

SUMMARIES

ARTICLES

Łukasz John, Artur Dłużniewski: Protection Against Lightning of Stationary Railway Facilities. Part 2. Internal Protection – General Principles of Design

Principles of protecting electrical and electronic devices against overvoltage in stationary railway facilities are presented in the article. The overvoltage protection involves the use of zonal protection for systems and devices. There are described basic principles of screening as well as electrical wiring and signal transmission in order to avoid feedbacks between installations located in stationary railway facilities, such as: posts, signal boxes or local control centres (LCS). Overvoltage protection for modern systems and electronic devices located in a stationary railway facility is shown on the example of the local control centre (LCS) and the post.

Keywords: internal lightning protection, surge protectors, lightning protection zone, electric surge

Ivana Martinčević, Adam Dąbrowski: Layout of TEN-T / RFC Rail Networks and the Possibility of Establishing a High Speed Rail Connection Warsaw – Budapest

The article features the current high-speed rail developments in the Visegrad Group (V4) countries. Moreover initial proposals concerning a fast Warsaw – Budapest connection are outlined. The possibility to include the proposed corridors into the Trans-European Transport Network (TEN-T) as well as their contact or joint operation with existing and planned Rail Freight Corridors (RFC) are assessed. Based on the analyses, sections of the railway infrastructure that meet and do not meet the technical requirements of the TEN-T network are determined. The plans for the future development of the TEN-T and RFC networks and their impact on the shape of the Warsaw-Budapest high-speed connection under consideration are also assessed.

Keywords: high speed rail, TEN-T Core Network Corridors, Visegrad Group (V4)

Eugeniusz Skrzyński: Subsidence of Soil Track Bed

The classic ground track bedding in the form of embankments and cuttings is the proven support of the surface of conventional railways, both operated at relatively low train speeds, as well as high-speed lines. The article lists the causes of subsidence of the ground subgrade, the impact of subgrade subsidence on the deformation of the railway surface, the effects of pressing ballast into fine-grained subgrades and the most frequently used methods for pre-

venting subsidence of the subgrade. It offers recommendations of railway constructors, both former ones, including prof. A. Wasiutyński, as well as contemporary ones.

Keywords: railway infrastructure, soil subsidence, settlements

Paweł Winciorek: Railway Wagons for Transporting Liquid Slag

The article features wagons of special construction, commonly called ladle wagons, intended for transporting liquid slag. The basic parameters of such wagons and the specifics of their operation are presented. Due to the type of cargo being transported and special operating conditions, such wagons must meet strict technical requirements regarding carrying capacity and thermal resistance.

Keywords: railway transport, internal railway transport, freight wagon

RECENT EVENTS

Magdalena Garlikowska: Global Debate on Mobility Challenges for the Future Society

This information refers to an international conference Global Debate on Mobility Challenges for the Future Society, held in Warsaw on 15–16 November 2018, dedicated to the exchange of ideas on future transport and the role of railways in the intermodal transport system. The topics of the debate as well as summaries of posters prepared by the Railway Research Institute's employees for the poster session associated the conference were presented.

Keywords: debate, mobility, rail transport

Iwona Wróbel: Participation of the Railway Research Institute in the Railway Congress 2018

The Railway Congress organized by Transport Consultants Group "TOR" Ltd. and Railway Business Forum is considered to be the greatest and most prestigious conference event in the railway sector. The 8th edition of the Congress was held at Legia Stadium in Warsaw on 7 November 2018. The honorary patronage included, among others, the Railway Research Institute. This information features the course of the Congress, its topics discussed in panel sessions by specialists, four of whom are the Railway Research Institute's employees.

Keywords: railways, congress