



doc. Ing. Milan Hřebačka, CSc.

**Organizace pro spolupráci železnic - OSŽD
Organization for Co-operation between Railways (OSJD)**

The OSJD is a governmental international organization established in 1956 in Sofia. The organization is dealing in the area of railway transport and forwarding cooperation and development of transcontinental connection between Europe and Asia. OSJD is introduced in its history, present and in the ongoing targeted reform as well. The author presents the data about organization structure, activities' outputs and broad international cooperation.

Ing. Ivan Dobeš

**TSI pro subsystém energie
TSI for Energy Sub-system**

This article describes technical specifications for interoperability relating to the 'energy' sub-system of the trans-European conventional and high-speed rail system. The article shows basic parameters and the process of assessing conformity of this TSI and its implementation.

Ing. Petr Jindra, Ph.D.

**Předpoklady úspěšné implementace TSI pro subsystém telematické aplikace
v nákladní dopravě v podmínkách českého železničního nákladního dopravce
Preconditions for successful implementation of TSI for the subsystem
Telematic Applications for Freight within a Czech freight railway undertaking**

The article deals with necessary prerequisites for interoperability of telematic applications in freight transportation to bring the effect desired by the European Commission. It presents the basic results of the dissertation which was elaborated on this topic and defended by the author in March 2010. Following the analysis of missing links and processes, not considered by the Commission Regulation (EC) No 62/2006, fundamental problems expected in relation with the TAF TSI implementation have been identified. A proposal of possible solutions is a part of the article.



Ing. Mgr. David Krásenský

**Rozvoj terminálů pro intermodální dopravu na ose Sever-Jih
v rámci projektu SoNorA
Developing terminals for intermodal transport on the South - North axis
within the SoNorA project**

Intermodal transport is one of the most prospective and most dynamic transport modes. It aims to reach a bigger share (modal split) of the railway as a sustainable surface transport, therefore it is also supported by public funds, both national and European ones. Initiatives aiming to develop intermodal transport include also the SoNorA program (South-North Axis), financed by the European Regional Development Fund (ERDF); its general aim being the development of accessibility in the South - North direction, between the Adriatic and Baltic seas, in particular improving multimodal freight logistics services and the infrastructure of intermodal terminals and the railway network as such. The author of the article introduces the overall structure of the project, the Czech participation in the SoNorA project and its specific results achieved by the Pre-Investment Case Study of market opportunities of the terminal in Brno and the analysis (Case Study) of developing the intermodal terminal in Lovosice.

Ing. Jiří Janšta – Ing. Miroslav Hladík

**Databáze omezení infrastruktury DOMIN jako důležitý zdroj informací
Infrastructure Restriction Notice Database DOMIN as an important
information source**

For any railway undertaking (RU), the Infrastructure Restriction Notice Database compliant to the TAF TSI is one of important information sources maintained by the infrastructure manager (IM). It contains information on closures, accidents, and other service restrictions and disruptions on the railway network. This contribution discusses the situation in the Czech Republic, and describes the processes of capturing information on infrastructure restrictions and providing this information to the RU's staff and IM's staff handling the train paths. It summarizes then the IM's information systems which can provide information for the Infrastructure Restriction Notice Database, and presents the data structures in conformance with TAF TSI.



Ing. Luděk Ehrenberger – Ing. Tomáš Tóth

PROBIS – provozně-obchodní systém ČD Cargo, a.s.
PROBIS – Operational and business information system of CD Cargo, a.s.

One of the most important programs of CD Cargo Project Management Office portfolio is the new operational and business information system of this company. The project program integrates a set of projects, addressing individual applications in the sector of operation and business. These create together a single whole, the business information system CD Cargo, called PROBIS. PROBIS is developed with a view to ensure linkage to core objects in rail freight transport (train, wagon, locomotive, train drivers, station staff) on the business case for the whole lifecycle of transportation and to ensure compliance with obligations under the EU Regulation on the TAF TSI.

RNDr. David Žák, Ph.D. – Ing. Lukáš Čegan, Ph.D. – Ing. Zuzana Kleprlíková

Přenosy dat o aktuální poloze hnacích vozů řady 560 v Jihomoravském kraji
Data transfer on the current location of power cars Series 560 in South Moravia

The article deals with evaluation of transferring UDP datagrams which carry information on the current location of cars Series 560 on railway lines in South Moravia. Datagrams are transmitted through a private APN of the public GSM network, which is integrated into the railway wireless communication network. The article studies the effects influencing the loss of UDP datagrams in the transmission network, for example the influence of the vehicle position or day time.

Ing. Jakub Vágner – Ing. Aleš Hába, Ph.D.

Možnosti stanovení příčné tuhosti flexi-coil pružin
Possibilities of assessing lateral stiffness of flexi-coil springs

Helical springs stressed not only in the axial direction but also in the lateral direction (flexi-coil springs) are currently used as a basic structural part especially for secondary suspension of rail vehicles. The lateral stiffness of the helical springs determines the resistance against rotation of the bogie in the vertical axis. This fact significantly influences the running behaviour of the vehicle, especially running stability on a straight track. This contribution presents a comparison of possible methods of calculating lateral stiffness of the helical spring for different load conditions.



prof. Ing. Jaroslav Smutný, Ph.D. – Ing. Ivan Vukušič – Ing. Vladimír Tomandl

**Zkušenosti z experimentálního měření dlouhých výhybkových pražců
Experience from experimental measurements of long crossing bearers**

This paper is focused on experimental measurements of displacement and acceleration of vibrations directly on long bearers in the crossings part of turnout in conditions of full operation. Results of analyses of measured signals on two turnouts were presented and compared. Measurement evaluation is provided by modern mathematical methods in time, frequency and time-frequency area. Recommendations for evaluating dynamic effects which can be used in the turnouts diagnostics are included.