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**Experimentální vozidlo s volně otáčivými koly pro rozchod 600 mm  
Experimental rail vehicle with independently rotating wheels for the 600 mm  
gauge**

This paper deals with construction of a special experimental rail vehicle with independently rotating wheels which is to be used for research in the field of rail vehicles with this drive arrangement. The current aim is research of the methodology of control of this rail vehicle with independently rotating wheels, which are driven by permanent magnet synchronous traction motors without gearbox, including electrical equipment and a battery power supply system. Each of the synchronous traction motors used has its own inverter with a control system. One common supersets control system is used onboard the vehicle to achieve the desired method of control and coordination between individual wheels and possible variations.

Ing. Ivo Hruban, Ph.D. – doc. Ing. Tatiana Molková, Ph.D.

**Průzkumy kvality služeb při zpoždění v osobní železniční dopravě u ČD a ÖBB  
Surveys of service delivered quality during delays in rail passenger transport  
at ČD and ÖBB**

The article deals with requirements of passengers concerning the quality of services provided during train delays. The requirements were identified on the basis of a questionnaire survey at the stations Brno hlavní nádraží and Wien Westbahnhof. The article further compares passengers' requirements with passengers' rights regarding compensations and liquidated damages resulting from Regulation (EC) No. 1371/2007. The requirements are sorted by several categories (the entire set of passengers; passengers of train categories SC (SuperCity), RJ (RailJet), ICE (InterCity Express) and passengers using train for business trips).

prof. Ing. Jaroslav Smutný, Ph.D. - Ing. Vladimír Tomandl – Ing. Ivan Vukušič  
– prof. Ing. Luboš Pazdera, CSc.

**Vybrané metody modální analýzy uplatňované na železniční infrastrukturu  
Selected Modal Analysis Methods in Use on the Railway Infrastructure**

Modal analysis is a part of dynamics which is very important in the field of diagnostics of machine and engineering structures. It is possible to obtain a complete dynamic description of the construction assembly by determining its modal characteristics. Many problems relating to excessive sound pressure levels and vibrations in the surroundings of the railway structures are associated with modal attributes of the railway structures. The paper deals with experience in practical modal analysis problems in the field of railway constructions and structures.



Ing. Michaela Škovranová

**Vyhodnocení geometrických parametrů koleje s podpražcovými podložkami  
Evaluation of geometric characteristics of tracks with under-sleeper pads**

The paper deals with assessment of track geometrical parameters in the trial track sections with under-sleeper pads in the railway line Havlíčkův Brod - Okrouhlice and in the railway station of Planá nad Lužnicí. There were evaluated measurements of vertical alignment of the rails by high-precision levelling, and measurements of deviations of track geometrical parameters measured by a track measuring car in this paper. There is expressed a conclusion concerning the impact of the under-sleeper pads on track geometric data in the paper.

Ing. Luboš Šperl

**České dráhy - přehledné informace nad mapovým podkladem  
České dráhy – Transparent information on a map basis**

The article describes how to display reports showing the relation between the number of passengers and a specific train / specific line or for a selected group of trains on the rail network, not only in the form of tables, but also graphically on the geographical basis by means of the map server – MapExpert.

Ing. Ondřej Štěpán

**Posouzení rozsahu dopravní infrastruktury s ohledem na výhledový rozsah  
dopravního provozu na trati Veselí nad Lužnicí – Jihlava- Havlíčkův Brod  
Assessment of the Transport Infrastructure Extent with Respect to Prospective  
Operations on the Railway Line Veselí nad Lužnicí - Jihlava - Havlíčkův Brod**

The paper presents main results of the author's thesis focused on assessment of the necessary extent of the infrastructure with regard to prospective operations (operational concepts) with the help of simulation modelling. The aim of the thesis was to propose rationalization measures on the railway infrastructure and to determine whether the infrastructure is adequate for the prospective range of operation or not (in the link to the prospective concepts of transport services in this area). A simulation model (developed in SW Open Track) was created for verification of the measures proposed.



Ing. David Švingr

**Jízdní řády ČD v mobilním telefonu  
Czech Railways time tables in a mobile phone**

While on the “classical” web of Czech Railways the browser in time tables is already a well-established and frequently used service, its mobile version is an innovation. The paper deals with browsing in ČD time tables on mobile phones and describes the context of arising of the special version optimised for display on mobile phones.

Ing. Vladimír Tomandl - Ing. Marek Pětioký – Ing. Petr Felgr - Ing. Oldřich Jirků

**Posuzování subsystému Infrastruktura dle TSI ve fázi projektu  
Assessment of the Infrastructure subsystem according to TSI in the design phase**

Important railway infrastructure projects within the trans-European conventional rail system must respect not only architectural, technical and technological demands, but also interoperability requirements. These requirements are stated, depending on the subsystem, in particular technical specifications for interoperability (TSI). This paper presents conformity assessment experiences relating to projects within the TSI infrastructure subsystem of the trans-European conventional rail system and the TSI relating to people with impaired mobility and orientation in terms of technical interoperability requirements in the design review phase. The paper freely follows up to the paper “Zkušenosti s posuzováním požadavků TSI PRM subsystému Infrastruktura” (Experience in assessment of requirements of TSI PRM of the Infrastructure Subsystem) issued in VTS ČD no. 31 of 06/2011.

Martin Vnuk

**Mobilní web Českých drah  
Mobile web of Czech Railways**

The mobile web of Czech Railways (<http://www.m.cd.cz>) is formed of several applications representing the basic structure of services provided and used on the web site <http://www.cd.cz>. The web version is adapted to display on mobile devices featuring a smaller size of screens, different control elements and different behaviour in comparison with e.g. “desktop PC computers” or notebooks (and other similar devices).