



doc. Ing. Petr Škapa, CSc.

OCHRANA ŽIVOTNÍHO PROSTŘEDÍ NA ČD ENVIRONMENTAL PROTECTION WITHIN CD

Results of protection of individual environmental components within Czech railways inclusive expenditures of Czech railways to moderate the environmental pollution resulting from the railway operational activities. The development of the pollution is presented for individual environmental components.

Milan Hála

ZAPOJENÍ ČESKÝCH DRAH, S.O., DO EKOLOGICKÉ PROBLEMATIKY V RÁMCI UIC CZECH RAILWAYS ACTIVITIES IN THE FRAMEWORK OF THE ECOLOGIC PROGRAMS OF THE UIC

Importance of an environmental protection in transport emphasising the ecological consideration of the railway transport. An active participation of CD in international projects of the UIC regarding the environmental protection. The attention which has been paid to the problems of the railway transport which is so friendly to the environment is the strategy of the UIC to improve its starting position in talks with the EU. The environmental protection within CD. Legal provisions concerning water management, water, ground and air protection as well as waste management comply with the european niveau. Insufficiency of existing normatives in the area of noise emissions should lead to better compliance with relevant EU documents.

Ing. Jaroslav Horký – Ing. Bohumil Boček

CESTY K INFORMACÍM PRO VÝROBCE A PŘEPRAVCE NEBEZPEČNÉHO ZBOŽÍ INFORMATION SOURCES FOR PRODUCERS AND CARRIERS OF DANGEROUS MATERIALS

Many data are to be known if a transport of dangerous chemistry products is to be safe. The article deals with data bases MEDIS-ALARM, dangerous products transport provisions and some data bases STN International. The article presents CD-ROM data bases which are significant information sources especially in the toxicology. It presents many information of a scientific-technical nature concerning individual products, many information about producers especially their production capacities and consumption structures on world markets. The best information source in above mentioned areas is the data base centre STN International, which is represented in the Czech Republic by Medistyl.



Ing. Jan Hlaváček

**PROTIHLUKOVÁ A PROTIVIBRAČNÍ OPATŘENÍ POUŽÍVANÁ V EVROPSKÉ
ŽELEZNIČNÍ SÍTI
ANTI-NOISE AND ANTI-VIBRATIONAL MEASURES USED WITHIN THE
EUROPEAN RAILWAY NETWORK**

A survey of anti-noise and anti-vibrational measures used by some European railways and some problems connected with the application. Some of measures mentioned have already been used in a construction of the CD corridor, some other are still studied or tested. Both types of measures moderate the harmful influence of a railway transport on the environment.

Ing. Jan Kout, CSc. – prof. Ing. Rudolf Kaloč, CSc.

**K PROBLEMATICE HLUKU KOLEJOVÉHO VOZIDLA
PROBLEMS OF A NOISE EMANATED BY A RAILWAY VEHICLE**

Problems concerning a noise emanation of railway vehicles especially a description of noise sources in an audible as well as in non-audible frequency range. Ways of eliminating or reducing of acoustic energy. Problems arising from an experimental and numerical simulation of a rail-wheel contact.

Ing. Jan Čihák – Ing. Jindřich Fajtl – Ing. Ladislav Kopsa – Ing. Jiří Šídlo

**EKOLOGIE V OBLASTI ŽELEZNIČNÍ DOPRAVNÍ CESTY
ECOLOGY IN THE BRANCH OF PERMANENT WAY**

A permanent way construction, methods of maintenance and management of materials gained in refurbishment as well as in modernisation of tracks have an influence on the environment especially in the vicinity of a railway. The noise of a railway transport can be reduced by active or passive provisions concerning the construction of permanent way. Rail grinding and elastic elements in rail fixation can be designated as active provisions whereas the construction of anti-noise walls is a typical passive provision. The art of an operational treatment of switches and the way how sleepers are impregnated have an direct influence on the environmental pollution. Recycling methods used for a balast gained from the track during refurbishment and modernisation of tracks as well as a repeated use of it for new track construction enable to reduce significantly the consumption of new balast materials, to reduce the waste stowed away in dumps and investments



Ing. Bohumil Nádvorník – Ing. Vojtěch Kladívko

**K PROBLEMATICE EKOLOGIE V ODVĚTVĚ AUTOMATIZACE A
ELEKTROTECHNIKY
ON ENVIRONMENTAL ISSUES IN THE FIELD OF AUTOMATION AND
ELECTROTECHNICS**

Determining the areas of main issues of ecology in the field of automation of railway transport and electrotechnics (branch 14). Emphasising the importance and priorities of typical environmental issues in the branch 14, also from legislative and technical points of view. Information on ongoing, adopted and implemented important solutions.

Ing. Zdeněk Beneš, CSc.

**STATICKÉ MĚNIČE A JEJICH EKOLOGICKO-EKONOMICKÝ PŘÍNOS PRO ČD
STATIC CHANGERS AND THEIR ENVIRONMENTAL AND ECONOMIC
CONTRIBUTIONS FOR CZECH RAILWAYS**

The ecological and economic importance of the use of static changers as a replacement for diesel electric generator sets at railway stations, and on the basis of positive experience the development of a possibility of using these devices also in other areas of application at Czech Railways, including drive vehicles of a new generation for regional transport.

Ing. Zbyněk Hejlík

**HOSPODÁRNÝ PROVOZ PLYNOVÝCH KOTLŮ U ČD A JEJICH MĚŘENÍ
ECONOMY OPERATION OF GAS BOILERS WITHIN CD AND NECESSARY
MEASUREMENTS**

Information about methods of efficiency measurements on boilers and emissions measurements known so far. Emphasis on the optimum operational economy of heating equipment by checking the operational efficiency of boilers, the adjustment of burners and allowable gaseous emission concentrations . Recommendation to install an automatic heating regulation in a heating system respecting the outside temperatures as the necessary condition to assure prescribed inside temperatures. It is the way how to attain a necessary economy of the whole heating system especially at those using high quality fuels.



doc. Ing. Petr Škapa, CSc.

**POROVNÁNÍ ŽELEZNIČNÍ A SILNIČNÍ DOPRAVY Z HLEDISKA ZNEČIŠŤOVÁNÍ
OVZDUŠÍ A ČERPÁNÍ PRIMÁRNÍCH ZDROJŮ ENERGIE
RAILWAY AND ROAD TRANSPORTS COMPARED IN TERMS OF AIR
POLLUTION AND USE OF PRIMARY ENERGY SOURCES**

Air pollution caused by railway and road transports. Establishing of emissions. Specific emissions and their calculations at diesel and electric traction vehicles. Comparison of emissions caused by individual transport modes. Emissions caused by a railway transport established on the base of fuel and electric energy consumption. Calculations of a primary energy. Energy consumption of a transport.

doc. RNDr. Jaroslava Machalíková, CSc.

**INFORMAČNÍ ZDROJE Z OBLASTI ŽIVOTNÍHO PROSTŘEDÍ NA ČESKÉM
INTERNETU
INFORMATION SOURCES CONCERNING THE ENVIRONMENT ON THE CZECH
INTERNET**

Problems of creating information companies in conditions of the Czech republic, especially as far as data spread about the environment via Internet. References to information sources concerning the environment oriented especially railway transport, available on the czech www-servers.