

INVITATION

Large number of experts in the foundry industry and foundry activities shall gather at this year International Foundry Conference in Portorož, taking place from 9th to 11th September 2009. Organised Foundry Conference is one of the most traditional foundry conferences and is accompanied by the corresponding foundry exhibition, presenting the achievements and results of the companies from Slovenia and abroad.

Participation of scientific experts of the universities, research institutes, business enterprises and national foundry associations shall be a quality assurance for all presentations. Attendance of the representatives of the World Foundry Organization (WFO), the European Foundry Association (CAEF) and the Central European Initiative (MEGI) additionally prove the international reputation and high standing of the Conference.

This year motto of the Conference shall be:

“RESEARCH PROJECTS AND DEVELOPMENT FOR THE FUTURE OF FOUNDRIES”

The following professional topics shall be the main issue of this year 49th Conference: situation and standing of the foundry industry and prognosis for the development of foundries; development of cast components; physical modelling and simulations; planning of new cast alloys and materials; correlation between the structure and properties; nucleation and nucleation potential; modern methods of controlling foundry processes; process parameters for achieving higher quality of castings; development of measurement techniques; production of thin-walled castings; foundry innovation centres.

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and

UNIVERSITY OF LJUBLJANA
Faculty of Natural Sciences and
Engineering

and

UNIVERSITY OF MARIBOR
Faculty of Mechanical Engineering

organize

INTERNATIONAL 49th FOUNDRY CONFERENCE PORTOROŽ 2009

with collaboration of
MEGI countries

9th – 11th September 2009

Motto:

“RESEARCH PROJECTS AND
DEVELOPMENT FOR THE FUTURE OF
FOUNDRIES”

PROGRAMME

Wednesday, 09. 09. 2009

- 17.30 – 19.30: Registration of Conference and Exhibition Participants and access to the exhibition area
18.00: Reception at the Municipality of Piran

Thursday, 10. 09. 2009

- 8.00 – 9.30: Registration of Conference and Exhibition Participants
9.30 – 9.45: MIRJAM JAN-BLAŽIČ, President
Društvo livarjev Slovenije: The Opening Address

Plenary Lectures

- 9.45 – 10.15: M. SCHUMACHER, CAEF – The European Foundry Association: European casting markets today and tomorrow – a longtime forecast
10.15 – 10.45: A. BÜHRIG POLACZEK, M. MATHES, E. SCHABERGER-ZIMMERMANN, Gießerei-Institut, RWTH Aachen University, (D): Modern analysis methods for process control and development of cast components
10.45 – 11.15: A. TURNER, The Foundry Organization, Winton House, Lyonshal, (UK): The foundry industry – casting its net into a wider work
11.15 – 11.45: A. KRIZMAN*, M. DEBELAK**, V. PIRIH**, M. JAN-BLAŽIČ***, *Univerza v Mariboru, **Gospodarska zbornica Slovenije, ***Društvo livarjev Slovenije, (SI): Slovenian foundry industry and research and development in year 2008
11.45 – 12.00: Break

Invited Lectures

- 12.15 – 12.35: P. SCHUMACHER, Oesterreichischer Giessereiinstitut Leoben, (A): Control of Nucleation phenomena in cast alloys
12.35 – 12.55: B. TONN, A. SOMMERFELD, L. DEKKER, Clausthal University of Technology, Clausthal, (D): New insights to the influence of trace elements on the nucleation and grain growth in cast iron melts
12.55 – 13.15: P. MRVAR, J. MEDVED, M. PETRIČ, Univerza v Ljubljani, Naravoslovnotehniška fakulteta: Complete master of the solidification process in castings from Al alloys
13.15 – 13.35: J. MEDVED, B. JURIŠEVIČ, S. GAJANI, M. ADAMIČ, I. AKRAPOVIČ, Akrapovič d.d., Ivančna Gorica, (SI): Titanium foundry in Akrapovič company
13.35 – 15.00: Lunch Break

Section A: Cast iron and casting technology

- 15.00 – 15.20: R. DÖPP, Clausthal University of Technology, Clausthal, (D): AIMS of development and application of our phase diagram for iron castings
15.20 – 15.40: H. RÖDTER, M. GAGNE, Rio Tinto Iron & Titanium GmbH, (D): Microstructure defects in heavy section ductile iron Castings – formation and effect on properties
15.40 – 16.00: M. SCHNEIDER*, C. HEISSER**, A. SERGINI***, A. KESSLER****, M. BODENBURG*, *MAGMA Giessereitechnologie GmbH, Aachen, **MAGMA Foundry Technology Inc., Schaumburg, Illinois, ***Hüttenes-Albertus Chemische Werke GmbH, Düsseldorf, ****IfG Institut für Giesserei-Technik GmbH, Düsseldorf, (D): Experimental investigation, physical modeling and simulation of core production processes
16.00 – 16.15: Break
16.15 – 16.35: F. JEZERŠEK, SIAPRO d.o.o., Cerklje, (SI): Equipment and process for regeneration of foundry sand mixtures
16.35 – 16.55: B. METELKO*, J. MEDVED**, P. MRVAR**, *Livar Ivančna Gorica, **Univerza v Ljubljani, (SI): Determination of nucleation potential in spheroidal graphite cast iron with in situ thermal analysis
16.55 – 17.15: D. PIHURA, DŽ. NOVIČ, Bosnia Foundrymen's Association, Fakultet za metalurgiju i materijale, Zenica, (BiH): On the transfer pilot plant research work on ductile iron into industrial scale

Section B: Non-ferrous alloys

- 15.00 – 15.20: K. WEISS, C. HONSEL, R. VOMHOF, RWP GMBH, (D): New material design leads to another castings quality-solidification, stress, mechanical properties
15.20 – 15.40: M. HORAČEK, Brno University of Technology, Department of Foundry Engineering, Brno, (CZ): Research activities at the Brno University of technology related to investment casting technology
15.40 – 16.00: G. PODLIPNIK, TCG UNITECH LTH-OL d.o.o., Škofja Loka, (SI): Complete master of high pressure die casting process on an example of cover for electronics
16.00 – 16.15: Break
16.15 – 16.35: V. KRUTIŠ, M. KOVAČ, V. KOLDA, MECAS ESI s.r.o., (CZ): Procast simulation-key to fixing your problems
16.35 – 16.55: T. DOTTERWEICH, H₂O GmbH, Steinen, (D): Saving money by the treatment of die casting emulsion
16.55 -17.15: G. LOJEN, A. C. KNEISSL, M. GOJIČ, R. RUDOLF, M. ČOLIČ, I. ANŽEL, Univerza v Mariboru, Fakulteta za strojništvo, Maribor, (SI): Continues casting of memory shape alloy Cu-Al-Ni

Thursday, 10. 09. 2009 at 18.30

Trip by a boat from Portorož to Trieste with a fish dinner. The boats »Portorož« and »Laho« shall be anchored at the main pier in Portorož.

Friday, 11. 09. 2009

Section A: Cast iron and casting technology

- 9.00 – 9.20: M. HOLMGREN, MD Swedish Foundry Association: Casting innovation centre – a Swedish r&d project for the truck, car and windpower industry
9.20 – 9.40: A. KOWALSKI, D. MYSZKA, K. GLOWNIA, Foundry Research Institute Krakow, (PL): The issues of thin-walled ADI castings
9.40 – 10.00: A. NOFAL, Central Metallurgical Research and Development Institute, Cairo, Egypt: ADI - the new horizons
10.00 – 10.15: Break
10.15 – 10.35: J. SZAJNAR, M. STAWARZ, T. WROBEL, W. SEBZDA, Silesian University of Technology, Gliwice, (PL): Inoculation of grey cast iron with use of electromagnetic field
10.35 – 10.55: F. UNKIČ, Z. GLAVAŠ, K. TERZIČ, Faculty of Metallurgy, Sisak, (CRO): The influence of microstructure characteristics and temperatures on the toughness of ferritic ductile iron
10.55 – 11.15: O. SCHMITZ, Koinc Co. Ltd, Iserlohn, (D): Non-heated ductile pouring with full quality control
11.15 – 11.30: Break
11.30 – 11.50: V. ILIJESKI, T. BARZOV, MZT Learnica AD Skopje, Makedonija: Implementation of bentonite from company bentomak-r. macedonia in foundry industry and its use in automatic process technology
11.50 – 12.10: G. PAVLIN, A. STRMOLE, Termit d.d., Moravče, (SI): Influence of coating on a properties of cold box cores

Section B: Non-ferrous alloys

- 9.00 – 9.20: F. KLEIN, Aage GmbH, Entwicklungsgießerei, Aalen, (D): Process parameters for aluminium castings with a low porosity
9.20 – 9.40: J. PAVLOVIC-KRSTIC*, M. DJURDJEVIC**, R. BÄHR*, G. KRSTIC*, Z. ODANOVIC***, *Institute for Manufacturing Technology and Quality Assurance, University of Magdeburg, Magdeburg, (D), **Nemak Linz GmbH, Linz, (A), ***IMS Institute, Belgrade, (SRB): The impact of alloying elements on the dendrite coherency point in Al-Si-Cu alloys
9.40 – 10.00: Z. ZOVKO BRODARAC, F. UNKIČ, K. TERZIČ, Sveučilište u Zagrebu Metalurški fakultet, Sisak, (CRO): Influence of the melt treatment on the microstructure and mechanical properties development of the AlSi10Mg alloy
10.00 – 10.15: Break
10.15 – 10.35: J. ORKAS, T. EISTO, M. NIEMINEN, Helsinki University of Technology, Department of Engineering Design and Production foundry engineering, (FIN): Early supplier involvement in casting industry

- 10.35 – 10.55: F. ZUPANIČ, Univerza v Mariboru, Fakulteta za strojništvo, (SI): Development of novel Al-casting alloys
10.55 – 11.15: M. VONČINA, J. MEDVED, P. MRVAR, I. BRATUŠ, I. KOSMAČ, M. ZDOVC, Univerza v Ljubljani, Naravoslovnotehniška fakulteta, Hydria inštitut za materiale in tehnologije, (SI): The influence of addition of recycle material on alloy quality
11.15 - 11.30: Break
11.30 – 11.50: M. PERZYK, Warsaw University of Technology, Faculty of Production, Engineering, Institute of Manufacturing Technologies, Warszawa, (PL): Data mining as a tool for improvement of quality and economics of foundry production
11.50 – 12.10: A. DEŽJOT, A. RECANATI, Istrabenz plini d.o.o., Koper, (SI): Tehnologije zgorevanja s čistim kisikom: povečanje termičnega izkoristka z uporabo čistega kisika v procesih zgorevanja / Technologies of burning with pure oxygen: increasing thermal yield with use of pure oxygen in process of burning
12.10 – 12.30: M. PETRIČ, P. MRVAR, J. MEDVED, Univerza v Ljubljani, Naravoslovnotehniška fakulteta (SI): Vpliv modificiranja na krčenje Al-zlitin / Effect of modification on shrinkage of Al-alloys

Posters

- J. ROUČKA, J. ODLOŽIL, M. KOVAČ, K. HRBAČEK, Brno University of Technology, (CZ): Prediction of solidification pattern and structure of inconel nickel alloys, using numerical simulation
- S. NESTOROVIC, D. MARKOVIC, L. IVANIC, I. RANGELOV, University of Belgrade, Technical faculty Bor(SER): Influence of Thermocyclic Treatment on the Anneal Hardening Effect of CuAl10
- A. LIKHTE, D.R. PESHWE, S. U. PATHAK, Visvesvaraya National Institute of Technology (VNIT), Nagpur, (INDIA): Structure – property correlations of graphite nodule morphology with dynamic elasticity modulus in inoculated low carbon equivalent irons
- S. KASTELIC, P. MRVAR, J. MEDVED, Univerza v Ljubljani, Naravoslovnotehniška fakulteta, (SI): Simulation of welding test for a plate 300 mm x 500 mm
- G. KLANČNIK, J. MEDVED, Univerza v Ljubljani, Naravoslovnotehniška fakulteta, Oddelek za materiale in metalurgijo, (SI): DSC analysis of aluminium alloys
- S. KORES, B. KOSEC, J. MEDVED, Univerza v Ljubljani, (SI): Influence of Ce and CeS addition on solidification of Al-Si alloys
- B.ŠENK, Exoterm it d.o.o., Kranj, (SI): Financial discipline and recovery management