



prof. Ing. Vlastislav Mojžíš, CSc.

**Jubilea Ing. Jana Pernera
Jubilees of Ing. Jan Perner**

The editorial deals with the life and work of Ing. Jan Perner, a leading Czech designer and master builder of railway lines, and with ceremonial events organised on the 200th anniversary of his birth and the 170th anniversary of his death.

prof. Ing. Václav Cempírek, Ph.D.

**Odkaz Ing. Jana Pernera české železnici
Ing. Jan Perner's Legacy in Czech Railways**

The paper is focused on the life and work of Jan Perner. Its author analyses various motives which influenced little Jan so much that he did not become an assistant to his father in the family-run mill where he was born, but started to study transport constructions instead. Jan was born in the period which was very interesting, without any doubt, from the viewpoint of social, political and especially technical and technological developments. This period was characterised by growing business activities, associated with renovation and construction of roadways at the end of the 18th and at the beginning of the 19th centuries. The other part deals with his contribution to construction of the first steam railways not only in Moravia and Bohemia, but also in Russia. In the author's opinion, the main legacy of Jan Perner consists in his participation in construction of the railway lines which are at present our most modern railway corridors.

doc. Ing. Bohumil Culek, Ph.D. - prof. Ing. Bohumil Culek, CSc.
- Ing. Petr Voltr - Ing. Jiří Malinský

**Rozvoj technické infrastruktury Dopravní fakulty Jana Pernera, Univerzity
Pardubice v oblasti kolejové dopravy
Development of the technical infrastructure of Jan Perner Transport Faculty,
University of Pardubice, in the field of rail transport**

On its 20th anniversary, Jan Perner Transport Faculty of the University of Pardubice opened up the Educational and Research Centre in Transport (ERCT), which constitutes an upgrade of its laboratory infrastructure, necessary for education, research and development in technical disciplines. The paper describes its fields of interest and research activities which are highly related to railway transport. The paper provides for characteristics of some unique equipment and technologies, much attention being paid to the railway wheel test stand and to one of its important applications – development of instrumented measurement wheel sets.



prof. JUDr. Karel Marek, CSc. - Mgr. František Bodlák

**Příkaz - Příkazní smlouva
Agency order - Agency Agreement**

Through an Agency Agreement the Agent undertakes to arrange for a matter of the Principal. The Agent shall pass all the benefits of the matter arranged for to the Principal. The provisions of Sections 2430 through 2443 of the Civil Code shall apply as appropriate to the cases involving an obligation to arrange for a certain matter on the account of another person under the Agreement or pursuant to other provisions of the Act, unless specific provisions indicate otherwise.

Ing. Alena Plášková, CSc.

**Společenská odpovědnost (PROČ - CO - JAK?)
Social responsibility (WHY - WHAT - HOW?)**

The article is focused on explanation of the term “social responsibility”. Readers can learn what social responsibility is, what led to its arising and current spreading, what roles can be played by both governments and individual companies. The article brings information also on how to proceed during implementation of the social responsibility concepts in such a way that they can bring advantages and not problems to a company.

Ing. Tomáš Rolník - Ing. Ivo Hruban, Ph.D.

**Kvalita dopravního provozu severního zhlaví stanice Brno hl. n. v rámci ŽUB
v odsunuté poloze
Quality of traffic on the northern station head in the Railway junction of Brno
in a shifted position**

The article deals with quality of traffic on the northern station head and its contiguous links in the Railway junction of Brno in a shifted position. The evaluation is aimed at comparison of the planned infrastructure range with the planned extent of transport operations with the aim of assessing, whether the planned infrastructure is sufficient or not for the prospective extent of transport operations. The transport model and simulations show that the operation of passenger and freight transport on the same infrastructure is not convenient.



Ing. Ondřej Štěpán

Přístupy k prioritě tras vlaků při plánování jízdního řádu
Approaches to train route priorities in the phase of the planning of time schedules

The article analyses current approach to railway capacity allocation issues during preparation and planning of timetables and in case of solving conflict situations. It further analyses approaches indicating how to solve various train path space-time conflicts during the planning of timetables, and possible methods of solutions, both in the Czech Republic and in selected European countries.

Ing. Stanislav Valdman

Technologie překládky jednotek kombinované přepravy
Technology of transshipment of combined transport units

Transshipment of intermodal semi-trailers and swap bodies can be carried out, within the framework of the system of combined transport (CT), between individual modes of transport in vertical or horizontal directions with the help of a suitably resolved transshipment technology. In the conditions of the Czech Republic, only a conventional vertical transshipment of these transport units is used. Special transshipment technologies enabling horizontal transshipment between individual modes of transport are not applied in the transshipment terminals of the combined transport in the Czech Republic yet. These are progressive technologically-construction solutions, which are developed and subsequently applied especially as pilot projects for newly arising lines and constructed combined transport terminals. Each of these new construction approaches to transshipment of the above mentioned CT units requires dedicated specific and technological solutions and backgrounds. Introduction of the system of horizontal transshipment of combined transport units brings not only an increase in efficiency of transshipment of the CT units between individual modes of transport, but at the same time also higher effectiveness of the entire combined transport system within the framework of continental transport operations.



Ing. Jan Vyčichl, Ph.D. - Ing. Tadeáš Volf

Statická numerická analýza pružného upevnění kolejnice k pražci Vossloh W14
Static numerical analysis of elastic mounting of a rail to the Vossloh W14
sleeper

The study which is described in this article is an opening study focused on the problem of static numerical analysis of elastic mounting of a rail to the Vossloh W14 sleeper. It describes creation of a geometry and finite element model of the whole railway superstructure assembly, including the definition of individual materials, boundary conditions and contacts. Four load cases corresponding to real life situations were simulated on the created assembly. The results obtained on the elastic mounting for each load condition (associated stress, strain, deformations) were analysed and compared together. The other parts of the railway superstructure were further examined in this study as well.