

Association of Foundrymen and Metallurgists of the Republic of Belarus
Belarusian National Technical University
JSC BMZ – Managing Company of Holding BMK
GNU «Institute of technology of metals» NAS Belarus

PROGRAMME

The XXV International
Science and Technology Conference

Foundry production and metallurgy 2017. Belarus

October 18–19

Minsk
BNTU
2017

FOUNDERS OF THE ASSOCIATION OF FOUNDRYMEN AND METALLURGISTS (ALIM) OF THE REPUBLIC OF BELARUS

Belarusian National Technical University

OJSC «BSW — Management Company of Holding «BMC»

State scientific institution – Institute of Technology of metals of National Academy of Sciences of Belarus

Open joint stock company «BELNIILIT»

Open joint stock company «Gomel foundry «Tsentrolit»

Open joint stock company «Mogilev Steel Works»

MEMBERS OF THE ASSOCIATION OF FOUNDRYMEN AND METALLURGISTS (ALIM) OF THE REPUBLIC OF BELARUS

OJSC Minsk Tractor Works

JSC BELAZ – managing company of BELAZ-HOLDING

CJSC ATLANT branch – Baranovichi machine-tool factory

Scientific and Industrial unitary enterprise «Tekhnolit»

The republican unitary production enterprise «Gtanite»

«Avtosib» LLC

NPF «Metallon» LLC

Republican unitary enterprise «Gomel Factory of Molding and Normals»

«Zhlobinsky open-cast mine of Forming Materials» open joint stock company

«Tekhnolit-Polotsk» open joint stock company

Production unitary enterprise «Mogilevvtorchermet»

Physics-Technical institute of the NAS of Belarus

SOOO «Belinvesttorg-Splav»

Unitary Enterprise «Industrial Ecological Systems»

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Co-chairmen of the Committee

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Academician of NAS of Belarus, Dr.Sci.Tech., prof., winner Gospremi BSSR and RB, Honored inventor of RB, Deputy Chairman of ALIM, editor-in-chief of the Journal «Foundry production and Metallurgy»

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«Ingenieurburo Tschandl» (Austria) – general manager

PROGRAM COMMITTEE

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<i>BELOV Vladimir D.</i>	Head of the department of National Research Technical University «MISIS», Moscow, Dr.Sci.Tech., professor
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<i>SHINSKY Oleg I.</i>	President of Association of founders of the Ukraine, Dr. Sci. Tech., professor

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INTERNATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE «FOUNDRY PRODUCTION AND METALLURGY 2017. BELARUS»

Belarusian National Technical University.

Minsk city

OCTOBER 18, 2017

*(37/1 Surganova Str., Science and Technology Park of BNTU
«Politechnic»)*

09⁰⁰–11⁰⁰ – Registration of participants.

11⁰⁰–11¹⁵ – Opening of the conference.

11¹⁵–14⁰⁰ – Plenary Session. Rewarding of Winners of the Award of Association of foundrymen and metallurgists of the Republic of Belarus.

14⁰⁰–15⁰⁰ – Lunch.

15⁰⁰–17⁰⁰ – Continuation of Plenary Session.

18⁰⁰–24⁰⁰ – Gala Night of foundrymen and metallurgists.

OCTOBER 19, 2017

*(37/1 Surganova Str., Science and Technology Park of BNTU
«Politechnic»)*

10⁰⁰–18⁰⁰ – Work of sections of a conference:

Section 1. «*Foundry production*»

Section 2. «*Metallurgical production*»

Round tables

13⁰⁰–14⁰⁰ – Lunch.

Venue of conference

37/1 Surganova Str., Science and Technology Park of BNTU
«Politechnic», 220013, Minsk, Belarus

Address of the organizing committee

220013, Minsk, Ya. Kolas Str., 24, room 8M.

Contact phones:

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PROGRAMME OF THE CONFERENCE

18.10.2017

PLENARY SESSION

(Assembly hall, 37/1 Surganova Str., Science and Technology Park of BNTU “Politechnic”)

- 11.00 **Opening of the conference**
E. Marukovich, the Academician of National Academy of Sciences of Belarus, Dr. of Engineering, Professor., Honored inventor of RB, Winner of State Prize of BSSR and the Republic of Belarus, Deputy Chairman of ALIM, Editor-in-Chief of the Quarterly Journal «Foundry production and metallurgy»
- 11.00– Welcome address by **A. Savenok**, the CEO of joint stock company «BSW – Management Company of Holding «BMC»», Chairman of Association of foundrymen and metallurgists of Republic of Belarus
- 11.15– **A. Turner, General Secretary of the World Foundry Organization (WFO)**
11.45 **zation (WFO)**
The Global Casting Industry (Overview)
- 11.45– **A. Savenok, CEO of joint stock company «BSW – Management Company of Holding «BMC»**
12.05 **ment Company of Holding «BMC»**
State and perspectives of development of metallurgical production in Belarus
- 12.05– **I. Dibrov, President of the Russian Association of founders**
12.25 Perspectives of foundry production development in Russia
- 12.25– **Olaf M. Kramer, Heinrich Wagner Sinto**
12.55 Quality in every mould
- 12.55– **A. Antomoshkin, Technical director of innovation center,**
13.15 **UNIDO National Expert**
Energy management – just words or deed? Results of implementation in Russia
- 13.15– **Fabio Zanardi, President of Zanardi Fonderie S. p. A.**
13.40 The Development of ADI in Italy
- 13.40– **Rewarding of Winners of ALIM awards**
14.00
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- 14.00– **Lunch**
15.00
- 15.00– **D. Samokhvalov, Representative of DISA Industries A/S,**
15.15 **Russia**
New foundry equipment of DISA
- 15.15– **Mauro Fassina, Italtipresse Gauss, Italy**
15.35 **Technologies and products of Italtipresse Gauss**
- 15.35– **Adel Nofal, Professor of the Central Metallurgical research**
16.00 **& development institute, Egypt**
Porosity defects in iron castings
- 16.00– **R. Ransing, H. Roshan, M. Ransing, S. Brown, Swansea**
16.20 **University, Great Britain**
How to save money in foundry with opportunities offered by Industry 4.0 and ISO 9001:2015 Standard
- 16.20– **K. Lizska, General Secretary of Polish Foundrymen’s Asso-**
16.40 **ciation, Poland**
Selected aspects of metalcasting production in Poland versus global and European status
- 16.40– **S. Tkachenko, The Association of founders of St. Petersburg**
17.00 **and Leningrad region**
State and scientific-technical potential of the foundry production of St. Petersburg and in Leningrad region

19.10.2017

Section 1. «Foundry Production»

Building No. 7, lecture hall 24

Start of work: 10⁰⁰

Heads of section:

A. Melnikov, Director of JSC BELNIILIT, Ph. D in Engineering., winner Gospremiï BSSR, Deputy chairman of ALIM;

M. Sadokha, Deputy Director of JSC BELNIILIT, Ph. D in Engineering

1. **V. Bairashevsky, Gospromnadzor, Ministry of Emergency Situations of Belarus**
Requirements for the development of declarations of industrial safety in foundry.
2. **M. Sadokha, JSC BELNIILIT**
Foundry Technologies and equipment designed and produced by JSC BELNIILIT.
3. **S. Rovin, UE Technolit**
Outlook for application of rotary furnaces. Metal waste recycling.
4. **L. Rovin, V. Zharanov; – Gomel State Technical University named after P. O. Sukhoi, S. Rovin, UE Technolit**
The heating and mixing of the discrete materials in rotary device.
5. **O. Shinsky, S. Klimenko, I. Shalevskaja, V. Shinsky (Ukraine); E. Marukovich (Belarus)**
Economy, ecology, organization of casting production on gasified models.
6. **O. Shinsky, (Ukraine), E. Marukovich, (Belarus), V. Doroshenko, P. Kaluzhny, (Ukraine)**
Regulation of the properties of cast structures by the intensification of heat transfer in the mold with lost foam model.
7. **Dan Taborsky, ASK CHEMICALS CZECH, Czech Republic**
New materials and new decisions for foundry production.
8. **A. Chaus, M. Bracik, Slovak University of Technology, Bratislava; F. Rudnitski, BNTU, Belarus**
On selection of cast tool varieties made of high-speed steels.
9. **P. Straka, SEEIF Ceramic, a. s., Czech Republic**
The advantage of using ceramic gating system for foundries.
10. **E. Marukovich, U. Bevza, V. Grusha; Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev, Republic of Belarus**
Improving the quality of parts from cast iron by creating of the optimal conditions for the formation of castings.

- 11. O. Ponomarenko, N. Evtushenko, D. Marinenko; National technical University «Kharkiv Polytechnic Institute», Ukraine, I. Grishin, Scientific-production centre «European technologies for machine-building», Kharkov, Ukraine**
Intensification of the drying process of sand-gypsum molds.
 - 12. F. Lovshenko, Belarussian-Russian University, G. Lovshenko, Belarussian State Academy of Aviation, Minsk, Belarus I. Lozиков, Belarussian-Russian University, Mogilev, Belarus**
Theory and technology of obtaining mechanically alloyed nanostructural modifying ligatures for the production of chrome bronze.
 - 13. T. Rudy, Company Idea Pro, Poland**
Experience in project and production company Idea Pro on modernization of foundries in Poland.
 - 14. Yu. Nikolaichik, A. Dubitsky, BNTU, Belarus**
Improving the quality of casting surface due to changes in nonstick coatings based on refractory fillers of anthropogenic origin.
 - 15. D. Volkov, A. Volkov, A. Melnikov, A. Efimenko; OJSC «BELNIILIT»**
New technologies for casting grinding balls.
 - 16. O. Komarov, E. Rozenberg, Belarusian National Technical University**
The management structure of high-chromium cast iron through a complex modification.
 - 17. E. Marukovich, Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev, E. Demchenko, BNTU, Republic of Belarus**
Heat transfer in the mould during vertical continuous casting of steel.
 - 18. I. Odarchenko, I. Prusenko, Gomel State Technical University named after P. O. Sukhoi, Gomel, Belarus**
Research and simulation of the influence of refractory filler on the processes of structural formation of core mixtures.
 - 19. I. Odarchenko, I. Zharanau, I. Prusenko, Gomel State Technical University named after P. O. Sukhoi, Gomel, Belarus**
Optimization of the hydrodynamics of gating – feeding systems in accordance with the technological complexity of the castings.
 - 20. E. Marukovich, V. Ilyushenko, P. Duvalau – Institute of Technology of Metals of the National Academy of Sciences of Belarus; A. Anisovich – Physics-Technical Institute of the National Academy of Sciences of Belarus; K. Baranouski, BNTU, Minsk**
Chromium cast iron alloyed with niobium.
 - 21. M. Maksimov, OOO «SKAMOL RUS», Russia**
The company's products «SKAMOL» to improve the energy efficiency of the equipment of a foundry and metallurgical industries.
 - 22. Yu. Nikolaichik, I. Rak, BNTU, Belarus**
The experience of mastering figurine silumin castings for utility equipment.
 - 23. D. Golub, A. Melnikov, M. Sadokha, OJSC «BELNIILIT», Minsk, Belarus**
The design and manufacture of foundry machine-tool attachment.
 - 24. G. Manzhula, MSP Technology Center, Minsk, Belarus**
Digital technologies in production of casting blocks of metal details.
 - 25. P. Kalyuzhny, S. Krotyuk, T. Levchuk, FTI of NAS of Ukraine, Ukraine**
Technological processes of obtaining steel castings for shutoff pipeline valves on gasified models.
 - 26. E. Marukovich, V. Kharkov; Institute of Technology of Metals of the National Academy of Sciences of Belarus**
Continuous casting up wire blanks made of copper and nickel alloys.
 - 27. S. Vondracek, MECAS ESI s. r. o. Czech Republic**
Modeling of technological processes as an element of the transition industry on the 5-th technological level.
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28. S. Kulikov A., V. Shumigai, JSC MTW; F. Rudnicki, BNTU, Belarus

Particularities of cast iron modifying of ultradispersed additives.

29. S. Sandomirskii, The Joint Institute of Mechanical Engineering of the National Academy of Sciences of Belarus

Evaluation of the ranges of changes in tensile strength of cast iron castings by hardness.

30. A. Pribylov, unitary enterprise «Industrial ecological systems», Belarus

Cleaning the air vent foundries from harmful organic substances.

31. A. Lazarenkov, S. Horeva, BNTU, Minsk, Belarus

Working conditions of the foundry in the manufacture of cores in a hot boxes.

32. A. Lazarenkov, S. Horeva, BNTU, Minsk, Belarus

Estimation of parameters of a microclimate of workplaces foundries.

33. A. Fedosov, JSC “Rostov foundry plant”, Russia

Experience of application of systems of computer simulation to increase the efficiency of the foundry production at JSC “Rostov foundry plant”.

Section 2. «Metallurgical production»

(37/1 Surganova Str., Science and Technology Park of BNTU “Politechnik”)

Start of work: 10⁰⁰

Head of section:

Peretyagina E. A., Deputy General Director on technology and quality of JSC «BMZ – Managing Company of Holding «BMK», Belarus.

1. S. Gorainov, design engineer, SMS – Group GmbH, Germany

Predictive Assistant for quality control for the tape machine at MHJ3.

2. E. Popova, JSC “Severstal-management”, Cherepovets City, Vologda Region, Russia

Research of carbide inhomogeneity in the cross section of continuously-cast billets of steel grade IIX15.

3. E. Urbanovich, I. Shkulkova, I. Koleda, OJSC “BSW – Management Company of Holding “BMC”

Increase in lining life of the pouring steel combined ladles due to increase of number of the intermediate repairs.

4. D. Vedybeda, OJSC “BSW – Management Company of Holding “BMC”

Simulation of a strip of hardenability band of machine steel brands.

5. A. Tereshchenko, OJSC «BSW – Management Company of Holding «BMC»

Development of production of continuous casting billets diameter of 200 mm made of chrome-molybdenum steel grades for the production of seamless pipes in the conditions of OJSC «BSW – Management Company of Holding «BMC».

6. T. Akhmetova, OJSC «BMW – Management Company of Holding «BMC»

Analysis of requirements of production for cold-deformed wire for reinforcement grade class VR-500.

7. S. Avdeev, OJSC «BMW – Management Company of Holding «BMC»

Development and implementation of production technology and heat treatment of seamless hot-rolled tubes from CR-mo stainless steel grades.

8. Yu. Rogovaja, OJSC «BMW – Management Company of Holding «BMC»

The causes of formation of defect «rolled-in scale» at rolled sections 850 mill used in the automotive industry.

9. T. Kurenkova, OJSC «BMW – Management Company of Holding «BMC»

Non-metallic inclusions in steel. Control methods.

10. L. Shapovalova, OJSC «BMW – Management Company of Holding «BMC»

The study of transformation of defects in heating for rolling continuously cast billets in conditions of SPC-2 shop.

11. F. Panteleenko, V. Shmuradko, N. Rudenskaya; BNTU, Belarus

Oxideceramic materials for metallurgy.

Round table 1

(37/1 Surganova Str., Science and Technology Park of BNTU “Politechnic”, r.221, Confucius Hall)

The beginning in 10.00 a. m.

“Casting aluminum alloys”

Head of section:

Belov V. D., Head of the department of NRTU «MISIS», Dr. Sci. Tech., professor, Moscow, Russian Federation

1. V. Belov, A. Kolygin, A. Fadeev; National research technological University «MISIS», Russia

Experience in the application of digital technology in the manufacture of light alloys of complex d castings for critical applications.

2. E. Marukovich, V. Stetsenko, Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev, Belarus

Casting aluminum-silicon alloys with high dispersion inverted microstructure.

3. N. Dashkevich, V. Belov, A. Fadeev; National research technological University «MISIS», Russia

The application of vacuum melting casting machines with water-cooled crucible castings of intermetallic titanium alloys.

4. E. Marukovich, V. Stetsenko; Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev, Belarus

Nanostructural processes of melting and moulding of tin bronze.

5. E. Marukovich, V. Stetsenko; Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev, Belarus

Basic elements and the mechanism of metallurgical heredity in casting alloys.

6. E. Marukovich, V. Stetsenko; Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev, Belarus

Thermodynamics of nanostructural processes of crystallization of the eutectic silumin.

7. V. Orlov – Representative of BUHLER A. G. (Switzerland) in Minsk

Die casting machines of BRUHLER.

8. I. Rafalsky, P. Lushchik, Belarusian National Technical University, Belarus

Mathematic simulation of the crystallization process and development of manufacturing techniques of faultless mold pieces' production from aluminium alloys.

9. E. Marukovich, A. Branovitsky, A. Kruglov, V. Dementiev, N. Sadvovsky; Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev, Belarus

Production of details of the rotor engine from aluminum alloys casting on gasifiable models.

10. E. Marukovich, Institute of Technology of Metals, National Academy of Sciences of Belarus, Mogilev; S. Usherenko, BNTU, Belarus

Change of structure of aluminum alloys of the local dynamic effects.

Round table 2

37/1 Surganova Str., Science and Technology Park of BNTU "Politechnic", hall 223,

The beginning in 10.00 a. m.

“Technology, properties and applications of austempered ductile iron (ADI)”

Head of section:

Adel Nofal, Professor of the Central Metallurgical research & development institute, Egypt.

Participants: scientists and specialists from Institute of technology of metals of NAS, Physical and technical institute of NAS, BNTU, enterprises and plants producing ductile iron, other organizations interested in using, promotion and development of ADI.

The main task of the Round table – to give full information on ADI, to help in production of various articles from ADI, to show practical profits in introducing ADI.

Round table 3

(Building 7, room 19M2)

“The mill products of JSC “BMZ — management company of holding “BMC” made according to the european standards for the belarus machine-building enterprises”

Head of section:

A. Vengura, Chief of the Research Department of OJSC «BMZ – Managing Company of Holding «BMK».

1. A. Vengura, OJSC «BSW – Management Company of Holding «BMC»

The results of sample testing of European brands of rolled steel at the machine-building enterprises in Belarus