

Dear Readers

The editors of Problemy Kolejnictwa are forwarding the second issue of our journal, published in 2022, which contains six articles on a variety of topics. All articles prepared by the Railway Institute staff provide a cross-section of the research currently being carried out at the Institute.

The publication opens with a comprehensive article by the team of A. Dąbrowski and S. Klemba on the state of rail transport in the Olsztyn Functional Urban Area and possible measures to increase its role in the future.

The article by M. Garbacz presents the influence of selected ageing mechanisms on painting systems currently used in the Polish railway industry in terms of maintaining their original protective properties against graffiti. The next article, by M. Lalik, describes the requirements for on-board equipment for rolling stock running on sections of the railway line where optional stops are located.

The article by M. Ostromęcka and J. Siwiec deals with the plastic deformation during the stretching of materials and the qualitative relationship between the changes occurring in the structure of the material deformed due to the increase in temperature, as observed by an infrared camera. The article by M. Ostromęcka and M. Szymański, on the other hand, is devoted to the preparation of microsections for macroscopic and microscopic examinations of friction-welded dissimilar steel joints and their evaluation in relation to the applicable standards.

The publication closes with an article by a team of employees from the Railway Institute's Department of Power Engineering, the topic of which is a model of current distribution in overhead lines. The model was developed as part of a research project on an innovative overhead line de-icing system.

Wishing you an interesting read

Andrzej Massel
Editor-in-Chief