

УВАЖАЕМЫЕ УЧАСТНИКИ И ГОСТИ КОНФЕРЕНЦИИ!

Приветствуем вас на научно-технической конференции
ПРОМЫШЛЕННОЕ ПРОИЗВОДСТВО И МЕТАЛЛУРГИЯ
16th International Conference on Industrial Manufacturing and
Metallurgy (ICIMM 2021)

Рабочие языки – русский, английский.
Регламент выступления – не более 8-10 минут.

Ссылка на Zoom-конференцию для онлайн-участников:
<https://evraz.zoom.us/j/98857921799?pwd=d1VkcUhWdDV2M1M5ak1pUFBzOFRVUT09>
(Идентификатор конференции: 988 5792 1799,
Код доступа: 123)

17 ИЮНЯ

8.00-10.30 – Регистрация участников конференции
ПЛЕНАРНОЕ ЗАСЕДАНИЕ КОНФЕРЕНЦИИ,
с 9.00 до 10.00 (GMT+5)

Модератор:

Миронова Мария Владимировна, к.т.н., заместитель директора по образованию и науке НТИ (филиала) УрФУ

1. Новоженев Денис Анатольевич, вице-президент – Руководитель Дивизиона Урал, Приветственное слово: перспективы развития АО «ЕВРАЗ НТМК».
2. Потанин Владислав Владимирович, директор НТИ (филиала) УрФУ, Модель непрерывного образования и независимой оценки квалификации в сфере высокотехнологичных производств.
3. Кошкарлов Денис Анатольевич, технический директор АО «ЕВРАЗ НТМК», Современные металлургические технологии, планируемые к внедрению на НТМК.
4. Пегашкин Владимир Федорович, д.т.н., проф., зав. кафедрой общего машиностроения НТИ (филиала) УрФУ, Наука производству: современные тенденции.
5. Ants Kallaste, Professor, Department of Electrical Power Engineering and Mechatronics, Tallinn University of Technology, Additive Manufacturing of Electrical Machines

10.00-10.30 – Кофе-брейк

РАБОТА СЕКЦИЙ КОНФЕРЕНЦИИ С 10.30 ДО 17.00

12.30-13.30 – Обед

15.30-16.00 – Кофе-брейк

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18 ИЮНЯ

9.00-15.00 Индустриальный тур на ЕВРАЗ НТМК

16.00-17.00 Индустриальный тур на Техпром

19 ИЮНЯ

9.00-14.00 Экскурсия по городу с посещением музея бронетанковой техники Уралвагонзавода.

СЕКЦИЯ «INDUSTRIAL MANUFACTURING» (17 ИЮНЯ, 10.30-17.00, GMT +5)

Председатели секции:

Пегашкин Владимир Федорович, д.т.н., проф., зав. кафедрой общего машиностроения НТИ (филиала) УрФУ
Недолуга Алексей Владимирович, главный механик, АО «ЕВРАЗ НТМК»

1. S. Belyaev, Integrated study of load distribution between the working and support rollers of sheet straightening machines with one row of support rollers.
2. V. Pegashkin, Optimization of low-rigid part machining.
3. R. Okulov, Influence of contact friction on the shaping of profiled pipes of cold mandrel-free drawing.
4. Y. Stroganov, Improving the stability of straight-line movement of two-axle tractor trailers by stabilizing the wheels of the front rotary trolley.
5. R. Okulov, Influence of the plasmatron anode length in the processes of powder production and coating.
6. V. Pegashkin, Deformation rate during ultrasonic hardening.
7. Y. Markova, Labor productivity growth as a factor in increasing the competitiveness of aircraft manufacturing enterprises.
8. N. Kalyagin, Under-control operation as a life cycle support system for railway products.
9. N. Semenova, Calculation of metal damage at multistage strain.
10. A. Dunkov, Method of calculation logging equipment's protection against the fall of a tree.
11. N. Bushueva, Strained condition parameters during brass backward extrusion with a high elongation coefficient.
12. V. Elchinsky, Investigation of the effect of the gap on the friction forces in the piston pair of the axial piston hydraulic machine.

13. D. Yakupov, Working Parts of Means of Minerals Excavation.
14. Y. Stroganov, Influence of natural gas composition on working process of gas power plant efficiency.
15. N. Telminov, Preparing models of special-purpose vehicles for printing with FDM printers.
16. E. Putilova, Engineering thinking and its role in modern industry.
17. N. Ignatova, Specificity of Engineering Knowledge.
18. E. Dolzhenkova, The development of the methodological aspects of the financial support for the electrical and thermal power production.
19. M. Kurashova, Assessment of the effectiveness of the man-agement system of an industrial enterprise over the whole product life cycle.
20. M. Kurashova, Modern technologies of developing regional smart-specialization.
21. I. Ilchenko, Mutual optimization of design and process preparation of production in mechanical engineering.
22. E. Pegashkina, Practical training of technical specialists for machine-building enterprises in the specialized department.
23. T. Mineeva, Increasing the efficiency of production technology by the method of value analysis.
24. M. Scherbinin, Internal and external assessment of the level of professional competence of young specialists of large industrial enterprises in Nizhny Tagil.
25. M. Scherbinin, Critical analysis of theoretical approaches in the study of labor and academic migration.
26. E. Podoliak, Pull control system in the technologically complex production at a machine-building enterprise.
27. V. Ponomarev, Pneumatic fractionation of enriched quartz sand for dry building mixtures.
28. V. Dudko, Improvement of mass exchange processes during drying of porous sample in modulated gas flow.
29. V. Matyukhin, Improvement of transportation mechanism of dispersed materials in hoppers by gas-dynamic methods.
30. A. Yazovskih, Transformation of the system of technological preparation for production of aviation wheels

СЕКЦИЯ
**«МЕCHATRONICS, ROBOTICS, INDUSTRIAL
AUTOMATION, ELECTRIC DRIVES AND
MACHINES, INDUSTRY 4.0, IT»**
(17 ИЮНЯ, 10.30-17.00, GMT +5)

Председатели секции:

Гоман Виктор Валентинович, к.т.н, член IEEE, директор центра научных исследований и инноваций НТИ (филиала) УрФУ

Овчинников Андрей Викторович, заместитель директора по информационным технологиям Дивизиона Урал, ООО «ЕвразХолдинг»

1. V. Potekhin, Development of a digital transformation model for industrial cyber-physical systems
2. R. Saifulin, Induction motor in a rotating coordinate system with a buffer source supply.
3. V. Goman, Comparative analysis of energy consumption by electric motors of pump units at various load profiles.
4. R. Yunusov, Study of the DC-DC boost converter physical model.
5. R. Yunusov, The module of pulse width modulation frequency converter.
6. O. Sidorov, Forecast of electricity consumption based on an artificial neural network.
7. R. Muhutdinov, Development of the prediction algorithm for smart thermostat.
8. A. Elfimov, Laboratory simulation of a process liquid Spill. Process control via use of a software computer vision system.
9. A. Dolganov, Determining general output parameters for a structural identification model of humanoid-robot control systems.
10. A. Dolganov, Developing expert control systems for automated complexes of technical operation of vehicles.
11. V. Shlychkov, Laser thickness gauges in pipe rolling production.
12. I. Shadrin, Modeling high-speed tracked vehicles in Simcenter Amesim.
13. R. Kazunin, Prototype method for ranking input factors "correlation in freezing" (using the example of optimization of casting block composition)
14. R. Kazunin, Software implementation variant of the method for ranking input factors "correlation in freezing" (using the example of optimization of casting block composition).

15. L. Zakharov, System-on-chip architecture for modern PLCs.
16. A. Mineeva, Kinematics of coordinated motion of multiparametric mechanical systems and multidrive machines.
17. P. Mishkurov, Rail yard digital twin implementation into an industrial information system.
18. D. Isakov, Electric pushrod drive based on a cylindrical linear induction electric motor with a telescopic secondary part.
19. D. Isakov, To the synthesis of the initial algorithms for control and diagnostic control of discrete automata based on programmable logic controllers.
20. D. Yampolsky, Algorithms and implementation of the control program for the multi-lifting operation.
21. A. Spiridonov, Preflight calculation of the orbital parameters of a small satellite.
22. K. Tawfiq, Analysis and Implementation of an interconnector between MATLAB Simscape and Simulink blocks in a multiphase drive system.
23. T. Krupa, The usage of recurrent neural networks for a prediction of educational trajectory in industrial information systems.
24. T. Krupa, The usage of recurrent neural networks for the design of information systems.
25. S. Byvaltsev, modeling the operating parameters of light unmanned aerial vehicles.
26. V. Goman, Thermal modeling and simulation for engineering education using Simulink.
27. N. Amosov, Industry efficiency indicators 4.0 for medium-sized engineering enterprises.
28. D. Ptitsyn, Adjustment and optical characteristics of optical emitters when using complex waveform current.



Международная
научно-техническая конференция

**Промышленное производство
и металлургия**

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Секция
«Industrial Manufacturing»

Секция
**«Mechatronics, Robotics,
Industrial Automation,
Electric drives and machines,
Industry 4.0, IT»**

Контактный телефон:
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17th-19th June 2021

Нижний Тагил

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и независимой оценки квалификации в сфере
высокотехнологичных производств.
3. Кошкарлов Денис Анатольевич, технический директор
АО «ЕВРАЗ НТМК», Современные металлургические
технологии, планируемые к внедрению на НТМК.
4. Пегашкин Владимир Федорович, д.т.н., проф., зав.
кафедрой общего машиностроения НТИ (филиала)
УрФУ, Наука производству: современные тенденции.
5. Ants Kallaste, Professor, Department of Electrical Power
Engineering and Mechatronics, Tallinn University of
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СЕКЦИЯ «METALLURGY» (17 ИЮНЯ, 10.30-17.00, GMT +5)

Председатели секции:

Шевченко Олег Игоревич, д.т.н., проф., зав. кафедрой
металлургических технологий НТИ (филиала) УрФУ
Соколов Константин Евгеньевич, зам. начальника
управления – начальник отдела прокатного производства,
Техническое управление, АО «ЕВРАЗ НТМК»

1. A. Metelkin, Method for estimating the sulfide capacity of
slags in ladle furnace unit using the ionic theory.
2. E. Kolmachikhina, Study of surfactant influence on
pressure oxidative leaching of zinc sulfide concentrate.
3. A. Finkelstein, Comparison of the structure and properties
of castings from steel 45Kh25N20S2L produced by
centrifugal casting and in resin bonded sand.
4. M. Tretiak, Fine dusts leaching of copper smelting
production.
5. O. Dizer, Nitric acid leaching modeling of copper-arsenic
sulfide raw material.
6. K. Ilin, The influence of sections of the elastic deformation
of a strip on the length of the deformation zone during cold
rolling.
7. A. Ryabov, Analytical solution of the problem of the low-
melting element behavior during alloying of steel.
8. N. Kosdauletov, Evaluation of metallurgical properties of
manganese ores of different genesis.
9. B. Suleimen, Behavior of extrusion briquettes (brex) and
pellets from oolite iron ore in solid-phase metallization.
10. K. Smirnov, Specific features of metal reduction from
ilmenite concentrate.
11. I Galimyanov, Analysis of double-threaded rolling in the
production of grinding balls with a diameter of 100 mm
from alloyed steel grades.

12. A. Upolovnikova, Physicochemical properties of the
CaO-SiO₂-B₂O₃-MgOAl₂O₃ slags system.
13. S. Dokuchayev, Ferrous metallurgy of Russia: between
sanctions and lockdown.
14. L. Mihailova, Dephosphorization of silicon-containing
fer-roalloys.
15. G. Vitkina, The relationship between the composition,
structure and metallurgical characteristics of iron ore
agglomerates.
16. I. Khlyst, Modern Solutions in Rail Production: Innovative
Process for 'Digital Cooling' and its Implementation within
Rail Rolling Production).
17. A. Kirichkov, Analysis and Explanation of Innovation
Process of Rail Differentiated Heat Treatment (TEC DT).
18. A. Makarov, Influence of the composition of the dust
and gas atmosphere on heat losses in arc steelmaking
furnaces.
19. N. Spirin, Investigation of heat transfer processes in
tuyere zones of a blast furnace.
20. M. Beavogui, Bauxite enrichment process (Bayer
process): bauxite cases from Sangaredi (Guinea) and
Sierra Leone.
21. R. Rusalev, Reducing of gold loss in processing Au-Sb
sulfide concentrates.
22. M. Kleshchevnikov, Recovery of tantalum from waste of
hard alloys production.
23. A. Klimov, Manganese behavior in the Hadfield steel
produc-tion by remelting.
24. O. Makovskaya, Cobalt (II) sorption from sulfate
solutions.
25. D. Boldyrev, Synergetic research approach of the
inoculants dissolution processes in the cast iron melt.
26. A. Shtykhno, The influence of chemical composition
vibra-tions on the properties of a high-manganese alloy
for armored parts of milling equipment.
27. O. Sidorov, Use of artificial neural network for prediction
of characteristics of metallurgical coke.
28. A. Nechaev, Recovery of sulfur and zinc from metallurgic
waste sludges.
29. G. Gazaleeva, The metallization process of
titaniummagnetite.
30. J. Napol'skikh, Leaching kinetics of scandium from
various red mud types by nitric acid.
31. A. Kyrchikov, Influence of CaO addition on alkali content
in products (red mud) of alumina production.

СЕКЦИЯ
«MATERIALS SCIENCE»
(17 ИЮНЯ, 10.30-17.00, GMT +5)

Председатели секции:

Сафонов Евгений Николаевич, д.т.н., ст.н.с., директор школы магистратуры НТИ (филиала) УрФУ
Лариков Александр Рудольфович, ведущий инженер-технолог, Центральная лаборатория комбината, АО «ЕВРАЗ НТМК»

1. I. Varyan, Improving energy efficiency and productivity in electrowinning of copper.
2. K. Gubareva, Heat transfer in a plane-parallel channel with a Couette flow.
3. V. Mironov, Procedure for solving a physical-mechanical problem of determining stress fields, temperatures and hydrogen concentration.
4. A. Khafizova, The determination of dynamic modulus of refractory elasticity.
5. D. Ryazanov, The behavior of material under high-speed loading.
6. O. Vodopyanova, Evaluation of VT6 and VT9 $\alpha+\beta$ titanium alloys spreading features during flat rolling.
7. E. Tsvetkova, Structural features of alloys manufactured by L-PBF process.
8. E. Balakirev, Features of nitrided layers in martensitic steel obtained by direct laser melting.
9. P. Tyubaeva, Methods of the effective modification of polymer composite materials by complexes of metalloporphyrins with Fe, Mn and Zn.
10. I. Burmistrov, Electrolyte concentration dependences of NiO based thermoelectrochemical cells performance.
11. G. Trekin, Auto-heating effect influence on the deposited layer formation for submerged arc welding.
12. V. Mironov, Calculation of the durability of a welded metal structure taking into account the cyclic degradation of material properties.
13. M. Erpalov, Studying the accuracy of determining the stress triaxiality values in the center of specimens under tension.
14. A. Popov, Investigation of the temperature state of fuel elements with a given spatial distribution of heat sources.
15. V. Zarembo, Control of Electroplating Process by Weak Back-ground pulses.
16. E. Safonov, Features of structure formation during surface quenching of cast iron with plate graphite

17. E. Safonov, Structure of the surface layer of cast iron after heat treatment by electric arc
18. F. Kapustin, A technology for the manufacture of double-layer concrete products.
19. S. Byvaltsev, One method for experimental investigation of deformation in homogeneity.
20. A. Nechaev, Production of sodium hydroxide and sulfuric acid solutions from sodium sulfate by electrodialysis.
21. T. Zavodova, Modeling of the filling of the shell with granulated powder elements.
22. V. Sharapova, Dilatometric effects during annealing of Fe-Ni-C cast invar alloy.
23. T. Zavodova, Modeling the process of compaction of granulated powder elements under the influence of vibration loads.
24. N. Bashkatov, Sulfur anhydride influence on sintering and activity of Portland cement clinker.
25. V. Lodyanaya, The granodiorite in ceramic production.
26. E. Belonosova, Production of heat-stable cordierite ceramic material.
27. A. Stolbovsky, Thermodynamic modeling and optimization of the composition of nanostructured low-alloyed Cu-Hf and Cu-Cr bronzes.
28. P. Shirshova, Optimization of the Composition based on Thermodynamic Modeling of Low-Alloyed Cu-Cr-Hf Bronzes.
29. S. Sibagatullin, Physicochemical Characteristics of High-Quality Sinter, Manganese Ore, and Their Mixture Reduced with Hydrogen.



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Секция
«Metallurgy»

Секция
«Materials science»

Контактный телефон:
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E-mail: conf_nti@urfu.ru

17th-19th June 2021

Нижний Тагил