

---

**ABSTRACTS**

---

*Received: 06 May 2017**Accepted: 19 May 2017***ENVIRONMENTAL SAFETY TRANSPORT OF HAZARDOUS GOODS BY RAILWAY**  
(pages 1-4)**Lucia Knapčíková**

Technical University of Kosice, Faculty of Manufacturing Technologies with a seat in Presov, Department of Manufacturing Management, Bayerova 1,080 01 Presov, Slovakia, lucia.knappcikova@tuke.sk

**Michal Balog**

Technical University of Kosice, Faculty of Manufacturing Technologies with a seat in Presov, Department of Manufacturing Management, Bayerova 1,080 01 Presov, Slovakia, michal.balog@tuke.sk

**Keywords:** environmental risk assessment, hazardous goods, wagon**Abstract:** Transport of hazardous goods by railway is not only particularly more sustainable, but is also faster than shipping and cheaper than air operations. But it is not always possible to use rail transport for the complete journey. The goal of big railway transportations companies is handle the pick-up and final delivery runs for customers and combine several means of transport to form multi-modal transport chains. Special case are hazardous goods, they are substances and articles that pose an acute risk to people, property and the environment due to their chemical or physical properties.*Received: 08 May 2017**Accepted: 02 June 2017***ORTHOTIC INFLUENCE OF LOCOMOTION AND VERTICALIZATION OF MYELOMENINGOCELE**  
(pages 5-8)**Katarína Šromovská**

Technical University of Košice, Faculty of Mechanical Engineering, Department of Biomedical Engineering and Measurement, Letná 9, 042 00 Košice, Slovakia, katarina.sromovska@student.tuke.sk

**Monika Michalíková**

Technical University of Košice, Faculty of Mechanical Engineering, Department of Biomedical Engineering and Measurement, Letná 9, 042 00 Košice, Slovakia, monika.michalikova@tuke.sk

**Marianna Trebuňová**

Technical University of Košice, Faculty of Mechanical Engineering, Department of Biomedical Engineering and Measurement, Letná 9, 042 00 Košice, Slovakia, marianna.trebutnova@tuke.sk

**Jozef Živčák**

Technical University of Košice, Faculty of Mechanical Engineering, Department of Biomedical Engineering and Measurement, Letná 9, 042 00 Košice, Slovakia, jozef.zivcak@tuke.sk

**Keywords:** HKAFO orthosis, myelomeningocele, locomotion**Abstract:** The thesis explains orthotic influence of myelomeningocele – spine bifida, which depends on age, damage level and patient's disease. The main goal of this thesis is to evaluate the influence and effect of orthoses on patient's image of walking. HKAFO orthosis (an orthosis influencing the hip, knee and ankle joints and the foot) is designated for patients in need of stabilization or compensation, when the lower limb is paralyzed, but the strength of hip and partially of knee extensor is kept, or when the lower limb is completely paralyzed. Correct type of RGO allows the patient to walk faster and with less energy consumption. The goal of the orthosis application is verticalization in the most possible physiological standing and locomotion.

*Received: 15 June 2017*

*Accepted: 29 June 2017*

## **THE EFFICIENCY OF THE COGENERATION UNIT IMPLEMENTED IN THE CHS SYSTEMS IN TERMS OF HEAT GENERATION**

(pages 9-13)

### **Miroslav Rimár**

Technical University of Košice, Faculty of manufacturing technologies with a seat in Prešov, Department of process engineering, Sturova 31.080 01, Tel.: 055/6026341 email: miroslav.rimar@tuke.sk

### **Marcel Fedák**

Technical University of Košice, Faculty of manufacturing technologies with a seat in Prešov, Department of process engineering, Sturova 31.080 01, Tel.: 055/6026330 email: marcel.fedak@tuke.sk

### **Milan Abraham**

Technical University of Košice, Faculty of manufacturing technologies with a seat in Prešov, Department of process engineering, Sturova 31.080 01, Tel.: 055/6026335 email: milan.abraham@tuke.sk

### **Andrii Kulikov**

Technical University of Košice, Faculty of manufacturing technologies with a seat in Prešov, Department of process engineering, Sturova 31.080 01, Tel.: 055/6026335 email: andrii.kulikov@tuke.sk

### **Jakub Váhovský**

Technical University of Košice, Faculty of manufacturing technologies with a seat in Prešov, Department of process engineering, Sturova 31.080 01, Tel.: 055/6026335 email: jakub.vahovsky@tuke.sk

**Keywords:** CHS, cogeneration, heat, electricity, efficiency

**Abstract:** Presented paper is dedicated on issue of the operation of a cogeneration unit integrated in the central heating system. An evaluation of the efficiency of the cogeneration unit operation is performed during heat water preparation and later the heating season. Indicators are evaluated as the correlation between the primary fuel and the electrical and thermal energy consumption. The main idea is following combined generation of electricity and heat with look at efficiency of the cogeneration unit in the central heat supply system in terms of heat generation.

---