



doc. Ing. Karel Hlava, CSc. – Ing. Jaromír Hrubý

**Ztráty v napájecí soustavě  
Energy losses in railway power system**

Components of energy losses for both 3 kV DC and 25 kV 50 Hz railway power system of Czech Railways are analyzed. Attention is also paid to the problem of multiple locomotives in the powered section. Diagrams are given for specific energy losses depending on the number of traction power for a selected length of the powered section.

Ing. Karel Kobza

**Modernizace motorových vozů řady 842  
Modernization of diesel railcars of class 842**

This paper shall introduce to readers the main facts about modernization of 37 diesel railcars of class 842 for Czech Railways (ČD, a.s.). The objectives of modernization are extension of effective lifetime, improvement of traction and fitting of a new control system allowing automatic speed regulation and automatic control of the train. Important is also the improvement of comfort for the passengers, which is achieved by fitting of vacuum toilet and audiovisual information system.

Ing. Miloslav Macháček, Ph.D.

**Mobilní síť 3G a železniční bezdrátová přenosová síť  
Mobile 3G network and the railway wireless transmission network**

The article evaluates the characteristics of public mobile networks 3G (T-Mobile, Telefonica and Vodafone) on the basis of experimental measurements. It shows the possibility to use support in the ICOM in the environment ŽBPS.

Ing. Ladislav Mlynařík – prof. Ing. Jaroslav Novák, CSc.

**Studie regionálního železničního provozu s akumulátorovým vozem a solárním  
napájením v podmínkách ČR  
Study of regional railway system with accumulator vehicle with photovoltaic  
supply**

The paper presents design of regional railway system with a photovoltaic feed. Three conceptions are presented: direct photovoltaic drive, indirect photovoltaic drive and hybrid photovoltaic drive. The design is work up for indirect photovoltaic drive. The conception of rail system and some results of traction and energetic calculations are in this paper.



doc. Ing. Bc. Kristýna Neubergová, Ph.D. – Ing. Bc. Dagmar Kočárková, Ph.D.

**Snížení hluku z železniční dopravy jako jedna z cest k udržitelné dopravě  
Reducing noise from rail transport as a way to sustainable transport**

The paper is focused on the issue of noise from rail transport. The introductory part is devoted to sustainable transport. This part is followed by a brief summary of the sources of noise from rail transport. The key is third part, where the various measures to reduce rail noise are characterized. In conclusion then is a summary of noise control measures.

Ing. Vlastimil Polach, Ph.D.

**Automatizace řízení železniční dopravy  
Automation of Railway Traffic Management**

The operation of railway traffic from one dispatching control centre ensures the high quality of a traffic management. The operators can solve traffic conflicts in wider context, because they have overall view of the traffic situation on the whole line. As a result of it a more fluent traffic and a better capacity usage of the line is achieved. There are not only the new interlocking systems which support the operators' work but also the information and control systems help the operator in solving conflict traffic situations. One of their functions is automatic train route setting. This paper deals with the possibilities of implementation of automatic route setting in the Czech Republic.

Ing. Jiří Segeta

**Nová vozidla ŠKODA VAGONKA pro příměstskou  
a regionální železniční dopravu  
New vehicles of ŠKODA VAGONKA for suburban and regional railway transport**

This paper describes regional railway vehicles produced in ŠKODA VAGONKA a.s. The first part deals with the electric double decked multiple units designated for passengers commuter transport of city agglomerations. Some data and passengers capacity are given. Detailed description of the electric single decked multiple unit for the Czech Railways developed in various versions for transport in the regions is introduced in the next part. The basic data are given and it is described configuration of the design groups. The text is completed with the pictures of exterior, interior, the body shell and assembly of the first prototype.



Ing. Stanislav Solánský

**Možnosti přizpůsobení železničního spojení na trase Valašské Meziříčí – Ostrava současným požadavkům na moderní a konkurenceschopnou železnici**  
**Ways of customization railway service between Valasske Mezirici - Ostrava for a current requirements of modern and competitive railway**

The article describes possible ways of railway infrastructure modification and traffic reorganization on the line Valasske Mezirici – Ostrava which would be as far as efficient and make railway transport more attractive at the expense of other transport modes. Relevation of construction interventions on infrastructure and timetable construction is from technological point of view verified and refined through a computer simulation on model.

Ing. Ivo Soukup

**Řídící vůz řady Bfhpvee**  
**Steering car of class Bfhpvee**

Steering car of the class Bfhpvee is designed to control electric and diesel locomotives in push pull train sets. Article focuses mainly on technical description of parts and equipment of the vehicle. Content is sorted according to the structural groups of the vehicle. The article begins with short historical overview of usage of driving trailers in the area of former Czechoslovakia. At the end of the article is information about the current state of the Bfhpvee car testing and homologation.

Ing. Miroslav Šídlo

**Nezávislé posuzování rizik vybraných změn na infrastruktuře železniční dopravní cesty**  
**Independent risk assessment of selected changes to the railway infrastructure**

The paper describes the process of independent risk assessment and its whole process. Part of the paper is a list of areas which are assessed by the Technical Centre of Infrastructure (TUDC) and the description of methods used in the assessment, including a list of resources used for the assessment.



Ing. Lenka Zahradníková

**Model poptávky po železniční osobní dopravě Českých drah, a.s.  
na tuzemském přepravním trhu  
The model of demand of Czech Railways' passengers transport on domestic  
market**

This contribution deals with modelling of Czech Railways passenger transport demand on domestic transport market. For its modelling are used both regression and correlation analysis, which investigate the dependency of the volume traffic on changes in particular kinds of prices.