

20/08/2024

List of papers of the Conference “Aluminium of Siberia”

Keynote session			
	Title	Organization	Authors
1.	RUSAL's Technological Sustainability & Development	UC RUSAL	V. Mann
2.	Problems and Technical Measures in the Development of China's Primary Aluminum Industry	Northeastern University, Shenyang	Zhaowen Wang
3.	Charting a Promising Path: The Evolving Landscape of India's Aluminum Industry	Jawaharlal Nehru Aluminium Research development and design centre	Anupam Agnihotri
4.	GAMI's Practice in the Design and Construction of Alumina Projects	CHALIECO GUIYANG BRANCH / Guiyang Aluminium & Magnesium Design & Research Institute Co., Ltd	Ronghua Li
5.	Current state and development of inert anodes	Northeastern University, Shenyang	Z. N. Shi

Section Alumina production

	Paper's Title	Organization	Authors
I. New projects and process improvement			
1.	Optimization and analysis of alumina refinery design strategy	CHALIECO GUIYANG BRANCH / Guiyang Aluminium & Magnesium Design & Research Institute Co., Ltd	Hui Yang, <u>Zhenyong Luo</u> , Yang Ni
2.	Solving the issue of bauxite ore sticking in the receiver cones of wet mills at Rusal Krasnoturyinsk	RUSAL ETC LLC	D.V. Rudakov, V.V. Virovets I.E. Chetyrkin, A.V. Shavkunov, A.A. Kursikov
3.	Improvement of the sinter slurry classification design at Rusal Kamensk-Uralsky	RUSAL ETC LLC	<u>O.A. Nechaev</u> M.N. Pechenkin, A.V. Panov, S.F. Ordon, O.G. Zharkov, N.E. Baeva
4.	Modern trends in the design of radial thickeners	Gormasheexport	A.A. Sokolova, A.V. Bauman
5.	Improvement of the flow for using process steam by autoclave trains at BAZ	RUSAL ETC LLC	<u>D.V. Ovsyuchenko</u> , M.N. Pechenkin, S.F. Ordon, V.V. Smorodinkin, E.N. Mitrofanova, I.E. Chetyrkin
6.	Development and implementation of an energy-efficient aluminate liquor heater design for desilication area at RUSAL Achinsk JSC	RUSAL ETC LLC	M.V. Brendel, <u>V. Bavchenkov</u> , E. Lokk
7.	Increased utilisation rate of calcined alumina heat	RUSAL ETC LLC	D.V. Finin, D.E. Lipukhin, I.E. Chetyrkin, <u>B.V. Bratslavskiy</u> , Yu.A. Kiseleva
II. Special grades of alumina and hydrate			
8.	Feasibility of reprocessing leachates from alumina production	RUSAL ETC LLC	<u>A. Knyazev</u> , A. Damaskin, A. Damaskina, B. Lavrov
9.	Development of UC RUSAL's products based on highly dispersed precipitated aluminium hydroxide	RUSAL ETC LLC	A.A. Smirnov, A.V. Panov, S.F. Ordon, O.N. Milshin, A.I. Krasnykh, <u>A.S. Volobueva</u> , A.S. Seniuta
10.	Possibilities of the quantitative phase analysis for determination of polymorphic modifications in the composition of special grades of aluminium hydroxide produced by RUSAL Achinsk	RUSAL ETC LLC	<u>V.V. Gak</u> , A.S. Volobueva, Yu.A. Chernyshova, A.G. Suss
III. Alumina R&D – theory, laboratory and pilot tests			
11.	Increasing productivity and intensification of the aluminium hydroxide recovery process from alkaline liquors in alumina production	RUSAL ETC LLC	<u>D.V. Rudakov</u> , S. Ordon, I. Chetyrkin, I. Gostinskaya, A. Shoppert, L. Chaikin
12.	Development of a comprehensive technology for processing loparite-containing tailings of the processing division	"Giredmet" JSC	<u>I. L. Fureev</u> , A.R. Aisinov, N.A. Pryamikov, E. N. Malakhova
13.	Development of beneficiation process for Goryachaya Mt. Ore	RUSAL ETC LLC	<u>A.A. Bliznets</u> , M.N. Pechyonkon,

			A.V. Panov, S.F. Ordon, O.N. Milshin, V.E. Bersegyan
14.	Development of hydrochemical enrichment technology for SUBR bauxite to reduce the carbonate content	RUSAL ETC LLC	<u>M.N. Pechyonkin</u> , A.A. Damaskin, A.V. Panov, S.F. Ordon, E.N. Mitrofanova, E.N. Elyakina
15.	Gravity enrichment of the VKB grade bauxite from the North Urals bauxite mine	RUSAL ETC LLC	A.N. Pivovarov
16.	Practical results and perspectives for dry beneficiation of substandard ores and technogenic wastes by pneumatic separation method	Gormasheport	<u>A.I. Stepanenko</u> , A.A. Stepanenko
17.	Reduce sintering of high-ferrous nepheline ores	RUSAL ETC LLC	<u>A.G. Suss</u> , N.V. Kuznetsova, A.A. Damaskin, A.V. Panov, I. V.Paromova, A.V. Alexandrov
18.	Recovery and recycling of lime component in complex processing of aluminosilicates	Saint-Petersburg Mining University	<u>R.I. Maksimova</u> , V.N. Brichkin, R.V. Kurtenkov
19.	Conditioning of limestone-nepheline aggregate composition when using alkali-free raw material additives	Saint-Petersburg Mining University	<u>R.V. Kurtenkov</u> , V.V. Vasiliev, V.N. Brichkin
20.	Reduction of alkali loss during sintering of rating pulps of alumina production	Siberian federal university	<u>N.V. Vasyunina</u> , K.E. Druzhinin, I.V. Dubova, Klyasikov V.S., Sysoeva Ya.S., Ivanova I.K.
21.	Beneficiation and valorization- Key to sustainability to Primary Aluminium Industry	Vedanta	Amit Chatterjee
22.	Green, Low Carbon Manufacturing Technology and Equipment in Alumina Production	Shenyang Aluminum and Magnesium Engineering and Research Institute Company Limited	Chen Yuguo
23.	Novel method of bauxite treatment using eletroreductive Bayer process	Ural Federal University named after B. N. Yeltsin	<u>A.A. Shoppert</u> , I.V. Loginova
24.	Calculation and experimental determination of phase equilibria with participation of gibbsite in partial sections of Na ₂ O - K ₂ O - Al ₂ O ₃ - H ₂ O system	Saint-Petersburg Mining University	<u>A.T. Fedorov</u> , R.I. Maksimova, V.N. Brichkin
25.	Development of the method and creation of a unit for assessing effectiveness of various antiscalants in alumina production processes	RUSAL ETC LLC	<u>D.S. Andreeva</u> , A. Knyazev, A. Pivovarov, V. Puzyrev
26.	Product line of Global Chemical LLC. Chemical reagents for aluminum production	"Global Chemical" LLC	A.I. Krivyakov, A.P. Tarasov, <u>A.A. Sergienko</u> , S.P. Zhidkoblinov
IV. Digitalization of alumina production			
27.	Digital technologies in alumina production service	RUSAL ETC LLC	<u>V.O. Golubev</u> , D.G. Chistyakov, D.S. Mayorov, I.V. Blednykh, M.E. Blum, M.F. Postika
28.	Experience in applying numerical simulation of multiphase flows for the mining industry	AO" SIMULATION AND DIGITAL TWINS "	<u>A.E. Morev</u> , T.T. Timofeev, M.N. Andreev
29.	Experience of using the vibroacoustic control method to determine the loading of bauxite mills	RUSAL ETC LLC	<u>I.V. Blednykh</u> , D.S. Maiorov, V.O. Golubev,

			E.N. Mitrofanova, A.A. Kursikov
30.	Digital laboratory. The practice of using domestic CAE Fidesys software in the mining and metallurgical industry	Fidesys	M.A. Sonnov
31.	CFD simulation to improve the efficiency of airlift agitator in precipitators	RUSAL ETC LLC	<u>D.S. Mayorov</u> , A. Damaskin, D. Rudakov, O. Zharkov, A. Khlyzov
32.	Program for calculation of ionic composition of equilibrium aluminate solutions in alumina production	Saint-Petersburg Mining University	<u>A.T. Fedorov</u> , R.I. Maksimova, V.N. Brichkin
33.	Simulation of an energy-efficient evaporator for anhydrous soda extraction at JSC RUSAL Achinsk	RUSAL ETC LLC	<u>D.G. Chistyakov</u> , M. Brendel, M. Postika
34.	CFD simulation to identify and mitigate the causes of wear in heating tubes of natural circulation evaporators	RUSAL ETC LLC	<u>M.E. Blyum</u> , D.S. Mayorov, O.G. Zharkov, A.S. Krylov, A.Yu. Khlyzov
V. Environment and waste utilization			
35.	Transforming coal fly ash into a valuable metallurgical resource	CSIR-Institute of Minerals and Materials Technology	<u>Kali Sanjay</u> , Abdul Rauf Sheik, Partha Bandyopadhyay, Binuta Patra, Ramanuj Narayan
36.	Effect of reduced magnetite red mud addition on leaching of Boehmitic bauxite	Ural Federal University named after B. N. Yeltsin	<u>M.M. Diallo</u> , A.A. Shoppert
37.	Analytical support for reprocessing red mud for production of scandium oxide, scandium-containing aluminium hydrate, and zirconium concentrate	RUSAL ETC LLC	<u>T.G. Golovanova</u> , Yu.A. Chernyshova, D.S. Ionkina, T.P. Mukina, A.G. Suss
38.	Method for determination of PM2.5 and PM10 particles in emissions from calciners on the example of FRIGUIA bauxite and alumina complex	RUSAL ETC LLC	A. Bozhko
39.	Evaluation of mechanical vapour Recompression (MVR) for low carbon alumina refining	Vedanta Ltd.	<u>S. Basu</u> , A. Chatterjee
40.	Price or value? The benefits of cooperation with a proven domestic manufacturer	Vzljot	M.Yu. Povarnitsyn

Aluminium reduction technology

	Paper's Title	Organization	Authors
I. Modernization and retrofitting of the aluminium production			
1.	Introduction on GAMI's High Amperage Potline Technologies	CHALIECO GUIYANG BRANCH / Guiyang Aluminium & Magnesium Design & Research Institute Co., Ltd	Chaohong Yang
2.	Analysis of scientific and technical achievements in the aluminium industry (TMS 2024 materials)	Siberian federal university	P.V. Polyakov
3.	New inert anode technology solutions and products	RUSAL ETC LLC	V.Kh. Mann, A.Yu. Krokhin, A.O. Gusev
4.	Start-up of RA-400 at the Tayshet Aluminum Smelter	RUSAL ETC LLC	I.I. Puzanov, I.N. Volokhov, R.Yu. Bykov, S.A. Muraviev
5.	EGA Enhancements in Emergency Bypass Busbar Development and Readiness for Emergency Scenarios	Emirates Global Aluminium	A. Arkhipov
6.	Modernisation of the ARMFS system using high-amperage technologies	RUSAL ETC LLC	A.A. Gubin, I.I. Puzanov, N.V. Klimkina, A.P. Skachko, A.N. Anisiferov
7.	RUSAL CAD for RA-550 technology as part of the environmental modernisation of aluminium smelters	SibVAMI JSC	S.V. Tepikin, A.S. Zherdev, A.P. Piankin, A.V. Klimov, N.L. Agapova, A.V. Trifonov
8.	Digital twins of equipment for aluminum production using modeling and AI	Institute of Advanced Studies of Problems of Artificial Intelligence and Intelligent Systems MSU	A.M. Bulkin
9.	Research and application of electrolytic aluminum energy saving technology	Zhengzhou Jingwei Technology Industrial Co., LTD	Wang Xudong Li Yingwu Heng Jiatao Bai Qingguo
II. Improvement of the current technologies			
10.	Key Problems of alumina dissolution in aluminum reduction cells	Northeastern University, Shenyang	Bingliang Gao, Hongkong Niu, Cong Wang, Youjian Yang, Zhongning Shi, Zhaowen Wang
11.	Determination of the continuous alumina feeding parameters	Siberian federal university	D.Yu. Varyukhin, P.V. Polyakov, O.V. Yushkova, I.M. Moiseenko, A.A. Filonenko
12.	Successful implementation of a project on increasing amperage by 17 kA up to 330 kA on OA-300 pots at a RUSAL smelter	RUSAL ETC LLC	D.M. Semiyandinov, S.A. Koshkarev
13.	Monitoring system for electrolytic reduction technology	RUSAL ETC LLC	V.V. Chesnyak, E.A. Sorokin
14.	Optimum cast iron grade for anode fixation in aluminum electrolytic cells	Central Metallurgy R&D Institute (CMRDI)	A.A. Nofal, S. Mohamed, M. Agour
15.	Influence of porosity structure on Søderberg anode consumption	Siberian federal university	S.A. Zykov, V.Yu. Buzunov, S.A. Khramenko, V.R. Shmal, I.V. Cherskikh

16.	Protective coatings for annealed anode blocks of aluminium cells	RUSAL ETC LLC	I. Puzanov, V. Kazantsev, <u>N. Klimkina</u> , E. Fedorova, G. Nagibin, A. Demyanov
17.	Use of artificial cooling to reduce emissions from Soderberg anode surface	RUSAL ETC LLC	<u>V.R. Shmal</u> , Ya. A. Tretiyakov, S.A. Khramenko, M.V. Golubev, M.E. Kazantsev, I.V. Cherskikh, R.S. Politik
18.	Impact of provisional mechanical activation on the dissolution rate of alumina in an industrial cell	Siberian federal university	<u>O.V. Yushkova</u> , <u>P.V.Polyakov</u> , V.P.Zhereb, A.I.Bezrukikh, D.Yu.Varyukhin, V.V.Yushkov
III. Lifetime of aluminium reduction cells cathodes			
19.	Current state and development perspectives of unshaped lining materials technology	RUSAL ETC LLC	<u>A.V. Proshkin</u> , V.V. Pingin, D.G. Agafonov, A.G. Sbitnev
20.	Using composite material to extend cathode lifespan and increase electromagnetic stability of cell operation	RUSAL ETC LLC	<u>E. Shaydulín</u> , I. Puzanov, N. Klimkina, A. Sbitnev, M. Kibler
21.	Laboratory corrosion testing of silicon carbide and silicon nitride materials and issues related to improving corrosion resistance	JSC "Volzhsky Abrasive works"	O.Yu. Danilova, N.V. Ushakova, V.V. Peremyschcev, <u>A.L. Yurkov</u>
22.	The influence of physical and chemical parameters of nitride bonded silicon carbide refractory products on corrosion resistance	JSC "Volzhsky Abrasive works"	<u>O.Yu. Danilova</u> , N.V. Ushakova, V.V. Peremyschcev, A.L. Yurkov
IV. Environmental technologies and labor protection			
23.	New approaches to the solution of long-time environmental issues	Siberian federal university	<u>B.P. Kulikov</u> , N.V. Vasyunina, I.V. Dubova, A.S.Kytavaya
24.	Certification contributes to the decarbonization and green development of electrolytic aluminum in China	China Green Metal Certification Center	<u>Pei Wang</u>
25.	RUSAL's GTC for the RA-550 technology as part of the Environmental Retrofitting of the Aluminium Smelters	SibVAMI JSC	D.V. Vysotskii, V.G. Grigorev, S.V. Tepikin, A.P. Piankin, <u>A.S. Zherdev</u> , A.V. Klimov, A.D. Shemet, A.A. Markov, D.B. Efremov, A.A. Gushchinskii, S.Yu. Pavlov
26.	Separation of secondary cryolite process flows to produce regeneration cryo-lite with a cryolite ratio of 2.8-3.2 and flotation cryolite with a cryolite ratio of 2.3-2.4	RUSAL ETC LLC	<u>A.A. Gavrilenko</u> , V.Yu. Buzunov, E.A. Litvishko, S.V. Belousov, S.N. Gusev
27.	Using sulphur hexafluoride for prebaked anode reduction cell hood integrity control	RUSAL ETC LLC	V.S. Burkat, <u>A.G. Bozhko</u> , K.I. Zorko, D.V.Merkulov, A.Yu. Kelesh

28.	3DESA - progressive technology for dust collection with bag filters	DESA Co. Ltd	V.V. Chekalov
29.	Innovative technology of sulphur utilisation with commercial production	RUSAL ETC LLC	<u>A.A. Gushchinskiy</u> , A.G. Suss, V.V. Pingin, D.V. Abramychov, N.V. Kuznetsova
30.	Technology for the calcium fluoride production from potroom liquors and solid waste	RUSAL ETC LLC	A.N. Baranov, <u>L.V. Gavrilenko</u> , S.N. Smirnov, M.V. Sidorenko
31.	Assessing the influence of magnetic fields of different types from cells on the operating staff in potrooms	RUSAL ETC LLC	V.V. Pingin, <u>E.Yu. Radionov</u> , A.V. Zavadyak, I.I. Puzanov, I.A. Orlov
32.	Measurement of gaseous HF using the FTIRGAS 22 in-line IR-Fourier analyzer	Evrotechlab Co.Ltd.	<u>V.V. Shevchenko</u> , G.A. Valiev
33.	Electrolytic refining of Al-Fe alloy through a diaphragm	Siberian federal university	<u>I. M. Moiseenko</u> , P. V. Polyakov, D. Yu. Varyukhin, Yu. V. Baykovskiy

Carbon materials

	Paper's Title	Organization	Authors
	I. Enlargement and modernization of carbon paste and prebaked anodes production capacities		
1.	The analysis on process and equipment selection for baked anode plant	CHALIECO GUIYANG BRANCH / Guiyang Aluminium & Magnesium Design & Research Institute Co., Ltd	<u>Shangqing Cheng</u> , Chao Deng
2.	Firebriks for RIEDHAMMER's anode baking furnaces	"BOROVICHI REFRACTORIES PLANT", JSC	A.V. Sakulin, S.I. Gershkovich, <u>V.V. Skurikhin</u> , F.R. Iksanov
3.	Refractory materials manufactured by Kazogneupor 2015 LLP for anode baking furnaces in Russia and CIS countries	REFACTOR, Ltd	<u>I.A. Serbikov</u> , O.N. Lipin, S.V. Gnidash, M.A. Petrova, S.G. Polubesov
4.	Experience with the use of screw-tooth crushers for crushing carbon materials	Gormasheport	A.I. Stepanenko
	II. Improvement of the technology of aluminium cells anodes production		
5.	Current Status and Development Trends of Anode Production Technology for Aluminum in China	Shenyang Aluminum and Magnesium Engineering and Research Institute Company Limited	Liu Chaodong
6.	Enhancing the quality of annealed anodes at Sayanogorsk aluminium smelter	RUSAL ETC LLC	V. Polovnikov, <u>A. Sivkov</u> , A. Anisiferov
7.	An alternative method of controlling the particle size distribution of the total charge, controlling the dosing of the binder pitch according to the apparent density of the green anode	RUSAL ETC LLC	<u>K.Yu. Perminov</u> , M.V. Golubev, Yu.A. Frantsev
8.	Anode Quality Control — Theory & Practice		B. M. Omarova, R.S. Kudabaev, <u>F. Morawietz</u>
9.	Anode non-destructive testing package and anode butts inspection system	RUSAL ETC LLC	<u>I.I. Puzanov</u> , N.V. Klimkina, S.G. Izbitskiy,

			A.N. Anisiferov, A.A. Pinaev
10.	Unification of requirements and inspection charts for anode blocks	RUSAL ETC LLC	<u>M.V. Lepp</u> , V.M. Polovnikov, S.A. Khramenko, Zh.L. Melnik
III. Development of the raw materials base for the electrodes industry			
11.	Development of technologies for producing binder pitches for anode production	RUSAL ETC LLC	<u>E.N. Marakushina</u> , M.E. Kazantsev, A.A. Zhukov, I.A. Yarosh, M.A. Popov
12.	Carbon black as components of lithium-ion batteries	Center of New Chemical Technologies BIC	<u>O.V. Potapenko</u> , O.A. Knyazheva, V.L. Temerev, A.V. Lavrenov
13.	Matrix synthesis of macroporous carbon materials	Center of New Chemical Technologies BIC	<u>O. A. Knyazheva</u> , A. V. Lavrenov, M. V. Trenikhin, O. A. Kokhanovskaya, O.V. Gorbunova, T.I. Gulyaeva, I. V. Resanov
14.	Aromatic concentrates from coal as a feedstock for carbon materials production	Siberian federal university	P.N. Kuznetsov, <u>V.A. Safin</u> , L.I. Kuznetsova, F.A. Buryukin, S.S. Kositsina, A.V. Obukhova, E.S. Kamensky
15.	Control of pore formation during firing of petroleum pitches	Siberian federal university	E.A. Goreyavchev
16.	Practice of industrial use of coal electrodes with through axial holes in smelting of metallurgical-grade silicon	Irkutsk National Research Technical University	A. A. Ilin, <u>N. V. Nemchinova</u> , N. N. Zobnin, I. A. Pikalova, M. E. Guretsky

Casting technology and new materials

	Paper's Title	Organization	Authors
I. Aluminium recycling			
1.	Current status and problems of aluminum recycling in Japan on the example of the automotive industry	Tohoku University, Japan	S. V. Komarov
2.	Synergistic recycling of steel tool dust with secondary aluminum	University of Belgrade	<u>V.D. Manojlović</u> , M.D. Bugarčić, D.Z. Anđić, M.D. Sokić, Ž.J. Kamberović
3.	About the possibility of waste-free processing of foundry slag	Siberian federal university	B. P. Kulikov, <u>N. S. Dombrovskiy</u> , S. V. Solonkov
4.	Processing of aluminium slag	RUSAL ETC LLC	A.B. Krechetov
5.	Recycling Al-Si alloys with high iron contamination	Jawaharlal Nehru Aluminium Research Development & Design Centre (JNARDDC)	<u>R N Chouhan</u> , R Anil Kumar, K Immanuel Raju, A K Prasada Rao, Anupam Agnihotri
6.	Processing of enrichment screenings and secondary slag from aluminum separation areas	DAR.RU	D.A. Platonov
7.	Upscaling recycling alloys with ultrasonic melt treatment	«RAM» JSC	Martijn Vos
II. Equipment and technology for melt processing			

8.	Industrial Application of Ultrasonic Vibrations to Direct-chill (DC) Casting of Aluminum Alloys : Potential and Limitations	Tohoku University, Japan	S. V. Komarov
9.	High Efficient Impeller for Aluminum Melt Purification	Tohoku University, Japan	S. V. Komarov
10.	Implementing experience of electrical technological equipment and promising developments in the field of electromagnetic (EMS) application technologies	Research and Production Center of Magnetic Hydrodynamics, LLC	V. Timofeev, <u>M. Khatsayuk</u> , E. Vinter, N. Sizganov, A. Maksimov
III. New materials and treatment technology			
11.	Strength, electrical conductivity and thermal stability of aluminum-based composite conductors	Saint Petersburg State University	<u>M.Yu. Murashkin</u> , A.M. Mavlyutov, N.A. Enikeev
12.	Structure and mechanical properties of non-heat treatable sheet alloy Al–2wt.%Cu–1.5wt.%Mn (Mg, Zn, Fe, Si)	NUST MISIS	N. A. Belov, K.A. Tsydenov, S.O. Cherkasov
13.	Study of the formation of mechanical properties during the production of electrical foil from new alloys of the ALTEC system	Siberian State Industrial University	D.N. Klepov, E.V. Aryshensky, <u>A.A. Levagina</u> , S.O Cherkasov, S.V. Konovalov
14.	Development of Al–Zn–Ca casting aluminum alloy with high thermal conductivity for industrial electronics and electric vehicle industry	NUST MISIS	<u>A.A. Lyskovich</u> , V.E. Bazhenov, A.A. Komissarov, A.V. Koltygin, V.D. Belov
15.	The influence of tin Sn and calcium Ca additions on the structure and mechanical properties of new generation Al-Cu(-Si) alloys	NUST MISIS	<u>T.K. Akopyan</u> , N.A. Belov, N.V. Letyagin
16.	Lead and tin free highly machinable 6XXX series aluminium alloy for automotive and electronic applications	Vedanta Ltd. Aluminium Business	<u>Anirban Giri</u> , Peeyush Mishra, Amit Chatterjee
17.	Mechanical and corrosion properties of Al-Ca alloy for high pressure die casting	ILMIT LLC	<u>D.O. Fokin</u> , D.O. Moiseev, D.K. Ryabov
18.	Structure and properties of "natural composites" based on the Al-Ca-Ce-Zn system	NUST MISIS	<u>E.A. Naumova</u> , M.A.Vasina, A.O.Bobrysheva
19.	Current state and prospects of application of cast metal matrix composites in industry	Vladimir State University	<u>V.A. Kechin</u>
20.	Products of research and production center "magnetic hydrodynamics" from small-section ingots obtained in an electromagnetic field	Research and Production Center of Magnetic Hydrodynamics, LLC	<u>G.P. Usynina</u> , V.N. Timofeev, M.M. Motkov, N.V. Sergeev, I.S. Gudkov, V.V. Zakharov
21.	Aluminum is a raw material for the development of promising technologies for creating new powder materials	Institute of SolidState Chemistry UB RAS	<u>V. Shevchenko</u> , V. Krasilnikov, D. Eselevich, A. Konyukova
IV. Modern methods for quality control, modelling and application of machine education			
22.	Using math simulation to develop foundry tooling for continuous casting of slabs	RUSAL ETC LLC	<u>A.A. Ilyin</u> , I.A. Strombskoy, N. Lashchukhin
23.	Theory and practice of designing moulds for casting slabs from aluminium alloys	RUSAL ETC LLC	<u>I.I. Bukelmanov</u> , N.E. Lashchukhin, A.I. Baranov, S.N. Konovalov
24.	Recent experiences with computer vision technology in casting production	«RAM» JSC	<u>A.N. Alabin</u> , A.Yu. Krokhin, P.B. Kuzmin, S.V. Valchuk, A.V. Tikhomitova

25.	Application of artificial intelligence in casting production	RUSAL ETC LLC	<u>N.E. Lashchukhin</u> , <u>V.V. Shakhmatov</u> , <u>M.E. Grinishin</u>
V. Aluminium alloys casting technology			
26.	Impact of casting parameters on magnesium macroliques in slabs of 5xxx series aluminium alloys	«RAM» JSC	<u>I.V. Kostin</u> , <u>A.S. Burkatskiy</u> , <u>A.N. Alabin</u> , <u>A.Yu. Krokhin</u> , <u>A.A. Ilyn</u> , <u>I.A. Strombskoy</u>
27.	On the possibility of combining casting and homogenization processes when casting large-sized ingots from Al-Mg system alloys	Kamensk Uralsky Metallurgical Works, JSC	<u>P.L. Kokovin</u> , <u>T.V. Maltseva</u> , <u>B.V. Ovsyannikov</u>
28.	RUSAL's pilot casting complex an integrated approach to innovation: from concept to implementation	RUSAL ETC LLC	<u>S.N. Kononov</u> , <u>A.V. Burkatskii</u>
29.	RUSAL Casting Systems — a Russian industrial solution for foundries	RUSAL ETC LLC	<u>N.E. Lashchukhin</u> , <u>A.Yu. Krokhin</u> , <u>V.F. Drozdov</u>
30.	Improving the purity of aluminium alloy castings by using scull in the casting wheel	RUSAL ETC LLC	<u>P.B. Kuzmin</u> , <u>N.N. Matchishin</u> , <u>A.N. Alabin</u>
31.	Casting of passenger wheels from Al-Ni-Fe alloy	ILMiT LLC	<u>D.O. Fokin</u> , <u>D.O. Moiseev</u> , <u>T.A. Bogdanova</u> , <u>D.K. Ryabov</u> , <u>A.N. Alabin</u>
32.	Separation coating for metal moulds of low-pressure casting of aluminium alloys	Casting and Mechanical Plant SKAD Ltd	<u>M. Antonov</u> , <u>T. Bogdanova</u> , <u>D. Yagodin</u> , <u>T. Gilmanshina</u> , <u>I. Dubova</u> , <u>P. Dubinin</u> , <u>A. Kovaleva</u> , <u>R. Eromasov</u> , <u>I. Churuksaev</u> , <u>V. Alexandrova</u>
VI. Modification of aluminium alloys			
33.	Development prospects of a grain refiner for aluminum alloys based on lanthanum	Siberian Federal University	<u>A.A. Kosovich</u> , <u>E.G. Partyko</u> , <u>S.V. Belyaev</u> , <u>L.E. Tanachev</u> , <u>N.A. Stepanenko</u> , <u>N.S. Dombrovskiy</u> , <u>D.N. Bozhko</u>
34.	Manufacturing technology of the Al-Ti-B system modifier	Siberian Federal University	<u>S.V. Belyaev</u> , <u>A.I. Zhikvarentsev</u> , <u>E.M. Lesiv</u> , <u>L.E. Tanachev</u> , <u>V.A. Zakharov</u> , <u>L.M. Osipova</u>
35.	Investigation of the method of obtaining modifying rods from secondary waste of aluminum alloys by the method of ingotless rolling-extrusion	Siberian Federal University	<u>S.B. Sidelnikov</u> , <u>E.S. Lopatina</u> , <u>N.A. Terentyev</u> , <u>A.V. Parubok</u> , <u>D.I. Kuzin</u>
36.	Modifying flux for casting passenger vehicle wheels	ILMiT LLC	<u>D.O. Moiseev</u> , <u>D.K. Ryabov</u> , <u>T.A. Bogdanova</u>
37.	Advanced master alloys for cast aluminum alloys	Siberian federal university	<u>O.V. Yushkova</u> , <u>V.P. Zhereb</u> , <u>M.P. Zhukov</u> , <u>A.I. Bezrukikh</u> , <u>R.A. Lyashko</u>
38.	Effect of holding time of the treated melt 1379s on the growth of primary silicon crystals	Siberian federal university	<u>N.A. Stepanenko</u> , <u>E.G. Partyko</u> , <u>A.A. Kosovich</u> ,

			P.O. Yuryev, D.N. Bozhko, N.S. Dombrovsky
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➤ Pressure treatment of aluminium and alloys

	Paper's Title	Organization	Authors
	I. Aluminium alloys with Sc		
39.	Features of the behavior of Al-Mg-Sc system alloys in the manufacture of large-sized sheets and plates	Kamensk Uralsky Metallurgical Works, JSC	<u>B.V. Ovsyannikov</u> , S.Yu. Esakov, S.I. Yakovlev
40.	New technical solutions for producing sheet stamped parts from aluminum alloy 1580	Siberian Federal University	<u>M.V. Voroshilova</u> , S.B. Sidelnikov, V.I. Ber, A.A. Balakhonov
41.	Investigation of the effect of hot rolling temperature on mechanical properties of sheets in high-magnesium aluminum alloys with Sc, Zr, Hf and Er additives	Samara National Research University named after academician S.P. Korolev	<u>K.A. Malkin</u> , A.A. Ragazin, E.V. Aryshenskii, V.U. Aryshenskii, C.V. Konovalov
	II. Technology of thermal deformation treatment of aluminium alloys		
42.	Extruform Technology — the contemporary standard for aluminium rod production equipment	RUSAL ETC LLC	<u>A.V. Salnikov</u> , N.A. Babitsky, A.V. Romanov
43.	Influence of regulations of the technological cycle for the production of cold-rolled roles of aluminum alloys Al-Cu-Mg systems for grain size and mechanical properties	Kamensk Uralsky Metallurgical Works, JSC	<u>K.T. Isyakaev</u> , Yu.N. Loginov
44.	Selection of thermomechanical treatment modes for the purpose of optimizing the production cycle of pressing aluminum deformable alloys	Kamensk Uralsky Metallurgical Works, JSC	<u>N.A. Kalinina</u> , I.S. Kamantsev, E.A. Putilova, V.P. Shveikin
45.	Improving the “strength-electrical conductivity” relationship of the Al-Fe aluminum alloys system by casting into an electromagnetic crystallizer and using combined deformation processing	Ufa University of Science and Technology	<u>A.E. Medvedev</u> , O.O. Zhukova, <u>M.Yu. Murashkin</u>
46.	Study of the influence of ingotless rolling-extrusion, annealing and drawing on the properties of heat-resistant conductor wire of Al-(Ce,La,Zr)-Fe system alloys	Siberian federal university	<u>V.A. Bergardt</u> , S.B. Sidelnikov, V.M. Bepalov, D.S. Voroshilov, P.O. Yuriev, D.B. Darmazhapov
47.	Superplastic forming process of aluminium alloy and its application in the front opening and closing mechanism hatch of high-speed trains'	Harbin institute of technology	Guofeng Wang
	III. Modelling of deformation treatment processes		
48.	Modeling of the rolling process clad sheets from AMG6 alloy	Kamensk Uralsky Metallurgical Works, JSC	<u>A.V. Degtyarev</u> , P.I. Glinskikh , T.V. Maltseva
49.	Modeling of the process of combined rolling and pressing of cast Mg90 grade magnesium semi-finished products in the QForm software package	Siberian Federal University	<u>A.V. Parubok</u> , S.B. Sidelnikov
50.	Development of model of recrystallization texture evolution during rolling of aluminum alloys	Siberian State Industrial University	D.N. Klepov, <u>E.V. Aryshensky</u> , E.D. Beglov, S.V. Konovalov
51.	Computer simulation of combined processes for the production car wheels	Siberian federal university	<u>Yu. V. Baykovskiy</u> , I. L. Konstantinov, D. N. Bozhko

➤ Metal science of aluminium and alloys – Biront's memory readings

	Paper's Title	Organization	Authors
52.	Tests for corrosion resistance to molten aluminum of refractory concrete with anti-wetting additives	REFACTOR, Ltd	S.V. Gnidash, S.G. Polubesov, <u>M.A. Petrova</u>
53.	RUSAL ETC Experience in production of standard samples of aluminium and aluminium alloys	RUSAL ETC LLC	A.B. Krechetov
54.	Automated analysis of aluminum alloys structure	SIAMS Company	<u>T.A. Sivkova,</u> S.V. Gubarev, A.O. Gusev, M. S. Petrov
55.	Application of artificial intelligence in the creation of new materials	Innopolis University	<u>D.E. Shevelev</u>
56.	Innovative system for automatic analysis of microstructure quality of 6xxx series alloys billets for extrusion	RUSAL ETC LLC	<u>I.V. Gerasimov,</u> T.N. Kovaleva, E.A. Sorokin, V.S. Cherepanov, A.S. Losev, A.A. Savvateev
57.	Investigation of the properties of cold-resistant alloy imported steel for welded-cast quarry excavators, selection of a domestic analogue and their comparison	Siberian Federal University	<u>A.G. Khokhlov,</u> S.V. Belyaev, E.M. Lesiv, M.A. Matyushina, V.M. Papkov, M.M. Kovalkov, N.S. Kovalkov
58.	Equipment for analysis of metals and minerals	«Melytec» LLC	O.N. Zobnina