

# Metallurgical & Materials Engineering Congress of South-East Europe

MME-SEE 15 June 4-5 2015

Crowne Plaza Hotel, Belgrade, Serbia

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## Congress Conclusions

Metallurgical & Materials Engineering Congress of South-East Europe (MME SEE 2015) is organized jointly by the Association of Metallurgical Engineers of Serbia, Faculty of Technology and Metallurgy, University of Belgrade, Serbian Foundrymen Society and Metallurgical Academic Network of SEE Countries, and represents fusion of few scientific events. The Congress is supported by SEE Associations of Metallurgical Engineers; Balkan Union of Metallurgists and Chambers of Commerce of SEE Countries.

MME SEE 2015 brought together a wide range of related topics presenting the views from both academia and industry. Number of authors is 179 from 56 universities, research centers and industries from 17 countries submitted 43 papers and 6 abstracts to the Congress.

Organizers have every reason to be satisfied with the presentations given by young colleagues, who are all involved in projects funded by the Ministry of Education, Science and Technological Development.

All participants, as responsible members of society in positions of decision-making, primarily in the technical sense, made effort to answer what are the essential concerns for the future? What is needed to exit the crisis and help South East Europe's economy to grow? How do you see Research & Innovation making a difference for a better future?

The special contribution to the Congress is the participation of representatives of successful companies who presented their projects, challenges, experience and expectations.

Tendencies of development of the steel industry and the industry of aluminum alloys, as the two largest sectors in materials industry are presented. Emphasis is given to the steady growth in demand and production of these materials and the specifics in the SEE region. It is expected that the future demands will require shorter delivery time at the same time with higher quality. That is main reason that industry representatives pointed out the need to be exceptional, especially in organizational and research fields. The research focus has shifted to the material producer, which further lead to cooperation with research partners, primarily with universities. On the other hand, material producers are facing increasingly stringent requirements of traditional users which also turns them to the development and improvement of the existing (traditional) products. Changes in the market are forcing producers to exceptionalism as the safest way of survival, and thus to the even stronger connections with researcher community. It was pointed out that this approach has no alternative and that only invest in research offers competitiveness and survival.

The metal industry in SEE countries has always had an exceptional technical, economic and social significance, currently with high contributing to the country's GDP. There are several reasons for such a notable role of this industrial branch, among which the most important ones are natural resources, historical development and centuries old tradition. Moreover, the whole of Southeast Europe, and especially the Balkan countries, could play a remarkable part in the strengthening of EU's metal sector.

The debate on how to generate jobs is ongoing in an ever more negative tone and belief in an easy resolution is gradually diminishing. Is there a national strategy to fight against this impediment? Regrettably, except for the scheme to attract foreign investment into technologically low demanding plants, the answer to the above query is negative as nothing of that sort exists. If this is the truth, someone should come up with a solution. The State pays scientists and experts employed in different institutes, universities, agencies and ministries to work on various issues and some of them actually do

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their jobs. Environmental sphere, projects involving greener production, energy efficiency and in particular innovation sector could quickly bring about new positions for some of the young engineers.

On the other hand, however, one can notice that thanks to the inherited infrastructure and tradition, metallurgy is one of our few truly competitive industrial resources. Keeping the above in mind, it is essential to ensure a stable growth through implementation of a strategic plan, based on principles of sustainable economic development, social and cohesion policy in the region and beyond. Investing in the metal sector has no alternative. In the future, precisely this will be one of the core means for securing existing work places as well creating new positions. Furthermore, without adequate education support, science policies and applied research, there shall be no progress.

Raising awareness of all relevant stakeholders in the process of strategic elevation of production quality (education system, scientific and professional associations, mass media, etc.), there is no doubt that investing into the professional development is vital and beneficial for adaptation and integration into more developed economic circles.

1. Reconstruction and/or redesigning the unsustainable industrial infrastructure constitute the ultimate requirement in the upcoming period. Would young, technologically educated, well paid, and morally intact generation of intellectuals initiate a new cycle, a cycle of restoration and sustainable movement forward?
2. New industrial policy and distribution of funds into innovative industrial fields using new / modern / recycled materials and following the principles of sustainable development should be appropriately bolstered by educational evolution, adjustments to the requirements of the new industrial environment and complete integration into European technological and scientific institutions in the coming years.
3. There is the necessity of reinforcing Europe's strategic industrial strength in metals and strengthening the "metallurgical infrastructure". Chamber of Commerce and Industry, as well as Universities and the Government, represent the main support for defining new policies and perspectives for advancement of metallurgy sector. Although, our researchers are among Europe's elite in terms of citations of their work, our country lies at the very bottom in comparison to the number of patents and innovations on the Continent. Scientists write papers that remain unnoticed by those in the industry. Primary task is better fit between academic scientific results and industrial needs and effective knowledge transfer, followed by innovation in development of processes oriented toward the design of new and multifunctional materials
4. There is a strong experts' and stakeholders' view that European industry needs more highly skilled people in the field of metallurgy. Europe must increase and coordinate its efforts across the entire materials value chain – from material discovery, alloy design, processing, optimization, to scale-up and in-service deployment.
5. In the European development program Horizon 2020, a Metallurgy Europe has been prepared – a Renaissance program for period 2012-2022, where metallurgy due to the strategic importance of metallic materials in all areas has been ranked in the priority areas of development. Also Eureka program has identified the importance of reestablishing metallurgical engineering (<http://www.eurekanetwork.org/content/metallurgy-europe>)

Until next Congress!

Scientific Committee

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