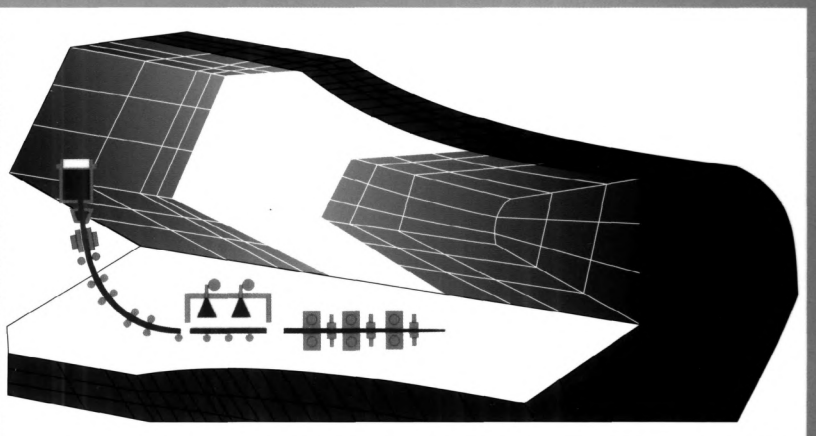
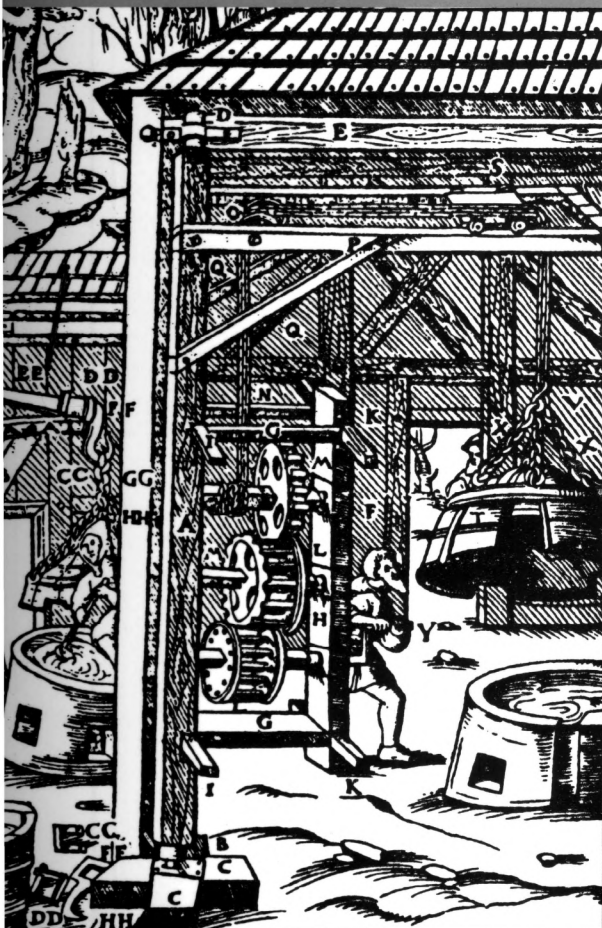


METALURGIJA

METALLURGY

3



Metalurgija: prošlost XVI. st.
Metallurgy: Past – XVI cent.

Metalurgija: sadašnjost
Metallurgy: Present

49th
year

METALURGIJA

METALLURGY

.669+621.7+51/54(05)=163.42=111

ISSN 0543-58
METABK 49 (3) 145-288 (2010)

METALURGIJA, vol. 49, br. 3, str. 145-288

Zagreb, srpanj / rujan (July / September) 2010

Izdavač / Publisher: Hrvatsko metalurško društvo (HMD) - Croatian Metallurgical Society (CMS)

Adresa / Address: Berislavićeva 6, 10 000 Zagreb, Hrvatska / Croatia

Phone/Fax: + 385 1 619 86 89 (service), Phone: + 385 98 317 173

Internet / On line: <http://public.carnet.hr/metalurg>; <http://hrcak.srce.hr>; <http://www.doaj.org>; <http://search.ebscohost.com>;
www.socolar.com / www.cepiec.com.cn; (On line) ISSN 1334-2576, (CD-ROM) ISSN 1334-2584

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METALURGIJA izlazi u četiri broja godišnje. Godišnja pretplata 53 EUR (protuvrijednost u kunama).

METALLURGY is published quarterly. Subscription rates per year 53 EUR.

Komp. obrada / Comp. design; Tisak / Print: Denona d.o.o., Zagreb, e-mail:denona@denona.hr

Naklada / Print: 600 primjeraka / pieces. Rukopise ne vraćamo. / Manuscript are not returned.

Članci objavljeni u časopisu "Metalurgija" referiraju se u međunarodnim sekundarnim publikacijama i bazama podataka.
Articles published in the journal "METALLURGY" are indexed in the international secondary periodicals and databases:

- ISI web of Science
- Science Citation Index (Expanded)
- Materials Science Citation Index (MSCI)
- EBSCOhost Academic Search Complete
- Research Alert (ISI)
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Časopisu "Metalurgija" daje novčanu potporu: Ministarstvo znanosti, obrazovanja i športa Republike Hrvatske.
Journal "Metallurgy" is financially supported by: Ministry of Science, Education and Sports Republic of Croatia.

**CROATIAN METALLURGICAL SOCIETY
HRVATSKO METALURŠKO DRUŠTVO**

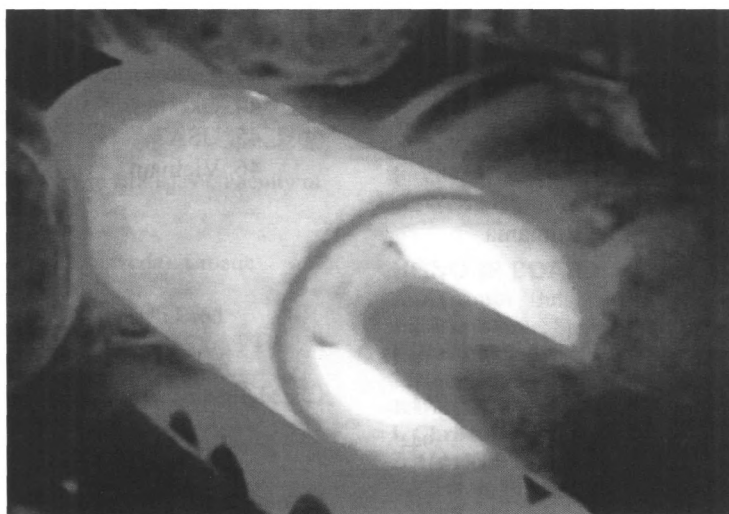
**9th INTERNATIONAL
9. MEĐUNARODNI**

**SYMPOSIUM OF CROATIAN METALLURGICAL SOCIETY
SIMPOZIJ HRVATSKOG METALURŠKOG DRUŠTVA**

S H M D '2010.

**MATERIALS AND METALLURGY
MATERIJALI I METALURGIJA**

**SUMMARIES OF LECTURE
SAŽECI PREDAVANJA**



**Šibenik, CROATIA, June 20 – 24 2010.
ŠIBENIK, HRVATSKA, 20. – 24. lipnja 2010.
HOTELSKO NASELJE *SOLARIS HOLIDAY RESORT***

THE AIM OD SYMPOSIUM

The aim of this Symposium is to point out all the possibilities of the materials and achievements in metallurgy.

9th International Symposium of Croatian Metallurgical Society «Material and Metallurgy» was held as a part of:

- 150th anniversary of THE ESTABLISHMENT OD STEEL INSTITUTE VDEh, DÜSSELDORF, Germany
- 90th anniversary of THE ESTABLISHMENT OF DNEPROPETROVSK NATIONAL UNIVERSITY, Dnepropetrovsk, Ukraine
- 70th anniversary of STUDIES OF METALLURGY OF UNIVERSITY OF LJUBLJANA, Slovenia
- 60th anniversary of THE ESTABLISHMENT OF INSTITUTE OF METALS AND TECHNOLOGY, Ljubljana, Slovenia
- 55th anniversary of THE ESTABLISHMENT OF INSTITUTE OF MATERIALS RESEARCH Slovak Academy of Sciences, Košice, Slovakia
- 50th anniversary of THE ESTABLISHMENT OF: – TECHNICAL FACULTY, UNIVERSITY OF RIJEKA, Rijeka, Croatia – FACULTY OF ELECTRICAL ENGINEERING, MECHANICAL ENGINEERING AND NAVAL ARCHITECTURE, UNIVERSITY OF SPLIT, Split, Croatia
- 20th anniversary of INTENSE INTERNATIONAL COOPERATION OF CROATIAN METALLURGICAL SOCIETY, Zagreb, Croatia

At the 9th International Symposium of Croatian Metallurgical Society «Materials and Metallurgy» had participated following countries:

1. Argentina	17. Germany	33. Russia
2. Austria	18. Hungary	34. Serbia
3. Belgium	19. India	35. Serbia/Republic of Kosovo
4. Belarus	20. Indonesia	36. Singapore
5. Benelux	21. Italy	37. Slovakia
6. Bosnia and Herzegovina	22. Japan	38. Slovenia
7. Brasil	23. Korea	39. South Africa
8. Bulgaria	24. Lithuania	40. Spain
9. Chile	25. Macedonia	41. Sweden
10. China	26. Malaysia	42. Thailand
11. Croatia	27. Montenegro	43. Turkey
12. Czech Republic	28. Netherlands	44. Ukraine
13. England	29. Philippine	45. USA
14. Egypt	30. Poland	46. Vietnam
15. Finland	30. Portugal	
16. France	32. Romania	

All of the lectures:

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Process Metallurgy – Section «B»	94
Plastic Processing – Section «C»	64
Metallurgy and Related Topics – Section «D»	114
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Many authors/co-authors have not observed the given form and length of abstracts of their reports. Scientific board has made adjustments, so we apologize if there are any faults. An abstract might be failing. Accept our apology again.

Organizer

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- American Iron and Steel Institute, USA
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- JERN - Jernkontoret, Sweden
- SRM Romanian Society for Metallurgy

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66. **D. Vitko, M. Sedlačko, M. Hricová; BERG Faculty, Technical University of Košice, Košice, Slovakia**
Economic crisis and car-scrapping scheme in Kosice region - myths and facts. The attribution brings complex view on the results of using marketing tool car-scrapping scheme in Slovakia and nearby counties in order to prevent the impact of economic crisis. In the sea of pros for sellers and producers also cons appear mainly for consumers many of whom came under crowd effect and purchased automobile and nowadays they have troubles with its financing or financing other life needs.
67. **L. I. Gracheva; G.S. Pisarenko Institute for Problems of Strength, National Academy of Sciences of Ukraine, Kyiv, Ukraine**
Thermal stressed state of thermal shield of a descending spacecraft in dense layers of the atmosphere. A system approach is proposed to estimate a thermal stressed state of the thermal shield in conditions modeling real ones in descending of the spacecraft from the orbit in dense atmospheric layers.
68. **I. G. Dobrotvor, N. A. Dolgov *, P. D. Stuhljak, A. V. Buketov; Ternopil Ivan Pul'uj State Technical University, Ternopil, Ukraine; *Pisarenko Institute for Problems of Strength, Nat. Ac. Sci. of Ukraine, Kiev, Ukraine**
Influence of Ultraviolet Radiation on the Properties of Epoxy Composites. The effect of ultraviolet radiation on the mechanical properties of epoxy resin composites filled with carbon black, chrome oxide, alumina and graphite particles was studied. Possible mechanisms for the improvement and degradation of mechanical properties of the epoxy composite materials were discussed.
69. **O. V. Ferendyuk, P. V. Popovich, N. I. Homuk; Ternopil National Ivan Pul'uj Technical University, Ternopil, Ukraine**
Designing The Working Part Of An Interrow Rotary Cultivator. This work proposes a schematics of vibratory interrow rotary cultivator which uses the axial vibrations to lower the energy spent on the rotation and to enhance the cleaning of the working parts from the remnants of the plants and the pieces of the soil.
70. **P. V. Yasniy, I. B. Okipny; Ternopil National Ivan Pul'uj Technical University, Ternopil, Ukraine**
The influence of preliminary combine tension on brittle fracture of the shell reactor steel. The paper deals to investigation of influence of the preliminary combined loading on brittle fracture of heat-resistance 15Cr2MFA steel in two structural states which simulates radiation influence to brittle material under action of neutron irradiation on the middle (state II) and end (state III) of term of life of frame of nuclear power reactor. The method of estimation of an influence of combined WPS on fracture toughness of heat resistance steel, which is based on the analysis of the strain-stress state of FEM and criteria of brittle fracture– cleavage stress.
71. **P. V. Popovich, M. J. Stashkiv, O. V. Ferendjuk, A. V. Babiy; Ternopil National Ivan Pul'uj Technical University, Ternopil, Ukraine**
Criterion estimation of elements of the reserved type of bearings frames. The article is devoted development of effective approach for determination of remaining resource of work of the thin-walled elements of the reserved type of structural structures of machines taking into account the real dynamics of loadings, features of exploitation, descriptions of resistance to cracks and initial imperfectness of material, with the purpose of optimization of their construction after of resistance to cracks.
72. **P. V. Popovich, T. I. Rybak; Ternopil National Ivan Pul'uj Technical University, Ternopil, Ukraine**
Remaining resource of bearings frames of machine-building constructions. This paper touches the problems of determination of effective method of prognostication of remaining resource of the bearings dynamically loaded frame metallic constructions.
73. **M. Hojdová, M. Dučai; Berg-Faculty, Technical University of Košice, Slovakia**
Financing of renewable energy projects. The following article discusses about the funding opportunities for renewable energy projects in Slovakia. There are several possibilities for funding projects. Own Resources, if the applicant generates sufficient revenue, they can prove their ability to finance the project from its own resources just by a statement of cash - flow. External resources, if the applicant does not have sufficient equity to finance the project, they can provide financing through various bank loans.
74. **M. Hojdová, M. Dučai; Berg-Faculty, Technical University of Košice, Slovakia**
Possibilities of renewable energy projects financing with the support of ERDB. The following article discusses about the financing projects from ERBD (European Bank for Reconstruction and Development). In Slovakia is this financing possible through the Slovenska sporitelna, ltd. ERBD has the mandate on the environment since its inception. The environment is defined in its broadest sense to include the ecological consequences, the employees, the health, safety and community problem.
75. **M. Hojdová, M. Dučai; Berg-Faculty, Technical University of Košice, Slovakia**
The most common mistakes perpetrated by project managers. Following article discusses about the common mistakes in project planning. Individual project activities are defined by gross and inaccurate. Little attention is paid to look carefully at the time and financial requirements. Project management is prescriptive, without good communication and cooperation with individual workers. Deadlines of the project are usually met only because, people postpone their obligations and begin to take up the challenge when the term really “burn”.
76. **J. Koščo; Berg-Faculty, Technical University of Košice, Slovakia**
Marketing in the Field of Polymetallic Nodules within the International organization of Interoceanmetal IOM. The composition of polymetallic nodules and their depositions abundance offer us a possibility to consider and design the ways, how to make use of these commodities on the market; which factors are the most substantial at decision-making on the ways of mining process and its consequential utilization, what also means, on business with individual metals contained in the nodules, mainly in regard to the economic profitability of mining in such an environment as the seabed in a depth of 5,000m is.
77. **L. Kovanič; Berg-Faculty, Technical University of Košice, Slovakia**
Geodetic activities at realization of the building “Transfer on the III. high ramp at railway station Čierna nad Tisou. The paper deals with the complex of surveying and aligning geodetic works at realization of the new building construction and rotary dumper equipment for transloading of loose materials from broad-gauge line to the standard one.
78. **M. Šimčák; Berg-Faculty, Technical University of Košice, Slovakia**
Determine deformational change of elevation point field of middle part of Košice city by method high-precision levelling. For determine deformation change of elevation point field the best method is a high-precision levelling. The method realise accuracy requirements for deformation measurement by the measurement method and used equipment. The measurement was eliminated about gravity correction, earth curvature and latitude reduction simultaneously.
79. **J. Jurčišin, M. Vargová; Berg-Faculty, Technical University of Košice, Slovakia**
Implementing GIS in electric distribution. GIS is a very important, we can say indispensable tool in electric distribution and GIS has positive influence on a customer service in any distribution company.
 The electric distribution system is ubiquitous and GIS is a natural tool for modeling the distribution system since nearly every street, highway, even a road has some kind of electrical distribution line installed. It describes and explains some problems and experience with a data migration from different data sources.