeracyjna – PKA) variants with respect to the possibility of serving the northern districts of Gdynia and neighbouring communes by rail transport. The project took into account previous studies carried out after 2000 which included variants of the route of the line and the location of railway stations and stops for the area of the Tricity metropolis. The studies and analyses resulted in an expert assessment report of potential variants of the PKA line, indicating the advantages and disadvantages of individual solutions and containing recommendations in technical and operational aspects.

**Keywords:** infrastructure projects, construction of railway lines, modernization, agglomeration railway, agglomeration transport

### RECENT EVENTS

#### **Janusz Poliński: European Year of Rail Train**

The year 2021 was announced the European Year of Rail by the European Commission. One of the events connected with the celebrations was the launch of the Connecting Europe Express – a special train promoting railways as the most environmentally friendly means of transport. The 20,000-kilometre route of the train passed through the territories of most EU countries, as well as Switzerland, Serbia and Northern Macedonia. Due to the different track gauges used in Europe, the standard gauge train was replaced on the Lisbon – Madrid – Hendaye route by an Iberian train consisting of six Talgo carriages, supplied by Spanish railways. On the Tallinn – Riga – Vilnius - Kaunas section, a Baltic train supplied by Lithuanian railways ran. The train journey was accompanied by meetings of persons responsible for transport, scientists and railwaymen, who discussed important issues related to the simplification of railway op-

eration, both from the legal and technical side. The event lasted 36 days and ended on 7 November 2021 in Paris.

**Keywords:** rail transport, European Year of Rail, Connecting Europe Express

**Agata Pomykała: XX Jubilee Scientific and Technical Conference NOVKOL'21 „Modern Technologies and Management Systems for Rail Transport”**

The information concerns the papers presented during the XX scientific and technical conference “Modern technologies and management systems in rail transport” NOVKOL'21. The leading theme of the conference was modern technologies in design, construction, maintenance, diagnostics and operation of rail infrastructure and rolling stock for passenger and freight transport. In addition, information was given on issues related to the new economic reality in the European Union, including Poland, and changes resulting from the pandemic situation.

**Keywords:** public transport, rail transport, railways

**Agata Pomykała: Conference PublicTrans 2021: Integrated Public Transport in Service of Cities and Regions**

The information concerns the papers presented during the 15th scientific and technical conference “Integrated public transport in service of cities and regions”. The papers described the changes on the transport market resulting from,

among others, the epidemiological situation, European climate and environmental strategies as well as the new EU financial perspective for 2021–2027. Moreover, the issues concerning the possibilities of the development of public transport in Poland were discussed, including the development of the Warsaw metro in the context of its 25 years of operation, as well as the development of bus transport in Warsaw in the context of the centenary of its operation.

**Keywords:** transport, urban transport, metro, railways

**Iwona Wróbel: Railway Stops Infrastructure Improvement Program**

The information describes a multi-annual government programme concerning financial support for construction and modernisation of railway stops, referred to as the Train Stops Programme. The main assumptions and objectives of the Programme were listed in order to increase accessibility to rail transport and thus enable journeys and reduce the scale of transport exclusion. The number of planned investments is mentioned, and, by voivodeship, the locations of investment tasks from the basic and reserve list are provided. The event related to adoption of the Train Stops Programme opens up opportunities for obtaining subsidies for investments in facilities infrastructure, which can have a real impact on increasing the share of rail in passenger transport.

**Keywords:** government program, railway infrastructure, passenger stop