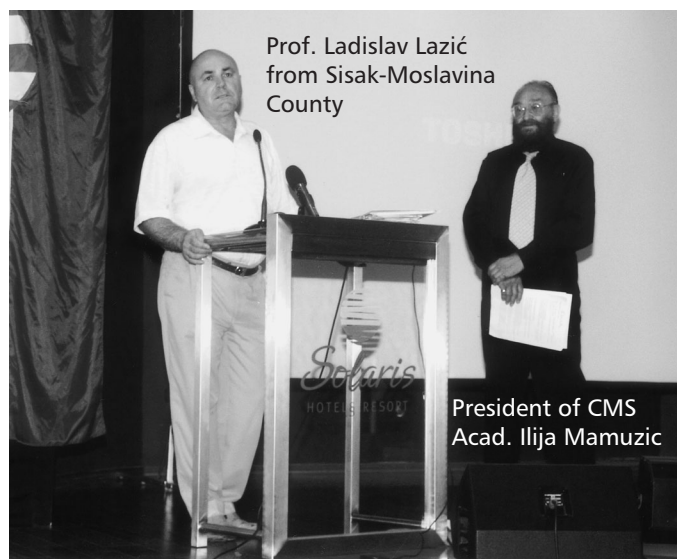


Survey of 8th International Symposium of Croatian Metallurgical Society (CMS)

S H M D '2008.

"Materials and Metallurgy"
<http://public.carnet.hr/metalurg>

Šibenik 2008, June 22-26
Solaris Holiday Resort, Croatia



Opening Ceremony of Symposium

8th International Symposium of Croatian Metallurgical Society «Material and Metallurgy» was held as a part of:

- 55th anniversary of the foundation of Croatian Metallurgical Society (from Society of Engineers and Technician Steel Works Sisak 1952 y.);
- 45th anniversary of the foundation and publication of the Journal Metallurgy

At the 8th International Symposium of Croatian Metallurgical Society «Materials and Metallurgy» had participated the following countries:

- | | | |
|---------------------------|-----------------|------------------|
| 1. Argentina | 16. Germany | 31. Romania |
| 2. Austria | 17. Hungary | 32. Russia |
| 3. Belgium | 18. India | 33. Serbia |
| 4. Belarus | 19. Indonesia | 34. Singapore |
| 5. Benelux | 20. Italy | 35. Slovakia |
| 6. Bosnia and Herzegovina | 21. Japan | 36. Slovenia |
| 7. Basil | 22. Korea | 37. South Africa |
| 8. Bulgaria | 23. Lithuania | 38. Spain |
| 9. Chile | 24. Macedonia | 39. Sweden |
| 10. China | 25. Malaysia | 40. Thailand |
| 11. Croatia | 26. Montenegro | 41. Turkey |
| 12. Czech Republic | 27. Netherlands | 42. Ukraine |
| 13. England | 28. Philippine | 43. USA |
| 14. Egypt | 29. Poland | 44. Vietnam |
| 15. France | 30. Portugal | |

ORGANIZER

CROATIAN METALLURGICAL SOCIETY (CMS)

PATRONS

- European Steel Institute Confederation (ESIC)
- European Steel Federation (ESF)
- International Iron and Steel Institute (IISI)
- Ministry of Science, Education and Sport Republic of Croatia,
- Croatian Chamber of Economy
- Sisak-Moslavina County

CO-ORGANIZERS

- Academy of Engineering Science of Ukraine
- University of Mining and Metallurgy, Faculty of Foundry Engineering, Krakow
- University of Ljubljana, Faculty of Natural Science and Engineering
- Baikov Institute of Metallurgy and Materials Science, Russian Academy of Sciences, Moscow, Russia
- University of Zenica, Faculty for Metallurgy and Materials Science, Zenica
- National Metallurgical Academy of Ukraine
- Technical University of Košice, Faculty of Metallurgy
- Technical University of Košice, Faculty of Mechanical Engineering
- Technical University of Košice, Berg Faculty
- University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture
- University of Osijek, Faculty of Mechanical Engineering, Slavonski Brod
- University of Rijeka, Technical Faculty
- VŠB Technical University of Ostrava
- University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture
- Institute of Metals and Technology, Ljubljana
- Institute of Materials Research of the Slovak Academy of Sciences in Košice
- Steel Works Split
- Moscow State Steel and Alloys Institute
- Physico-Technical Institute National Academie of Science Minsk
- Politehnica University of Bucharest
- University of Zenica, Institute of Metallurgy “Kemal Kapetanović”, Zenica
- Pisarenko Institute of Problems of Strength NASU, Kiev
- Dnepropetrovsk National University
- Hutnictvi zeleza, a.s., Prague

- Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology
- Vatrostalna Sisak d.d.
- Tvornica lakih metala “Šibenik”
- University of Osijek, Polytechnic of Slavonski Brod

CO-OPERATION WITH ORGANIZATIONS

- Stahlinstitut VDEh, Germany
- ATS - Association Technique de la Siderurgie Francaise
- CENIM - Centro National de Investigaciones Metalurgicas Spain
- ChSM - The Chinese Society for Metals China
- CRM - Centre de Recherches Metallurgiques Belgium
- ASMET - The Austrian Society for Metallurgy and Materials
- American Iron and Steel Institute, USA
- ISIJ - The Iron and Steel Institute of Japan
- JERN - Jernkontoret, Sweden
- SRM Romanian Society for Metallurgy
- SITPH - Association of Polish Metallurgical Engineers
- HOOGOVS, The Netherlands
- SHS - Slovak Metallurgical Society
- Sociedade Portuguesa de Materiais
- MVAE - Association of Hungarian Steel Industry
- Steel Federation of the Czech Republic
- Union of Bulgarian Metallurgists
- IBS - Instituto Brasileiro de Siderurgia
- AIM - Associazione Italiana di Metallurgia
- The Japan Institute of Metals
- Egyptian Association for Industrial Development
- Instituto Argentino de Siderurgia
- Associacao Brasileira de Metalurgia e Materiais
- ILAFA - Instituto Latinoamericano del fierroy el Acero, Chile
- Société Francaise de Métallurgie et de Matériaux
- The Institut of Materials, Minerals and Mining, England
- P. T. Krakatau Steel, Indonesia
- ISIJ - The Iron and Steel Institute of Japan
- KOSA - Korea Iron and Steel Association
- Amsteel Mills Sdn Bhd, Malaysia
- Philippine Iron & Steel Institute
- NatSteel Asia (S) Pte Ltd, Singapur
- The South African Institute of Mining and Metallurgy
- Iron and Steel Institute of Thailand
- Vietnam Steel Corporation

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

TOPICS OF THE SYMPOSIUM WERE:

Materials

- New Materials
- Refractory Materials
- The Development
- Applications
- Physical Metallurgy

Metallurgy

- Process Metallurgy and Foundry
- Plastic Processing of Metals and Alloys
- Technologies
- Energetics
- Ecology in Metallurgy
- Quality Assurance and Quality Management

There were 615 reports, over 900 authors and coauthors registered for the 8th International Symposium of the Croatian Metallurgical Society.

330 participants were present at the symposium. Symposium activity took place through plenary lectures and four sections (poster):

Plenary lectures	10
Materials - Section "A"	291
Process Metallurgy – Section "B"	133
Plastic Processing – Section "C"	71
Metallurgy and Related Topics – Section "D"	110
	Σ 615

For the plenary lectures research topics were selected relating partly to the new materials and partly to the increase of efficiency of metallurgical procedures, as well as improving of products quality Magnesium, High Strength Steels, and Severe plastic deformation.

PLENARY LECTURE WERE:

J. Raab, J. Mannheim*; *Czech Steel Federation Prague, *Steelworks of Trinec, Trinec, Czech Republic*
Position and development of the global steel industry.

F. Chowanec; *Arcelor Mittal, Ostrava, Czech Republic*
Quality improvement of continuously cast round billets.

R. Kawalla; *Institute of Metal Forming, Freiberg University of Mining and Technology, Freiberg, Germany*
Simulation of metal forming processes.

M. Jenko; *Institute of Metals and Technology, Ljubljana, Slovenia*

Advanced methods for materials research.

F. Vodopivec, B. Arzenšek, J. Vojvodič Tuma, R. Cel'n; *Institute of metals and Technology, Ljubljana,*

Slovenia **The Charpy fracturing process in ductile range.**

J. Zrník, S. V. Dobatkin*, I. Mamuzić;** *Comtes FHT, Ltd. Plzen, Czech Republic, *Moscow Institute of Metallurgy and Material Science, Moscow, Russia, **Faculty of Metallurgy University of Zagreb, Sisak, Croatia*
Processng of metals by severe plastic deformation (SPD) - structure and mechanical properties respond.

S. Dobatkin, J. Zrník*, I. Mamuzić;** *A. A. Baikov Institute of Metallurgy and Materials Science, Moscow, Russia, *Comtes FHT, Plzen, Czech Republic, **Faculty of Metallurgy, University of Zagreb, Sisak, Croatia*
Ultrafine-grained low carbon steels by severe plastic deformation (SPD).

R. Kawalla, M. Oswald, C. Schmidt, M. Ullmann, H.-P. Vogt*, N. D. Cuong*; *Institute of Metal Forming, Freiberg University of Mining and Technology, Freiberg, Germany, *MgF Magnesium Flachprodukte GmbH, Freiberg, Germany*
New technology for the productoin of magnesium strips and sheets.

T. Kvačkaj, M. Molnárová, I. Mamuzić*, J. Bacsó, R. Mišičko, M. Fujda, P. Škodroöová, T. Kuskulić, I. Pokorný; *Faculty of Metallurgy, Technical University, Košice, Slovakia, *Faculty of Metallurgy, University of Zagreb, Sisak, Croatia*
Influence of reheating and cooling conditions on structure and mechanical properties of C-Mn-Si steel.

F. Vodopivec; *Institute of Metals and Technology, Ljubljana, Slovenia*
Review of papers materials and metallurgy (section "A", "B", "C" I "D").

Comprehensive outline of plenary repors (the 7 reports) were published in the journal *Metalurgija* 47 (2008) 3, 173-198; 211-221 as the article. The summaries of all lectures of 8th Symposium were published also in *Metalurgija* 47 (2008) 3, 229-284.

For this symposium the reports were prepared by the authors and coauthors from various world universities, institutes, academies and companies. It is to be emphasised that the scientists from Croatian universities (Zagreb, Split, Rijeka, Osijek) participated in the symposium.

In the time of 8th Symposium was also held:

Meeting of International Editorial Board of the Journal *Metalurgija*, June 23. 2008; 6³⁰ PM

Minutes of this meeting, *Metalurgija* 47 (2008) 4 291-294:

- Meeting of Menaning Board of Croatian Metallurgical Society, June 24. 2008, 1.⁰⁰ PM

- Assembly of Croatian Metallurgical Society (25 Participants, delegates of Institute, University etc. June 25. 2008. 6⁰⁰PM)

More than 150 participants were included in a round table session on the achievements, conclusions and closing of the 8th International symposium "Materials and Metallurgy" (June, 25., 6.⁰⁰ PM)

In the discussions it was confirmed that the symposiums organized by Croatian Metallurgical Society have become traditional assembly of experts and scientists of various profiles: metallurgists, geologists, physicists, chemists, mechanical engineers etc.

With a demonstration of their best achievements they all assist the metallurgy in Croatia to call the same attention as it does otherwise in the world.

Subsequently we give some of the discussions on the 8th Symposium following sections (from F. Vodopivec and J. Zrnik)

"The scientific interest of participants has been directed by the scope of conference and covered a wide range of topics from various fields of materials and metallurgy. There the following topics can be recognized (found) and included in presentations: influence of solutes in solid solutions, amorphous alloys, nanocrystalline materials, their preparation and properties, materials microstructure related to mechanical and physical properties, hot and cold deformation processes and their relation to industrial technologies.

The vastness of topics presented and discussed does not allow pointing out the attention to original findings of particular importance for the increase of the theoretical and practical knowledge on metals and alloys as well as of their manufacturing technology and use in different environments conditions.

Statistical data on the symposium are a reliable proof and confirm that symposium has acquired and enviable position as place for presentation of scientific findings in domain of science of metals and alloys, and the relation of scientific achievements to modern technologies and products. Some contributions assumptionally have shown in a new light on long time solved problems and may lead to technological breakthroughs when confirmed and properly developed to innovations in technologies and products.

The strongly increased number of authors and contributions has also confirmed that the 8th Symposium of

Croatian Metallurgical Society has strengthened his position as international event which provides opportunity for presentation and the discussion of new achievements in the research and development of metallic materials and their technology and, also, provided good chance for participants to present their works. This scientific conference appeared to be appropriate forum for exchange of ideas and experience, for obtaining information on new research and analytical facilities as well as for the establishment of personal and professional contacts among participants for their future work.

Exactly due to this reason, it is proposed and advised that the organizers should start soon enough to prepare the subsequent 9th International Symposium of Croatian Metallurgists and secure attendance of wider oral presentations. The number of authors, the number and quality of original scientific works presented justify that public power and backs and helps the organizers for covering of expenses related with organization of this scientific event.

Summarizing the contribution of the Symposium the following facts can be provided as an evidence for evaluation of this scientific forum and its value being useful for materials and metallurgical scientific community."

Based on the analysis and evaluation of the subject matter of the symposium, the symposium has been appraised positively and it has been acknowledged that it has its place in the international exchange of knowledge.

It is reasonable to conclude that the demonstrated results of scientific and professional investigation accompanied by the complete and quality manifestations, especially discussions at the round table prove that the organizing of the 8th International symposium of Croatian Metallurgical Society "Materials and Metallurgy" in Šibenik 2008, June 22-26 was justified. Especially has to be emphasized that the participants will keep wonderful memories of Šibenik and Solaris Hotels.

Based on the agreement of Meeting of World Metallurgical Societys, Düsseldorf, November 2007 y, and the conclusion of the round table, the next 9th International Symposium of Croatian Metallurgical Society "Materials and Metallurgy" will be held 2010 – June 20-24.