

# Program of the NON-FERROUS METALS 2011 Congress and Exhibition

## September, 7. Wednesday

8.30-9.30 am	Registration
9.30-10.00 am	Briefing
10.00-10.30 am	Opening of the Congress and Exhibition. Photography
10.30 am-6.00 pm	Exhibition

## ROUND TABLE DISCUSSIONS

### September, 7. Wednesday Big Hall

10.30 am-12.00 pm	Issue: <b>Mining and smelting complex development</b> <b>Moderator:</b> V.P. Tomenko, Deputy Governor of Krasnoyarsk Region – Deputy Chairman of Krasnoyarsk Region Government
12.00-1.30 pm	Issue: <b>The future of Nizhnee Priangarie</b> <b>Moderator:</b> D.G. Pashkov, Minister of industry and energetics of Krasnoyarsk region
2.00-5.00 pm	Issue: <b>Inert anodes</b> <b>Moderators:</b> J. Thonstad, Professor of Norwegian Science and Technology University A.O. Gousev, Head of Inert Anodes Team, RUSAL ETC Ltd.

### September, 8. Thursday Small Hall

10.15 am-1.30 pm	Issue: <b>Red Mud and Nepheline Slime Conversion Products: Efficient Ways Final Consumers' Introduction To Manufacturing</b> <b>Moderator:</b> A.V. Panov, Head of Alumina Department of RUSAL ETC Ltd.
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**September, 9. Friday**  
**Big Hall**

<b>10.00 am-12.00 pm</b>	Issue: <b>Engineering education in Russia</b> <b>Moderators:</b> Ye.A. Vaganov, Rector of Siberian Federal University V.M. Sitcev, First Vice-president of International Union of Scientific and Engineering Associations
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**September, 9. Friday**  
**Small Hall**

<b>9.00 am-1.00 pm</b>	Issue: <b>Alstom Grid technology in effective development of aluminium reduction</b> <b>Moderator:</b> N.N. Borodin, Cand. of Tech. Sc., Assistant professor
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## PRESENTATIONS

Exhibition Hall №1

ENGLISH

### September, 7. Wednesday

2.00-2.30 pm	ToxSoft's Presentation
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### September, 8. Thursday

10.40-11.10 am	«Long-term Development of the SET Consortium Concept» Sibtsvetmetniiproekt, JSC
11.10-11.40 am	Pyrotek's Presentation
3.40-4.10 pm	«Purolite Ion Exchangers for Hydrometallurgy» Purolite International Ltd.

## ALUMINIUM REDUCTION TECHNOLOGY SECTION

**September, 8. Thursday**  
**Conference Hall**

**Chairmen:** Prof. P.V. POLYAKOV, Siberian Federal University  
V.Yu. BUZUNOV, RUSAL ETC Ltd.

Time	Title	Authors	Company
<b>9.00 am-6.00 pm</b>	<b>EXHIBITION</b>		
9.00 am	Analysis of world scientific and technical achievements in aluminum industry	P.V. Polyakov	Siberian Federal University
9.40 am	Health, outer and inner environment and safety	<u>H.A. Oye,</u> L.Hellebo	Norwegian University of Science and Technology
10.00 am	New implementation technologies of unshaped refractory materials in the construction of modern cells	A.V. Proshkin, V.V. Pingin, I.A. Yarosh, S.A. Levenson, A.V. Morozov	RUSAL ETC Ltd.
<b>10.20 am</b>	<b>BREAK. EXHIBITION</b>		
11.20 am	Amperage – an important tool	G. Dobra, <u>C.T.Stănescu,</u> C.Ioan, M. Ion	VIMETCO ALRO
11.40 am	New generation of industrial control systems		TOXSOFT Ltd.
12.00 pm	Using computer simulation of physical and chemical investigation of technological processes and systems	<u>N.V. Golovnykh,</u> V.A. Bychinsky, A.V. Muhedinova, I.I. Shepelev, K.V. Chudnenko	Establishment of the Russian Academy of Sciences Institute of Geochemistry behalf of A.P. Vinogradov, SB RAS
12.20 pm	Towards a new method of aluminium reduction	<u>A.I. Begunov,</u> A.A. Begunov, E.A. Antsiferov	Irkutsk State Technical University

12.40 pm	Development of combined technology of aluminum production	<u>V.A. Kryukovsky,</u> <u>M.P. Petukhov,</u> <u>P.V. Polyakov</u>	UC RUSAL
<b>1.00 pm</b>	<b>LUNCH</b>		
2.00 pm	Energy efficient electrolysis cells construction	G.V. Arkhipov	RUSAL ETC Ltd.
2.20 pm	Carbon and Graphite Cathode Lining for Primary Aluminium Smelting	<u>T. Oracz</u>	SGL CARBON POLSKA SA
2.40 pm	Material development for low-consumable (inert) anodes	<u>E.N. Samoylov,</u> <u>Yu.A. Lainer,</u> <u>E.A. Levashov,</u> L.L. Rokhlin, V.Ya. Dashevsky, D.Yu. Rozhkov	Establishment of the Russian Academy of Sciences
3.00 pm	The viscosity of cokepitchy compositions	V.K. Frizorger, E.M. Gildebrandt, <u>E.P. Vershinina,</u> <u>E.N. Marakushina</u>	Siberian Federal University
3.20 pm	Environmental Effectiveness and Economic Efficiency of Gas Purification Solution and Fluorocarbon-containing Aluminum Production Waste Processing	<u>E.P. Rzhchitsky,</u> <u>V.V. Kondratiev</u>	Irkutsk State Technical University
<b>3.40 pm</b>	<b>BREAK. EXHIBITION</b>		
4.40 pm	Electrolysis Cells RA-300 start-up at Khakass Aluminium Smelter without decrease in technological load	A.V. Zavadyak, <u>I.I. Puzanov,</u> <u>V.V. Platonov,</u> E.A. Gibert, S.G. Mikhalev	RUSAL ETC Ltd.
5.00 pm	Implementation of continuous monitoring of current distribution over anodes on RA-400	<u>V.A. Klykov</u>	RUSAL ETC Ltd.
5.20 pm	Analysis of the consumption of anode mass for Nadvoitsy aluminum plant cells by multivariate statistical investigation methods	<u>T.V. Piskazhova,</u> <u>P.V. Polyakov,</u> N.A. Sarypov, A.V. Krasovitsky, S.A. Sorokin	Siberian Federal University
5.40 pm	Refractory concretes for aluminium production units	V.P. Migal, V.V. Skurikhin, <u>V.V. Bulin</u>	Borovich Refractories Plant

## ALUMINIUM REDUCTION TECHNOLOGY SECTION

**September, 9. Friday**  
**Conference Hall**

**Chairmen:** Prof. P.V. POLYAKOV, Siberian Federal University  
V.Yu. BUZUNOV, RUSAL ETC Ltd.

Time	Title	Authors	Company
9.00 am-4.00 pm	<b>EXHIBITION</b>		
9.30 am-12.00 pm	<b>Excursions: JSC RUSAL Krasnoyarsk</b> <b>JSC Krastsvetmet</b> <b>Siberian Federal University</b> <b>JSC Foundry-pressing plant SEGAL</b>		
12.00 pm	<b>LUNCH</b>		
1.00 pm-2.00 pm	<b>BREAK. EXHIBITION</b>		
2.00 pm	Formal cryolite ratio and actual acidity of fluoroaluminate melts - influence of cation nature	<u>G.A. Tsirlina</u>	Moscow State University
2.20 pm	Determination of thermal conductivity of waste dry barrier mixture by laser flash	A.V.Proshkin, <u>I.A.Yarosh</u>	RUSAL ETC Ltd.
2.40 pm	Implementation of CubiX3 diffractometer for analysis of the chemical composition of electrolyte at RUSAL Krasnoyarsk	L.L. Doronina, N.G. Prokhorova, <u>S.G. Ruzhnikov,</u> <u>L.I. Khlystunova</u>	Analytical X-Ray Systems Ltd.
3.00 pm	Express methods of control of aluminium chemical composition	<u>E.V. Bessonov</u>	Thermo Techno Ltd.
3.20 pm	<b>BREAK</b>		
3.40 pm	Predicting depth of filling coke open pores with pitch in anode paste production	A.S. Tayanchin, <u>Ye.D. Kravtsova</u>	RUSAL ETC Ltd.

4.00 pm	Transport of bulk solids - a ten-year marathon		TOXSOF Company
4.20 pm	Intensification of oil coke baking process in rotary furnaces	<u>I.I. Lapayev,</u> S.E. Goloskin, Yu.I. Storozhev, A.D. Arnautov, E.S. Makhinov	RUSAL ETC Ltd.
4.40 pm	Technological features of alumina dissolution in the electrolyte of aluminium reduction cells	A.A. Vlasov, V.M. Sizyakov, V.Yu. Bazhin, D.D. Sharipov, R.Yu. Feschenko	St. Petersburg State Mining University
<b>6.00 pm</b>	<b>Closing of the Congress and Exhibition. Banquet</b>		

### Stand section

Means for the formation of the working section of self-baking anode at aluminum cells	<u>A.A. Alshanskaya,</u> A.N. Anushenkov	Siberian Federal University
Physicochemical properties of cryolite-alumina melts and principles for calculating the errors of their measurements	<u>I.V. Ostrovsky,</u> P.V. Polyakov, O.N. Simakova	Siberian Federal University
Adjustment of NaF-AlF <sub>3</sub> phase diagram in low CR range	S.D. Kirik, <u>Yu.N.Zaitseva</u>	Institute of Chemistry and Chemical Technology SB RAS
PAHs emissions reduction and protection of anode pins from corrosion during the secondary forming of self-baking anodes	<u>I.Yu. Storozhev,</u> V.V. Leonov A.K. Abkaryan	Siberian Federal University

## NON-FERROUS AND RARE METALS PRODUCTION SECTION

**September, 8, Thursday**

**Middle Hall**

**Chairmen:** Prof. G.L. PASHKOV, Chemistry and Chemical Technology SB RAS  
 Prof. D.V. DROBOT, Moscow State Academy of Fine Chemical Technology named  
 after M. Lomonosov

Time	Title	Authors	Company
<b>9.00 am-6.00 pm</b>	<b>EXHIBITION</b>		
9.00 am	Mixprocesses and combined technologies in nonferrous metallurgy	G.L. Pashkov	Institute of Chemistry and Chemical Technology SB RAS
9.20 am	Chemical beneficiation of ilmenite	F. Habashi	Laval University
9.50 am	Surfaces of nonferrous and precious metals sulfide minerals in the process of leaching, flotation: study by X-ray photoelectron spectroscopy and probe microscopy methods	<u>Y.L. Mikhlin,</u> <u>M.N. Likhatsky,</u> <u>A.S. Romanchenko,</u> E.V. Tomashevich, V.V. Shurupov	Institute of Chemistry and Chemical Technology SB RAS
10.10 am	Ways of improving the technologies in production of nonferrous and rare metals	<u>E.N. Selivanov,</u> V.I. Ponomarev, G.N. Kozhevnikov, V.M. Chumarev, I.N. Tanturov	Institute of Metallurgy UB RAS
<b>10.30 am</b>	<b>BREAK. EXHIBITION</b>		
11.30 am	Metal cation extraction recovery and concentration process control applying three-phase extraction	V.I. Kuz'min, S.N. Kalyakin, <u>M.N. Leskiv</u>	Institute of Chemistry and Chemical Technology SB RAS
11.50 am	Cobalt extraction from sulphuric solutions in bis (2,4,4-trimethylamyl) dithiophosphine acid systems	I.Y. Fleytlikh, <u>N.A. Grigoryeva,</u> G.L. Pashkov	Institute of Chemistry and Chemical Technology SB RAS
12.10 pm	Solvent extraction of copper and zinc from a pickling solution using VERSATIC 10 acid, CYANEX 272 and LIX 984N	S.K.Sahu, M. K. Sinha, P. Meshram, B.D. Pandey, V. Kumar	CSIR-National Metallurgical Laboratory

<b>1.00 pm</b>	<b>LUNCH</b>		
2.00 pm	The concept of creation of heavy non-ferrous metals restitution in alkaline condition technologies	<u>V.S. Chekushin,</u> <u>N.V. Oleynikova</u>	Siberian Federal University
2.20 pm	Cobalt containing (metal, oxide) nanoparticles production by solvothermolysis	<u>G.L. Pashkov,</u> <u>M.V. Panteleeva,</u> <u>S.V. Saykova,</u> <u>E.V. Lync</u>	Institute of Chemistry and Chemical Technology SB RAS
2.40 pm	Obtaining of aluminum and rare metals alloys by technical powder injection	<u>S.P. Yatsenko,</u> <u>B.V. Ovsyannikov,</u> <u>V.M. Skachkov,</u> <u>P.A. Varchenya</u>	Institute of Solid State Chemistry UB RAS
3.00 pm	Iron-based ultrafine particles made in mode solutions and industrial waste waters	<u>M.I. Teremova,</u> <u>E.A. Petrakovskaya,</u> <u>A.S. Romanchenko,</u> <u>F.V. Tuzikov,</u> <u>Yu.L. Gurevich,</u> <u>O.V. Tsibina,</u> <u>E.K. Yakubailik,</u> <u>Abhilash</u>	Krasnoyarsk Research Center SB RAS
<b>3.20 pm</b>	<b>BREAK. EXHIBITION</b>		
4.20 pm	Natural coal ash - unconventional source of rare elements	<u>G.L. Pashkov,</u> <u>S.V. Saikova,</u> <u>V.I. Kuzmin,</u> <u>M.V. Panteleyeva,</u> <u>A.N. Kokorina</u>	Institute of Chemistry and Chemical Technology SB RAS
5.00 pm	Cation-exchange properties of cobalt compounds with $\beta$ - oxyoximes	<u>V.I. Kuzmin,</u> <u>N.V. Gudkova</u>	Institute of Chemistry and Chemical Technology SB RAS
5.20 pm	Auxiliary processes in oxide and sulfide ore processing by high-speed metallurgy methods	<u>A.D. Kustov,</u> <u>O.G. Parfenov</u>	Institute of Chemistry and Chemical Technology SB RAS

## NON-FERROUS AND RARE METALS PRODUCTION SECTION

**September, 9. Friday**

**Middle Hall**

**Chairmen:** Prof. G.L. PASHKOV, Chemistry and Chemical Technology SB RAS  
 Prof. D.V. DROBOT, Moscow State Academy of Fine Chemical Technology named  
 after M. Lomonosov

<b>Time</b>	<b>Title</b>	<b>Authors</b>	<b>Company</b>
<b>9.00 am- 4.00 pm</b>	<b>EXHIBITION</b>		
<b>9.30 am- 12.00 pm</b>	<b>Excursions: JSC RUSAL Krasnoyarsk JSC Krastsvetmet Siberian Federal University JSC Foundry-pressing plant SEGAL</b>		
<b>1.00 pm</b>	<b>LUNCH</b>		
2.00 pm	Specifics of pure metal production from multicomponent ores by high-speed metallurgical methods	R.A. Zakirov, A.S. Kustov, S.V. Kukhtetsky, P.I. Panov, <u>O.G. Parfenov</u>	Institute of Chemistry and Chemical Technology SB RAS
2.20 pm	Microbial composite in trivalent chromium remediation from effluents	<u>Abhilash</u> , M.Prakash, K.D.Mehta, B.D.Pandey	CSIR-National Metallurgical Laboratory
3.00 pm	Design of water rotation and thickening plants in non-ferrous metal and alumina production. Integrated solutions and know-how	<u>A.V. Bauman</u> , A.I. Stepanenko	Gormasheport CJSC
3.20 pm	Features of mixers launching in settled solid state conditions	D.S. Moskalenko	Ekato Rus Ltd.
3.40 pm	Application of combination of microwave sample preparation systems Milestone and atomic absorption and ICP spectrometers Agilent (ex-Varian) for elemental analysis in non-ferrous metallurgy laboratories	<u>A.V. Bashilov</u> <u>A.N. Bashilov</u>	CCS Service Ltd

4.00	Shimadzu equipment overview. Experience of spark optical emission spectrometers Shimadzu application for the non-ferrous metals analysis	E.V. Zhurina	Element Ltd.
4.20	Problems of operating fluids' purity and their solution by means of Pall equipment	V. Shumakov	Pall Eurasia Ltd.
<b>6.00 pm</b>	<b>Closing of the Congress and Exhibition. Banquet</b>		

### Stand section

Study of the process of hydrometallurgical silicon refining	<u>N.V. Nemchinova,</u> <u>A.A. Tyutrin</u>	Irkutsk State Technical University
Tungsten-steam way to produce pure hydrogen by high-speed metallurgy methods	<u>V.P. Guler,</u> A.D. Kustov, S.V. Kukhtetsky, P.I. Panov, O.G. Parfenov	Institute of Chemistry and Chemical Technology SB RAS
Tungsten-steam way to produce pure nitrogen by high-speed metallurgy methods	V.P. Guler, <u>E.O. Zaytseva,</u> A.D. Kustov, S.V. Kukhtetsky, P.I. Panov, O.G. Parfenov	Institute of Chemistry and Chemical Technology SB RAS
Tungsten oxide in the non-catalytic conversion of hydrogen chloride to chlorine for high-speed metallurgy	<u>A.D. Kustov,</u> S.V. Kukhtetsky, O.G. Parfenov	Institute of Chemistry and Chemical Technology SB RAS
Ammonia obtaining by high-speed metallurgy methods	A.D. Kustov, O.G. Parfenov, <u>N.V. Taraban'ko</u>	Institute of Chemistry and Chemical Technology SB RAS
Integrated treatment circuit for highly mineralized process solutions	<u>E.V. Salimzhanova,</u> O.V. Bolshakova, A.I. Yuriev	Polar Division of MMC Norilsk Nickel OJCS

## PRECIOUS METALS PRODUCTION SECTION

**September, 8. Thursday**

**Small Hall**

**Chairmen:** S.N. Mamonov, JSC Krastsvetmet  
N.V. Belousova, Siberian Federal University  
V.F. Borbat, Omsk State University

<b>Time</b>	<b>Title</b>	<b>Authors</b>	<b>Company</b>
<b>1.00 pm</b>	<b>LUNCH</b>		
2.00 pm	Development of the method of gold reextraction from ore deposits of new types	<u>I.I. Baksheyeva,</u> <u>V.I. Bragin</u>	Siberian Federal University
2.20 pm	Method for hydrometallurgical processing of selenious cakes from Kola M&MC at Polar Division facilities	D.A. Lapshin, E.F. Grabchak, I.S. Kuzmina, Y.A. Gorjacheva, A.S. Leonov	Polar Division of MMC Norilsk Nickel OJCS
2.40 pm	Efficiency Improvement for platinum concentrates production from electrolytic slimes at Polar Division of OJCS MMC Norilsk Nickel	D.A. Lapshin, <u>E.F. Grabchak,</u> I. Kuzmina, Yu.A. Goryacheva, A.L. Kozhanov	Polar Division of MMC Norilsk Nickel OJCS
3.00 pm	Processing of iron-nickel-based platinum metals' concentrates	<u>V.D. Ilyashevich,</u> <u>E.I. Pavlova,</u> N.G. Koritskaya, S.N. Mamonov, D.R. Shulgina	Krastsvetmet JSC
3.20 pm	Recovery of gold, platinum, palladium and silver from pyrite concentrates obtained from «Sukhoy Log» ore deposit	<u>V.V. Patrushev,</u> <u>Y.S. Kononov,</u> V.P. Plekhanov	Institute of Chemistry and Chemical Technology SB RAS
<b>3.40 pm</b>	<b>BREAK. EXHIBITION</b>		
4.40 pm	Autoclave mixer innovations	D.S. Moskalenko	Ekato Rus Ltd.
5.00 pm	Synthesis of neural-network regulator for management of fusion process in furnace of Vanjukov of copper-nickel materials	E.D. Kadyrov	St.-Petersburg State Mining University
5.20 pm	Electrochemical studies of bimetallic PD-AU, PD-IR, PD-RH systems	R.V. Borisov, <u>O.V. Belousov,</u> A.V. Sirotina	Institute of Chemistry and Chemical Technology SB RAS
5.40 pm	Application of random-determined planning method for optimization of silver powder production	<u>S.S. Zhuravlyova,</u> <u>E.I. Pavlova,</u> V.D. Ilyashevich, E.A. Pavlov	Krastsvetmet JSC

## PRECIOUS METALS PRODUCTION SECTION

**September, 9. Friday**

**Small Hall**

**Chairmen:** S.N. Mamonov, JSC Krastsvetmet  
N.V. Belousova, Siberian Federal University  
V.F. Borbat, Omsk State University

<b>Time</b>	<b>Title</b>	<b>Authors</b>	<b>Company</b>
<b>9.00 am-4.00 pm</b>	<b>EXHIBITION</b>		
<b>9.30 am-12.00 pm</b>	<b>Excursions: JSC RUSAL Krasnoyarsk JSC Krastsvetmet Siberian Federal University JSC Foundry-pressing plant SEGAL</b>		
<b>12.00 pm</b>	<b>LUNCH</b>		
<b>1.00 pm</b>	<b>EXHIBITION</b>		
2.00 pm	Formation of nanomaterials based on non-ferrous and noble metals in autoclaves	<u>O.V. Belousov,</u> <u>A.V. Sirotnina,</u> <u>N.V. Belousova,</u> <u>E.V. Fesik,</u> <u>R.V. Borisov,</u> <u>G.D. Malchikov</u>	Siberian Federal University
2.20 pm	Low-temperature alkaline melts for breakdown of mineral objects	<u>E.A. Selina,</u> <u>S.N. Kalyakin,</u> <u>O.V. Belousov,</u> <u>N.V. Belousova</u>	Siberian Federal University
2.40 pm	Automated assay test systems	<u>E.V. Bessonov</u>	Thermo Techno Ltd.
3.00 pm	The influence of heat and mass transfer on the structure during the crystallization of gold jewelry alloys with 585 purity	<u>E.A. Pavlov,</u> <u>V.Y. Gurskaya,</u> <u>A.A. Gushchinsky,</u> <u>S.N. Mamonov,</u> <u>V.N. Yefimov</u>	Krastsvetmet JSC
3.20 pm	Hydrochlorination of gold-containing materials in the presence of sulphide sulphur	<u>O.N. Vyazovoy,</u> <u>L.V. Ivanova</u>	Krastsvetmet JSC
3.40 pm	Technology of complex ore enrichment by flotation method through non-cyanic process	<u>N.K. Algebraistova,</u> <u>E.A. Gubina,</u> <u>A.A. Kondratieva,</u> <u>E.A. Vorontsova</u>	Siberian Federal University
4.00 pm	Extraction of secondary mineral components from the phosphate concentrates to increase their grade and complex use of raw materials	<u>I.I. Baksheyeva,</u> <u>A.A. Glumova,</u> <u>V.I. Bragin</u>	Siberian Federal University
<b>6.00 pm</b>	<b>Closing of the Congress and Exhibition. Banquet</b>		

## Stand section

Development of precious metals standard samples at Krasnoyarsk Non-Ferrous Metals Plant	V.I. Shukhovtsev, E.A. Volkova, <u>I.B. Hobyakova</u>	Krastsvetmet JSC
Development of rhodium national standard. The method of atomic emission analysis with arc excitation of spectrum	E.A. Volkova, T.P. Zemlyanko, K.V. Podorozhnyak	Krastsvetmet JSC

## INTEGRATED SESSION

### ENERGY EFFICIENCY IN METALLURGY AND MINING

**September, 9. Friday**  
**Big Hall**

**Chairmen:** D.G. PASHKOV, Minister of industry and energetics of Krasnoyarsk region  
 V.N. TIMOFEYEV, Siberian Federal University

Time	Title	Authors	Company
9.00 am-4.00 pm	<b>EXHIBITION</b>		
9.30 am-12.00 pm	Excursions: <b>JSC RUSAL Krasnoyarsk</b> <b>JSC Krastsvetmet</b> <b>Siberian Federal University</b> <b>JSC Foundry-pressing plant SEGAL</b>		
12.00 pm	<b>LUNCH</b>		
1.00 pm		D.G. Pashkov	Ministry of industry and energetics of Krasnoyarsk region
1.20 pm	Energy efficiency in metallurgy and mining	<u>V. Timofeyev</u> A. Korchagin, E. Pavlov, N. Timofeyev, M. Eremin	Siberian Federal University
1.40 pm	Energy efficiency in aluminium reduction technology (adapted from TMS-2011 conference proceedings)	P.V. Polyakov	Siberian Federal University
2.00 pm	Energy-efficient integrated approach for combustion processes of metallurgical plants	<u>F. Dentella</u>	ESA Pyronics International, Italy
2.20 pm	The power effective electric furnace-mixer with the direct heating aluminium alloy	<u>R.M. Khristinich</u> , <u>H.V. Khristinich</u> , <u>A.R. Khristinich</u>	RPA Metallurgenergoprom Ltd.
2.35 pm	Power saving at production of electrode products	Ye.N. Panov, S.V. Kutuzov, A.Ya. Karvatsky, I.L. Shilovich, G.N. Vasilchenko, T.B. Shilovich, S.V. Leleka, S.V. Danilenko, I.V. Pulinets, T.V. Chirka, T.V. Lazarev	National Technical University of Ukraine – Kiev Polytechnic Institute

2.50 pm	Development of hydrophilic surface creation technology on carbonic cathode by boriding method	E.S. Gorlanov, G.V. Arkhipov	RUSAL ETC Ltd.
<b>3.05 pm</b>	<b>BREAK</b>		
3.20 pm	Enhancement of reliability and energy efficiency of electric heating systems in electric mixers and out-of-furnace equipment	A.A. Temerov, V.N. Timofeev, <u>D.A. Mikhailov</u>	Siberian Federal University
3.35 pm	Application of calcium silicate boards for aluminum electrolytic cells insulation	V. Krasselt, G. White, <u>D.V. Lyubimov</u>	Promat GmbH
3.50 pm	Innovations for deep aluminum conversion	<u>S.A. Boyakov</u> , V.B. Osipenko, V.N. Timofeev, M.V. Pervukhin	Siberian Federal University
4.05 pm	Ultra-high-molecular-weight polyethylene in hoisting machines at OJSC KRAZ	<u>G.Ye. Selyutin</u> , <u>A.V. Turushev</u>	Institute of Chemistry and Chemical Technology SB RAS
4.20 pm	Energy-efficient technology of non-ferrous metals induction heating	E.A. Golovenko, <u>V.A. Goremykin</u> , I.S. Gudkov, E.S. Kinev, K.A. Mikhailov	Siberian Federal University
4.35 pm	Energy management system. Challenges in the development and implementation	G.A. Eremeeva	City Appraisal Center Ltd.
<b>6.00 pm</b>	<b>Closing of the Congress and Exhibition. Banquet</b>		

### Stand section

Series of energy-efficient linear induction machines for power impact on molten metal	V.N. Timofeyev, E.A. Golovenko, <u>V.A. Goremykin</u> , I.S. Gudkov, A.S. Khronik	Siberian Federal University
Power consumption of electrohydraulic excavator	<u>D.V. Antonenkov</u> , <u>A.Yu. Yuzhannikov</u>	Sibsvetmetniiproect JSC

## ALUMINA PRODUCTION SECTION

**September, 7. Wednesday**  
**Small Hall**

**Chairman:** A.V. PANOV, RUSAL VAMI Ltd.

<b>Time</b>	<b>Title</b>	<b>Authors</b>	<b>Company</b>
11.00 am	The comparative economics of various bauxite & alumina projects	R.D. Hond	Alcor Technology
11.30 am	Processing of subquality nepheline raw materials with use of alumina-containing additions	I.I. Shepelev, R.Ya. Dashkevich, N.V. Golovnykh, A.G. ikhtovnykh, S.N. Gorbachev, N.P. Mukhin	EKO-ENGINEERING Ltd.
11.50 am	Prospects for development of JSC «RUSAL Achinsk» raw material base	F.V. Yermakov, A.A. Marchenko	Sibsvetmetniiproect JSC
12.10 pm	Fluoride method of complex processing of the kaolin concentrates	V.S. Rimkevich, Yu.N. Malovitsky, A.A. Pushkin, T.Yu. Eranskaya	Institute of Geology and Nature Management FEB RAS
12.30 pm	Theory of modern cyclone design and industrial application	M. Missalla	Outotec GmbH
<b>1.00 pm</b>	<b>LUNCH</b>		
2.10 pm	Perspective directions for development of technology of low-grade bauxite complex processing at Aluminium of Kazakhstan JSC	A.T. Ibragimov, S.V. Budon, A.R. Sabitov, G.K. Abikenova	Aluminium of Kazakhstan JSC
2.30 pm	Solution conversion in the technology of red mud hydrochemical processing	A.T. Ibragimov, S.V. Budon, A.R. Sabitov, O.I. Mikhailova, M.N. Pechyenkin	Aluminium of Kazakhstan JSC
2.50 pm	Sierra Leone bauxite processing in ALUM TULCEA	G. Dobra, A. Kiselev, Y. Layner, V. Alistarh, N. Anghelovici, S. Iliev	VIMETCO ALUM
<b>3.20 pm</b>	<b>BREAK</b>		

3.40 pm	Increase in productivity of alumina production through the intensification of process equipment cleansing	<u>O.L. Lipatov,</u> <u>E. A. Zaytsev</u>	Nikolaev Alumina Refinery Ltd
4.00 pm	Design of water rotation and thickening plants in non-ferrous metal and alumina production. Integrated solutions and know-how	<u>A.V. Bauman,</u> <u>A.I. Stepanenko</u>	Gormasheexport CJSC
<b>6.30 pm</b>	<b>Sightseeing</b>		

## ALUMINA PRODUCTION SECTION

**September, 8. Thursday**  
**Small Hall**

**Chairman:** A.V. PANOV, RUSAL VAMI Ltd.

Time	Title	Authors	Company
<b>9.00 am- 6.00 pm</b>	<b>EXHIBITION</b>		
9.00 am	Scientific and technological basis of aluminum-containing wastes recycling	<u>Yu.A. Lainer,</u> <u>A.N. Kiselev,</u> G. Dobra, V. Alistarh	Establishment of the Russian Academy of Sciences
9.20 am	Integrated processing and disposal of alumina production waste - red mud	<u>S.P. Yatsenko,</u> <u>I.N. Pyagay,</u> L.A. Pasechnik, V.T. Surikov, V.S. Anashkin, <u>G.N. Klementenok</u>	Institute of Solid State Chemistry UB RAS
9.40 am	Areas of research to improve the processing of red mud, including ways of acid treatment	<u>A.V. Panov,</u> <u>A.G. Suss,</u> I.V. Paromova	RUSAL ETC Ltd., Saint-Petersburg
<b>10.15 am</b>	<b>Round table discussion: Red Mud and Nepheline Slime Conversion Products: Efficient Ways of Final Consumers' Introduction To Manufacturing</b>		
<b>1.00 pm</b>	<b>LUNCH</b>		

## MINERAL AND RAW MATERIALS SOURCES OF NON-FERROUS METALS SECTION

**September, 8, Thursday**  
**Big Hall**

**Chairman:** Prof. V.A. MAKAROV, Siberian Federal University

Time	Title	Authors	Company
<b>9.00 am- 6.00 pm</b>	<b>EXHIBITION</b>		
9.00 am	Iron-titanium-vanadium ores from Sayan province and their enrichment during metamorphism	O.M. Glazunov	Vinogradov Institute of Geochemistry SB RAS
9.20 am	Hydrothermalites and gold content of Gerfedskoye gold deposit	V.A. Makarov, V.G. Mikheyev, <u>V.V. Mezhubovsky</u> , M.P. Krivopusk, I.P. Matskevich	JSC Vasilevsky Rudnik
9.40 am	Geological study of conditional parameters which determine the morphological features of gold deposit	S.S. Ilyin, D.E. Malofeyev, V.A. Makarov, A.N. Ofeynikov	Polyus Proekt Ltd
10.00 am	Complex deposit reserve calculation with micromine software package	M.N. Makarova, <u>Yu.Yu.Kondrashova</u> , A.A. Bitsura	Sibsvetmetniiproect JSC
10.20 am	Problems of flour spar production in Russia	<u>A.A. Marchenko</u> , S.P. Kiseleva	Sibsvetmetniiproect JSC
<b>10.40 am</b>	<b>BREAK. EXHIBITION</b>		
11.40 am	real composition and flotation ore dressing at Sanzheevskoye deposit	<u>A.V. Zashikhin</u> , V.G. Samoilov, S.A. Anciferova	Institute of Chemistry and Chemical Technology SB RAS
12.00 pm	Phosphorous-containing polimer (polystyrenephosphine oxide) analysis as flotation reagent during impregnation copper-nickel ore dressing	V.G.Samoilov, L.I.Timoshenko, S.F. Malysheva, <u>S.M. Markosyan</u> , N.A. Belogorlova	Institute of Chemistry and Chemical Technology SB RAS

12.20 pm	Minerals of sillimanite group as a new kind of raw materials for industrial production of alumina, silumin and aluminum in Russia	G.G. Lepezin	Sobolev's Institute of Geology and Mineralogy SB RAS
12.40 pm	New approaches to the chemical analysis in mining industry with application of Niton portable and mobile analyzers	V.V. Verkhorubov	CCS Service Ltd
<b>1.00 pm</b>	<b>LUNCH</b>		
2.00 pm	Features of gold ores material composition from Yenisei and SouthYenisei regions and test of their processing ways	V.A. Gron', V.V. Korostovenko	Siberian Federal University
2.20 pm	Laboratory of mineral raw materials analysis at Polyus CJSC. State and possibilities of analytical control	T.A. Babkina	Polyus CJSC
2.40 pm	Growth of ferrous metallurgy in Nizhneye Priangarie as an engine of development of nonferrous metals mineral base in the region	A.A. Bitsura	Sibsvetmetniiproect JSC
3.00 pm	Cyclic conveyor technology at open pit mining	Sh.N. Nazyrov	Sibsvetmetniiproect JSC
3.20 pm	Efficiency of investment project to upgrade energy supply system of nickel-mining company	A.E. Cherepovitsyn, A.A. Solomatina	St.-Petersburg State Mining University
<b>3.40 pm</b>	<b>BREAK. EXHIBITION</b>		
4.40 pm	Instrumental monitoring of landslides in open cast mine and ways to reduce their impact on the subjacent horizons	V.A. Chumlyakov	Siberian Federal University
5.00 pm	Application of satellite geodesic system for studying the near edge area deformation processes	A.N. Khozyainov	Siberian Federal University

5.20 pm	Explanation of the conditions of displacement and deformation in the hanging pit wall of deposit during the transition from open to underground way of exploitation	Y.L. Yunakov	Siberian Federal University
5.40 pm	Chemical accident at the alumina refinery in Hungary in 2010	<u>A.A. Burlakov</u>	Siberian Federal University

### **Stand section**

Possibilities of atomic absorption analysis in control of mineral raw materials and products of technological updating samples for silver content	T.A. Babkina, L.A. Yakubovich	Polyus CJSC
Possibilities of assay in the laboratory of mineral raw materials analysis at Polyus CJSC	T.A. Babkina, E.V. Strelsky, M.A. Savinov, I.V. Svireenko	Polyus CJSC
Application of atomic emission spectrometry in the analysis of samples from gold deposits	T.A. Babkina, P.Y. Lytkin	Polyus CJSC

## CASTING OF NON-FERROUS METALS SECTION

**September, 7. Wednesday**  
**Middle Hall**

**Chairmen:** Prof. V.G. BABKIN, Siberian Federal University  
 V.F. FROLOV, RUSAL ETC ltd.

Time	Title	Authors	Company
11.00 am	Electric power saving technologies in alloys production	<u>V.Timofeev,</u> <u>A. Korchagin,</u> E. Pavlov, N. Timofeev, M. Eremin	Siberian Federal University
11.20 am	The Art of Dross Management	<u>M. Bumford,</u> <u>A.M. Peel</u> J. Herbert	Altek Europe Ltd.
11.40 am	PROMAG - improvements in casthouse processing using in-furnace and in-line refining systems	<u>R. Bridi,</u> <u>I. Vitouch</u>	Pyrotek Inc.
12.00 pm	Influence of environment on physical and chemical properties of aluminium alloys and the materials providing reception of qualitative semifinished products from them	A.V. Tikhonov	Stroybis Ltd.
12.20 pm	Block-type molds to cast slabs on PNG machines in UK RUSAL	<u>V.F. Frolov,</u> <u>S.V. Soldatov</u>	RUSAL ETC ltd.
<b>1.00 pm</b>	<b>LUNCH</b>		
<b>2.00 pm-3.00 pm</b>	<b>BREAK. EXHIBITION</b>		
3.00 pm	Production development lines and engineering of low aluminum alloy wire rod	<u>L.P. Trifonenkov,</u> <u>N.N. Dovzhenko,</u> S.B. Sidelnikov, V.F. Frolov, <u>V.N. Baranov,</u> <u>V.A. Padalka,</u> Ye.S. Lopatina, A.V. Salnikov	Siberian Federal University

3.20 pm	Prevention of shrinkage defects at casting small ingots from aluminium and its alloys	<u>P.B.Kuzmin</u> , <u>A.V.Strelov</u> , A.L.Ragozin, M.Yu.Kuzmina, M.P.Kuzmin	RUSAL ETC Ltd.
3.40 pm	Quantitative evaluation of the microstructure of shaped castings of alloys Al-Si	<u>N.V.Okladnikova</u> , <u>T.N.Drozdoва</u> , <u>T.A.Orelkina</u> , Y.A.Kleymenov, S.V.Ponomareva, O.V.Timofeeva, A.G.Romanova	Casting and Mechanical Plant SKAD Ltd.
4.00 pm	Study of the impact of crystallization rate on the properties of the gold jewelry alloy with 585 purity	E.A. Pavlov, V.Y. Gurskaya, A.A. Gushchinsky, M.V. Pervukhin, N.V. Sergeev, A.P. Skuratov, M.Yu. Hatsayuk	Krastsvetmet JSC
4.20 pm	Industrial study of nano-powder inoculators' influence on mechanical properties of ingots	<u>V.A. Poluboyarov</u> , <u>A.N. Cherepanov</u> , Z.A. Korotajeva, V.A. Kuznetzov, G.F. Mochkin, Yu.S. Mokhaylov, S.P. Antipin, Yu.V. Zhukovsky	Institute of Solid State Chemistry and Mechanochemistry SB RAS
4.40 pm	Quality improvement of corrosion-resistant coatings on the surface of cast iron sections of gas-collecting bell of Soderberg cell	<u>V.G. Babkin</u> , <u>I.A. Shimansky</u> , E.S. Goloskin, V.K. Frizorger, A.S. Samoylo	Siberian Federal University
<b>6.30 pm</b>	<b>Sightseeing</b>		

## CASTING OF NON-FERROUS METALS SECTION

**September, 8. Thursday**  
**Meeting Hall**

**Chairmen:** Prof. V.G. BABKIN, Siberian Federal University  
 V.F. FROLOV, RUSAL ETC ltd.

Time	Title	Authors	Company
9.00 am-6.00 pm	<b>EXHIBITION</b>		
9.00 am	Calcium silicate-graphite composites in billet casting units and influence on performance	<u>J. Klaes</u> , <u>W. Huttner</u> , <u>T. Holscher</u>	Silca Service- und Vertriebsgesellschaft für Dämmstoffe mbH
9.40 am	To problem of lining service life in working zone of rotor tilted furnace	<u>T.G. Kalinovskaya</u> , <u>V.A. Luchkov</u> , <u>S.S. Dymov</u> , <u>S.B. Novichkov</u>	PSC MOSOBLPROM-MONTAZH
10.00 am	New materials based on silicon carbide ceramics	<u>K.N. Filonov</u> , <u>S.L. Shikunov</u> , <u>A.E. Yershov</u> , <u>V.N. Kurlov</u> , <u>N.P. Talakuyev</u> , <u>V.A. Naumenko</u>	Institute of Solid State Physics RAS
10.20 am	Podolskogneupor OJSC - development of production of structural products from silicon carbide	<u>N.P. Talakuyev</u>	Podolskogneupor OJSC
10.40 am			

## THERMAL AND PRESSURE METAL TREATMENT SECTION

**September, 8. Thursday**  
**Meeting Hall**

**Chairmen:** Prof. S.B. SIDELNIKOV, Siberian Federal University  
 Prof. N.N. ZAGIROV, Siberian Federal University

Time	Title	Authors	Company
<b>9.00 am- 6.00 pm</b>	<b>EXHIBITION</b>		
11.20 am	Implementation experience and prospects of aluminum semi-finished products application in the production and modernization of transportation systems on Russian plants	Y.A. Gorbunov	SIAL ETC Ltd.
11.40 am	Optimization of stress relief by stretching in 7175 plates for airspace applications	G. Dobra, <u>I. Sava,</u> A. Giura	VIMETCO ALRO
12.00 pm	Nanostructured aluminum alloys for electrical applications	R.Z. Valiyev, <u>M.Y. Murashkin,</u> G.I. Raab, E.V. Antipov	Ufa State Aviation Technical University, Institute of Physics of Advanced Materials
12.20 pm	Prospective SPD technologies for UFG aluminum alloys	G.I. Raab, <u>M.Y. Murashkin,</u> R.Z. Valiyev	Ufa State Aviation Technical University, Institute of Physics of Advanced Materials
12.40 pm	Pilot production engineering of wire rod from aluminum-zirconium alloys	<u>L.P. Trifonenkov,</u> <u>N.N. Dovzhenko,</u> S.B. Sidelnikov, V.F. Frolov, V.N. Baranov, V.A. Padalka, Ye.S. Lopatina, E.A. Rudnitsky, A.V. Salnikov, V.M. Bespalov	RUSAL ETC Ltd.
<b>1.00 pm</b>	<b>LUNCH</b>		

2.00 pm	Improving of the process of billets obtaining for production of jewelry out of palladium alloy with 850 purity	<u>A.A. Guschinsky,</u> E.A. Pavlov, V.Yu. Gurskaya, S.I. Yeltsin, V.N. Yefimov, S.N. Mamonov	Krastsvetmet JSC
2.20 pm	Effect of components' structure and properties on quality of steel-cored copper wire	<u>M.V. Chukin,</u> I.V. Sitnikov, N.V. Koptseva, M.A. Polyakova	Magnitogorsk State Technical University
2.40 pm	Rods of non-plastic aluminum alloys by combined methods	<u>S.B. Sidelnikov,</u> I.L. Konstantinov, D.Y. Gorbunov, M.V. Pervuhin, R.E. Sokolov, R.I. Galiev, D.S. Voroshilov, A.L. Kiselev	Siberian Federal University
3.00 pm	Condition and problems of the production of aluminum alloys with non-dendritic thixotropic structure and semi-finished products out of them by liquid-solid state deformations	Yu.A. Gorbunov	SIAL ETC Ltd.
<b>3.20 pm</b>	<b>BREAK. EXHIBITION</b>		
4.20 pm	Protective atmosphere for non-ferrous metals heat treatment	<u>N. Corna,</u> <u>F. Dentella</u>	SIAD RUS
4.40 pm	Experimental mold-pressing installation for nonferrous metals based on the carousel mold	<u>Yu.V. Gorohov,</u> V.P. Katryuk, I.V. Solopko	Siberian Federal University
5.00 pm	Development and study of production technology of deformed semi finished products out of solder alloys based on silver	<u>O.O. Vinogradov,</u> A.V. Stolyarov, E.S. Lopatina	Siberian Federal University
5.20 pm	Intensification of shear deformations during the production of moulded articles and wire from non-ferrous metals and alloys facing	<u>N.N. Zagirov,</u> I.L. Konstantinov, E.V. Ivanov, A.A. Arefiev	Siberian Federal University