

## SUMMARIES

## ARTICLES

**Paulina Banachowicz: Materials and Structure Laboratory**

The structure and activity of the Materials and Structure Laboratory of the Railway Research Institute were described. The most important test stands were presented and also the projects executed by the Laboratory were mentioned.

**Keywords:** fire protection, fire tests, chemical analyzes, corrosion tests, strength tests, mechanical tests, training of ultrasonic testing

**Magdalena Garlikowska: New Organizational Unit in the Railway Research Institute's Structure – Safety Assessment Centre**

The article presents requirements on applying risk management process and requirements for assessment bodies mentioned in the Council Implementing Regulation No. 402/2013 of 30 April 2013. There were described tasks of a new organizational unit of the Railway Research Institute – the Safety Assessment Centre the activity of which is going to be in accordance with the mentioned above Regulation and with the PN-EN ISO/IEC 17020:2012 standard.

**Keywords:** safety assessment, Assessment Body, risk management

**Małgorzata Kucińska, Andrzej Aniszewicz: Metrology Laboratory of the Railway Research Institute**

The article describes a scope of activity and works performed in the Electrical Quantities Office and the Length and Angle Office of the Metrology Laboratory of the Railway Research Institute. There were presented essential calibration areas and types of calibrated instruments. Attention was drawn to performance of calibration of specialised railway equipment and railway superstructure elements, instruments and vehicles.

**Keywords:** metrology, accreditation, calibration laboratory

**Krzysztof Ochociński: Activity of Railway Track and Operation Division in the Field of Rail Transport**

The article presents the areas of activity of the Railway Track and Operation Division in the Railway Research Institute tailored to market needs.

The Division conducts research activities and technical cooperation in the field of design, construction, and operation of railway lines and public transport systems, organization of railway traffic and operation, passenger and freight transport forecasting, and impact of railway investment on the environment.

**Keywords:** railway transport, railroad, passenger and freight transport market, environmental protection

**Janusz Poliński: The Rules of Providing Assistance for Passengers with Reduced Mobility at Railway Stations**

The Specification for interoperability No. 2008/164/EC requires from station managers development of strategy of access to passenger infrastructure for people with disabilities.

The staff appointed to contact with passengers should be trained also in *savoir vivre* and good practices in relations with people with disabilities. In the article there were presented rules of proper conduct of railway staff in contacts with the blind and the partially sighted, the deaf and the partially deaf, people with reduced mobility, speech impediments, lowered cognitive performance, mental and other disorders, as well as people with different appearance. Described rules are aimed at quality improvement of disabled passengers service and facilitation of education in this area.

**Keywords:** rail transport, passenger disabled, helping travelers with disabilities

**Artur Rojek: Researches of Equipment and Electric Traction Power Supply Systems**

The Electric Power Division of the Railway Research Institute conducts analyses, measurements, tests of electric traction supply systems, non-traction collections and high-voltage equipment installed in rail vehicles. It performs expertises and tests of short circuit protection and protection against electric shocks systems. The tests are performed in laboratories (including short-circuit ones), during field surveys and on electric traction supply objects. The Division performs research works of traction substations and their elements, static inverters, short circuit protection and protection against electric shock systems, return circuit and its elements, pantograph and others. It conducts short circuit, load, heat, climate and other tests in accordance with requirements of standards for tested equipment and systems.

**Keywords:** electric traction supply, high-speed circuit breaker, short circuit current, rectifier set

### **Iwona Wróbel, Szymon Klemba: Review and Update of Transport Plan**

In accordance with the rules in force, a Transport Plan of interregional and international services shall be periodically reviewed for conformity of its regulations to real execution by passenger services' operators and also due to changing conditions of services, for functioning of which bears the competent minister in charge of transport. The first verification and update is scheduled for year 2016 and should be preceded by an analysis of selected parameters described in the chapter 7 of the Plan.

The article describes basic elements of the Transport Plan to be reviewed, including an evaluation of parameters of interregional and international services, an update of area of the railway network currently used for services and planned for the (final) expansion in aspect of development of transport offer, verification of transport needs' forecast and presents indicators of service parameters that are at disposal of the minister and which should be gained in 2024.

**Keywords:** transport plan, public collective transport, international services, interregional services

## RESEARCH INFORMATION

### **Adam Dąbrowski: Specification of CARGOTOR's Railway Infrastructure in the Area of Transfer Station in Małaszewicze**

The main object of the study was to check availability and validity of existing documentation of railway infrastructure managed by Purchaser (CARGOTOR Sp. z o.o.) in the area of Transfer Station in Małaszewicze, taking into account the division into subsystems: „Infrastructure”, „Energy” and „Control command and signalling”.

Moreover, the subject of the Register of Infrastructure (RINF) was carefully reviewed in the study, namely: the purpose and structure of RINF, the history of its implementation, the character of the data collected in the system and the procedure for reporting data to RINF. In this way the Purchaser was equipped with a set of basic and essential knowledge in this field.

**Keywords:** railway infrastructure, railway infrastructure manager, Register of Infrastructure, RINF, transfer station

### **Marceli Lalik: Tests of Coach-set TALGO F063 in Poland**

Article presents selected technical parameters of TALGO F063 coach-set and scope of tests and assessment of mentioned vehicle in order to confirm its compliance with

requirements of open points and special cases of the applicable technical specifications for interoperability and vehicle compliance with Polish railways infrastructure.

**Keywords:** railway transport, Talgo, TSI

## RECENT EVENTS

### **Paulina Banachowicz: Third International Conference „Modern Trends of Fire Protection in Rolling Stock”**

There was presented an information about the Third International Conference “Modern Trends of Fire Protection in Rolling Stock” organized on 18<sup>th</sup> May 2016 in Warsaw by the Railway Research Institute. The aim of the conference was characterized, as well as its results, and the titles of 13 papers from 5 countries presented during thematic sessions were mentioned. The Conference was accompanied by the “Modern and Safe Rolling Stock Equipment” showroom.

**Keywords:** fire protection, standard EN 45545, fire tests, fire resistance barriers

### **Magdalena Garlikowska: Railway Research Institute as Signatory of Declaration on Development of Safety Culture in Railway Transport**

On 21<sup>st</sup> April 2016 over ninety railway market representatives officially signed Declaration on Development of Safety Culture in Railway Transport in the headquarters of the Railway Transport Office. The Railway Research Institute was one of the signatories. The information presents main assumptions of the document.

**Keywords:** safety, railway transport, safety culture

### **Elżbieta Langa: Scientific and Technical Seminars at the Railway Research Institute**

In the first half of the year 2016 the Railway Research Institute organized six open scientific and technical seminars that were a platform for discussion on essential railway transport issues and new technical solutions. Apart from research workers in the seminars representatives of railway companies and industry took part. During presentations there were described new-generation overhead contact line aluminium alloy equipment, new fatigue limit tests results, there were described safety on rail-road crossing issues as well as meaning of rail profiling for superstructure maintenance. There were presented results of experimental tests and simulations of brake friction pairs and methods

of estimation of measurement uncertainty used in the Signalling and Telecommunication Laboratory. Presentations are available on the Railway Research Institute's website ([www.ikolej.pl/seminaria-instytutu-kolejnictwa](http://www.ikolej.pl/seminaria-instytutu-kolejnictwa)).

**Keywords:** railway transport, Railway Research Institute, seminar, overhead contact line, fatigue limit, rail-road crossings, safety, profiling rails, a pair of brake pads, the estimation of measurement uncertainty

## EXTERNAL PUBLICATIONS

### **Renata Barcikowska: Research Institutes in the Innovative Policy of Poland in Terms of Membership in European Union**

The information presents main assumptions, aims, hypotheses and research methods of the doctoral thesis entitled: Research Institutes in the Innovative Policy of Poland in Terms of Membership in European Union.

**Keywords:** European Union, innovation policy, research and development centres