

## SCIENTIFIC PROGRAMME

V International Scientific and Technical Conference  
 “Innovative Designs and Technologies of Nuclear Power” (ISTC NIKIET–2018)  
 2–5 October 2018, JSC «NIKIET», Moscow, Russia

2 October 2018				
8.30–9.30	Conference participants registration			<b>Conference-hall floor 3</b>
<b>PLENARY SESSION</b>				
9.30–9.35	<b>Opening.</b> Opening address by <b>Evgeny ADAMOV</b> , Deputy Chairman of the Programme Committee, JSC NIKIET’s Scientific Leader			
9.35–9.40	Welcoming address by <b>Vladimir ASMOLOV</b> , Adviser to Rosatom State Corporation’s Director General			
9.40–9.45	Welcoming address by <b>Sergey KUSHNAREV</b> , Executive Vice-President of the Nuclear Society of Russia			
9.45–9.50	Welcoming address by <b>Andrey KAPLIENKO</b> , JSC NIKIET’s Director General			
9.50–10.00	Welcoming addresses to the conference			
<b>Chairman Vladimir Asmolov</b>				
1.	10.00–10.30	Oleg PATARAKIN	Rosatom State Corporation, Russia	Formats of the international scientific and technical cooperation of the Rosatom State Corporation
2.	10.30–11.00	Alessandro ALEMBERTI	Ansaldo Nucleare SpA, Italy	The Generation-IV lead fast reactor activities
3.	11.00–11.30	Alexander SAPOZHNIKOV	Rostechnadzor, Russia	Nuclear and radiation safety regulation of innovative nuclear facilities
<i>Coffee break 11.30–12.00</i>				
<b>Chairman Evgeny Adamov</b>				
4.	12.00–12.30	Valery RACHKOV	“PRORYV” Project, Russia	Fast reactors with closed nuclear fuel cycle and their requirements to solve problems of the “old” technological platform of nuclear power
5.	12.30–13.00	Vadim LEMEKHOV	NIKIET, Russia	Present-day status and development prospects of fast-neutron lead-cooled reactors
6.	13.00–13.30	Ming JIN	INEST, CAS, China	Design and R&D status of China lead-based reactor
<i>Lunch 13.30–14.30</i>				
<b>Chairman Alexander Pimenov</b>				
7.	14.30–15.00	Stefano MONTI	IAEA, Austria	IAEA’s contribution to the development of advanced and innovative nuclear power reactor technologies
8.	15.00–15.30	Vladimir KUZNETSOV	IAEA, Austria	Scenario analysis and decision support tools for enhancing nuclear energy system sustainability

<b>2 October 2018</b>				
9.	15.30–16.00	Francesco D'AURIA	University of Pisa, Italy	New safety barrier for current and future nuclear reactors
<i>Coffee break 16.00–16.30</i>				
<b>Chairman Yury Strebkov</b>				
10.	16.30–17.00	Vitaliy POLUNICHEV	Afrikantov OKBM, Russia	Conceptual design of RITM-200 SMR
11.	17.00–17.30	Irina TAZHIBAEVA	RSE NNC RK, Kazakhstan	Kazakhstan material test tokamak KTM and international cooperation in controlled fusion research
12.	17.30–18.00	Maksim SVIRIDENKO	NIKIET, Russia	Development of the design, fabrication and experimental justification of the NIKIET-supplied ITER blanket system components
<b>3 October 2018</b>				
<b>PLENARY SESSION (continued)</b>			<b>Conference hall floor 3</b>	
<b>Chairman Alexander Lopatkin</b>				
13.	9.30–10.00	Denis KULIKOV	NIKIET, Russia	Issues and prospects of small nuclear generation development. International and Russian experience
14.	10.00–10.30	Rafael ARUTYUNYAN	IBRAE, Russia	Radiation risks and environmental safety of nuclear power
15.	10.30–11.00	Abderrahim AL MAZOUZI	Materials Ageing Institute, France	The Materials Ageing Institute: R&D programme and scientific network for safe long term operation with knowledge-based management of materials and components
16.	11.00–11.30	Aleksey SLOBODCHIKOV	NIKIET, Russia	Use of robotics in the RBMK-1000 life management
<i>Coffee break 11.30–12.00</i>				
17.	12.00–12.30	Alexander CHEBESKOV	IPPE, Russia	Export potential of Russian fast reactors and technologies of closed nuclear fuel cycle
18.	12.30–13.00	Peter LANG	Dunedin Energy Systems Ltd., Canada	Progress and opportunities in small reactor development in Canada
19.	13.00–13.30	José Rubens MAIORINO	Federal University of ABC, Brazil; University of Pisa, Italy	The utilization of thorium in advanced PWR – from small to big reactors
<b>End of Plenary Session</b>				
<i>Lunch 13.30–14.30</i>				

**3 October 2018**

**SESSION 1**

**INNOVATIVE DESIGNS OF VARIOUS-PURPOSE NUCLEAR POWER FACILITIES**

**Conference hall  
floor 3**

**Chairman Vadim Lemekhov**

1.	14.30–14.55	Boris GORDON	SEC NRS, Russia	Analysis of the thermal-hydraulic substantiations of the BREST reactor
2.	14.55–15.20	Andrey NOVIKOV	MPEI, Russia	Influence of thermogravitational convection on heat transfer in the BREST reactor core
3.	15.20–15.45	Anastasiya MALYSHEVA	MPEI, Russia	Research of influence of side reflector thickness on neutronic characteristics of the BREST-300 reactor
4.	15.45–16.10	Marco RICOTTI	Politecnico di Milano, Italy	IRIS-like reactor configuration and main passive safety strategy for a submerged SMR deployment

*Coffee break 16.10–16.40*

5.	16.40–17.05	Ming JIN	INES, CAS, China	Conceptual design of China lead-based miniature reactor CLEAR-M10
6.	17.05–17.30	Ming JIN	INES, CAS, China	The first stage commissions and tests of CLEAR-S for China lead-based research reactor
7.	17.30–17.55	Valentin MAKHIN	OKB «GIDROPRESS», Russia	Conceptual proposals on supercritical water-cooled reactor (overview of foreign and Russian SCWR designs)

**SESSION 2**

**NUCLEAR FUEL, COOLANTS AND NEW MATERIALS**

**Room 208, floor 2**

**Chairman Yury Cherepnin**

1.	14.30–14.55	Masatoshi KONDO	Tokyo Institute of Technology, Japan	Experimental study on material compatibility for heavy liquid metal coolants
2.	14.55–15.20	Yury GORDIENKO	Branch IAE NNC RK, Kurchatov, Kazakhstan	Methodology of complex studies of graphite materials interaction with reactive gases and vapour-gas mixtures in fission and fusion reactors
3.	15.20–15.45	Jiří ŽDÁREK	UJV ŘEŽ a.s. Husinec, Czech Republic	Status of test facility to confirm the IVMR strategy for VVER 1000/320
4.	15.45–16.10	Vyacheslav ALMJASHEV	NITI, Russia	Glass-ceramic fuel with ultrafine structure

*Coffee break 16.10–16.40*

5.	16.40–17.05	Efim KOGAN	Moscow Polytech, Russia	Thermoelasticity of structural elements of nuclear reactors under influence of the high-temperature and radiation fields
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<b>3 October 2018</b>				
6.	17.05–17.30	Alexander ZHILIN	Kurganspecarmatura, Russia	New items for liquid metal-cooled reactors
7.	17.30–17.55	Ekaterina ORLOVA	MEPhI, Russia	Harmonization of the nitride fuel element properties by means of a corrosion-resistant heat-conducting Pb-Mg-Zr sublayer
<b>SESSION 3</b> <b>CLOSED FUEL CYCLE TECHNOLOGIES, SNF AND RW MANAGEMENT, TECHNOLOGICAL ANSWERS TO THE PROBLEMS OF NON-PROLIFERATION</b>				<b>Room 301, floor 3</b>
<b>Chairman Vladimir Vasyukhno</b>				
1.	14.30–14.55	Nikolay LEBEDEV	Aleksandra-Plus, Russia	Innovative ultrasound technologies in nuclear power
2.	14.55–15.20	Dmitry STEFANOVSKY	SIA LUCH, Russia	Technology of uranium-zirconium fuel rods reprocessing
3.	15.20–15.45	Boris SHEVCHENKO	PDEC, Russia	Experience of high-temperature reprocessing of radioactive waste at plasma facility in PDEC, the branch of SC Concern Rosenergoatom
4.	15.45–16.10	Pavel AKSYUTIN	MCC, Russia	Development of the “low-water” technology for processing SNF fragments with the use of the gaseous oxidizers system
<i>Coffee break 16.10–16.40</i>				
5.	16.40–17.05	Andrey AKATOV	SPSIT, Russia	Novel approaches to metal decontamination in decommissioning of nuclear and radiation hazardous facilities
6.	17.05–17.30	Darya KONEVA	TPU, Russia	IAEA's Safeguards: Quantitative analysis of diversion path
7.	17.30–17.55	Valery PROZOROV	RAOPROEKT, Russia	Nanotechnology-based minimization of radioactive waste produced during NPP operation
<b>SESSION 4 will begin on 4 October 2018, 11.40</b> <b>SMALL SIZE POWER REACTORS (stationary, floatable, transportable, propulsion, space)</b>				<b>Room 301, floor 3</b>
<b>SESSION 5</b> <b>INTEGRATED COMPUTATION CODES OF A NEW GENERATION FOR SAFETY ANALYSIS OF NUCLEAR POWER FACILITIES AND THEIR FUEL CYCLES</b>				<b>Room 305, floor 3</b>
<b>Chairman Mikhail Rozhdestvensky</b>				
1.	14.30–14.55	Nastasjya MOSUNOVA	IBRAE, Russia	New generation integral code EUCLID/V1 for the fast reactor safety analysis: New models, advanced capabilities

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2.	14.55–15.20	Dmitry VEPREV	IBRAE, Russia	Modules and models of the EUCLID/V2 integrated computer code for the accident simulation of NPPs with fast reactors
3.	15.20–15.45	Artem ANFIMOV	Afrikantov OKBM, Russia	Using the SOCRAT-BN code to validate the BN-1200 design
4.	15.45–16.10	Ruslan CHALY	IBRAE, Russia	Development of integrated code SOCRAT-BN for safety analyses of NPP with fast reactors

*Coffee break 16.10–16.40*

5.	16.40–17.05	Canhui SUN	SPICRI, China	Subchannel analysis of a LBE-cooled fast reactor BLESS
6.	17.05–17.30	Ivan ROZHDESTVENSKIY	NIKIET, Russia	Precision neutronic calculations to ensure safe operation of the RBMK-1000 reactors
7.	17.30–17.55	Andrey ZHIRNOV	NIKIET, Russia	Procedures for the computational and experimental determination of the 3d power density distribution in the RBMK-1000 reactor using a scanning sensor

### SESSION 6 CONTROLLED FUSION

**Room 306, floor 3**

**Chairman Yury Strebkov**

1.	14.30–14.55	Anatoly MINEEV ч	NIIIEFA, Russia	Evolution of DEMO-FNS concept: Magnet system and vacuum chamber
2.	14.55–15.20	Vitaly CHERNENOK	NIIIEFA, Russia	Substantiation of the concept of electromagnetic system for DEMO-FSN hybrid fusion neutron source
3.	15.20–15.45	Gennady GLADUSH	TRINITI, Russia	Analysis of a hybrid power reactor concept based on a lithium stabilized fusion source of neutrons (FSN) with a depleted uranium blanket
4.	15.45–16.10	Aleksey CHIRKOV	Bauman MSTU, Russia	Possibilities of using alternative fusion reactions for energy production and neutron generation

*Coffee break 16.10–16.40*

5.	16.40–17.05	Pavel PISKAREV	NIIIEFA, Russia	Refinement of the technology of hot isostatic pressing of vacuum-tight bimetallic joint of ITER in-vessel components
6.	17.05–17.30	Yury KOROLEV	NIIIEFA, Russia	Experience in using the ultrasonic testing complex at the JSC NIIIEFA in the framework of the ITER project
7.	17.30–17.55	Andrey EREMKin	NIIIEFA, Russia	Experimental determination of critical heat fluxes in mock-ups of the ITER vacuum vessel inner armoring

**4 October 2018**

**SESSION 1**

**INNOVATIVE DESIGNS OF VARIOUS-PURPOSE NUCLEAR POWER FACILITIES**

**Conference hall  
floor 3**

**Chairman Natalya Romanova**

1.	9.30–9.55	Georgy KHORASANOV	MEPhI, Russia	A design of multipurpose lead-cooled reactor with hard neutron spectrum
2.	9.55–10.20	Gennady KULIKOV	MEPhI, Russia	Nuclear safety of a fast reactor with reflector made of heavy moderator with low neutron absorption
3.	10.20–10.45	Aleksey IVASHCHENKO	Sosny R&D Company, Russia	Construction of neutron source facility driven by linear electron accelerator
4.	10.45–11.10	Galina DVORINA	NIKIET, Russia	Homogeneity of the world view platform for the participants in the reactor facility design

*Coffee break 11.10–11.40*

5.	11.40–12.05	Jens NIETVELT	SCK•CEN, Belgium	MYRRHA revision 1.7 diaphragm design
6.	12.05–12.30	Wonkyeong KIM	UNIST, Republic of Korea	A conceptual study of small modular LFR
7.	12.30–12.55	Arthur SURAEV	RSE NNC RK, Kazakhstan	Thermal-to-fast neutrons converter in the IGR reactor
8.	12.55–13.20	Arthur SURAEV	RSE NNC RK, Kazakhstan	Thermal reactor with thorium-uranium and uranium-plutonium fuel and a technology of its closed cycle

*Lunch 13.20–14.20*

**Chairman Oleg Yarmolenko**

9.	14.20–14.45	Mikhail ORLOV	“Proryv” Project, Russia	Enriched uranium start-up as a factor of improving the investment appeal of inherently safe fast reactors
10.	14.45–15.10	Andrey GORYACHIKH	NIKIET, Russia	An isotope production facility with a loop device
11.	15.10–15.35	Ruslan IRKIMBEKOV	RSE NNC RK, Kazakhstan	Conversion of the IVG.1M reactor to the low-enriched uranium fuel
12.	15.35–16.00	Andrey CHISTOV Denis KAPITANOV	RIMU Nizhni Novgorod, Russia Lobachevsky State University of Nizhni Novgorod, Russia	Numerical simulation of non-steady processes in a steam generator of the BREST reactor in case of lead coolant crystallization

*Coffee break 16.00–16.30*

13.	16.30–16.55	Yury SHVETSOV	Afrikantov OKBM, Russia	Analysis of LOCA at RITM-200 reactor with operation of passive safety systems using the best estimate coupled codes KORSAR/BR-KUPOL
14.	16.55–17.20	Egor KONDUROV	Polzunov Institute, Russia	Ways to increase power efficiency of power units at NPP
15.	17.20–17.45	Alexander SEMCHENKOV	NIKIET, Russia	Modeling of the BREST-OD-300 steam generator using RELAP5 and HYDRA-IBRAE/LM/V1 codes

**End of Session 1**

**4 October 2018**

**SESSION 2**

**NUCLEAR FUEL, COOLANTS AND NEW MATERIALS**

**Room 208, floor 2**

**Chairman Aleksey Korostelev**

1.	9.30–9.55	Nikita BULGAKOV	Bauman MSTU, Russia	Accident tolerant fuel for VVER of new generation
2.	9.55–10.20	Ming JIN	INEST, CAS, China	Development of heavy liquid metal technology for lead-based reactor
3.	10.20–10.45	Victor ALEKSEEV	IPPE, Russia	Corrosion products mass transfer in circuits with liquid-metal coolants
4.	10.45–11.10	Vladimir UL'YANOV	IPPE, Russia	Methods and devices for hydrogen purification of lead-bearing primary coolants of reactor facilities and research stands

*Coffee break 11.10–11.40*

5.	11.40–12.05	Yury CHEREPNIN	NIKIET, Russia	Results of efforts towards conversion of research reactors to low enriched uranium fuel
6.	12.05–12.30	Andrey BAKHIN	SIA LUCH, Russia	Low enriched nuclear fuel based on uranium-zirconium carbonitride: Preparation to reactor test and research in critical assemblies
7.	12.30–12.55	Yaroslav VOLGIN	MPEI, Russia	Study of thermomechanical strength of uranium-zirconium carbonitride fuel
8.	12.55–13.20	Sergey BAZYUK	SIA LUCH, Russia	Thermal hydraulic characteristics of FA-Zr and FA-Mo under LOCA in LWR

*Lunch 13.20–14.20*

**Chairman Oleg Arkhipov**

9.	14.20–14.45	Vladislav SIZAREV	NIKIET, Russia	Features of hydroelastic vibrations of fuel assemblies in lead coolant flow
10.	14.45–15.10	Kirill SHUT'KO	NIKIET, Russia	Experimental evaluation of the corrosion behavior of the BREST-OD-300 steam generator tube metal
11.	15.10–15.35	Alexander VATULIN	VNIINM, Russia	Behavior of dispersion fuel elements of floating power units under irradiation
12.	15.35–16.00	Nikita DUBENKOV	NIKIET, Russia	Experimental studies on the rates of the fission product release from lead to gas in conditions of the BREST-OD-300 reactor facility operation

*Coffee break 16.00–16.30*

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13.	16.30–16.55	Victor MAKAROV	GIDROPRESS, Russia	Experimental investigations of fuel assembly strength in pressurized water reactors
14.	16.55–17.20	Antony ARTSYBASHEV	NIKIET, Russia	Modification of the RBMK-1000 fuel assembly design with central attachment of the fuel elements

*End of Session 2*

### SESSION 3

**CLOSED FUEL CYCLE TECHNOLOGIES, SNF AND RW MANAGEMENT, TECHNOLOGICAL ANSWERS TO THE PROBLEMS OF NON-PROLIFERATION**

**Room 301, floor 3**

**Chairman Sergey Ryasnyansky**

1.	9.30–9.55	Iliya KURSKY	MCC, Russia	Treatment of VVER-1000 SNF at start-up facilities of Pilot Demonstration Center
2.	9.55–10.20	Viktor TEDIASHVILI	NIKIMT-Atomstroy, Russia	Establishment of radwaste treatment facility at the Kursk NPP
3.	10.20–10.45	Alexander EGOROV	IPPE, Russia	Evaluation of the efficiency of scenarios of nuclear power development in Russia with the account of non-nuclear power plants
4.	10.45–11.10	Alexander SOBKO	RAOPROEKT, Russia	Rational use of NZK containers for radwaste disposal

*End of Session 3*

*Coffee break 11.10–11.40*

### SESSION 4

**SMALL SIZE POWER REACTORS (stationary, floatable, transportable, propulsion, space)**

**Room 301, floor 3**

**Chairman Denis Kulikov**

1.	11.40–12.05	Ming JIN	INEST, CAS, China	Conceptual design of liquid metal heat pipe-cooled reactors for space application
2.	12.05–12.30	Elena ROMADOVA	NIKIET, Russia	Space nuclear power: past, present, future
3.	12.30–12.55	Vitaly POLUNICHEV	Afrikantov OKBM, Russia	Floating NPPs with RITM-200M reactor facilities
4.	12.55–13.20	Jia HAIJUN (Цзя Хайцзюнь)	INET, Tsinghua University, China	Experimental investigation on the steady-state thermal-hydraulic characteristics of a 200 MW combined heat-power natural circulation reactor

*Lunch 13.20–14.20*



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5.	14.20–14.45	Yury FOKOV	JIPNR – Sosny of NAS of Belarus	Main neutronic characteristics of sub-critical assembly Yalina-Booster
6.	14.45–15.10	Dmitry KAMENSKIY	SEC NRS, Russia	Specific features of floating transport and transportable nuclear facilities safety regulation
7.	15.10–15.35	Anastasiya MALYSHEVA	MPEI, Russia	Modeling of heat and mass transfer in steam generators of nuclear powered icebreakers
8.	15.35–16.00	Andrey BELKIN	NIKIET, Russia	Procedures to model physical processes in nuclear facilities with thermionic energy conversion

*Coffee break 16.00–16.30*

**Chairman Alexander Pimenov**

9.	16.30–16.55	Ivan KRIVOSHEIN	NIKIET, Russia	Neutronic analysis of the SHELF reactor core
10.	16.55–17.20	Nikolay MOLOKANOV	NIKIET, Russia	Feasibility study of a small nuclear power plant based on the SHELF reactor facility

*End of Session 4*

### SESSION 5

**INTEGRATED COMPUTATION CODES OF A NEW GENERATION  
FOR SAFETY ANALYSIS OF NUCLEAR POWER FACILITIES AND THEIR FUEL CYCLES**

**Room 305, floor 3**

**Chairman Dmitry Afremov**

1.	9.30–9.55	Dmitry FOMICHEV	NIKIET, Russia	Realization of models for impurity interaction and transport in circuits with lead coolants by means of CFD-code
2.	9.55–10.20	Vincenzo NARCISI	ENEA, Italy	RELAP5-3d pre-test analysis for double wall bayonet tube steam generator experimental campaign in CIRCE facility
3.	10.20–10.45	Evgeny DANILOV	VNIIEF, Russia	LOGOS software cross-verification in the full-scale simulation of mixing non-isothermal coolant flows in pressure chamber of marine reactor plant
4.	10.45–11.10	Yaodong CHEN	SPICRI, China	Uncertainty and sensitivity analysis of HAPPY200 LOCA using SNAP/RELAP5-DAKOTA

*Coffee break 11.10–11.40*

5.	11.40–12.05	Alexander SOROKIN	IPPE, Russia	Experimental investigations of stratification processes in elements of circulation circuits in various NPPs
6.	12.05–12.30	Ming JIN	INEST, CAS, China	Development of super multi-functional calculation program for nuclear design and safety evaluation (Super MC)

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7.	12.30–12.55	Fedor GRIGORYEV	INM, Russia	Evolution of the integral GERA code for justification of radioactive waste site safety
8.	12.55–13.20	Valery PODGORNYY	MPEI, Russia	Application of dynamic probabilistic safety assessment method to NPP accident analysis

*End of Session 5*

*Lunch 13.20–14.20*

### SESSION 6 CONTROLLED FUSION

Room 306, floor 3

**Chairman Igor Danilov**

1.	9.30–9.55	Mikhail ZAWADSKY	SNPO "Eleron", Russia	On the issue of designing fusion-fission hybrid facilities and systems
2.	9.55–10.20	Alexander GERVASH	NIIEFA, Russia	Optimization of cross-section of ITER blanket cooling channel closest to plasma
3.	10.20–10.45	Aleksey MALYSHEV	NIIEFA, Russia	Experimental determination of acoustic CHF precursors in a mock-up of the ITER divertor vertical target
4.	10.45–11.10	Mikhail KHOKHLOV	NIIEFA, Russia	Strength estimation of the central assembly of fully tungsten divertor for ITER reactor-tokamak

*Coffee break 11.10–11.40*

5.	11.40–12.05	Konstantin BESTUZHEV	NIIEFA, Russia	Peak withstand current tests of switches for the ITER coil power supply system
6.	12.05–12.30	Natalya GUBANOVA	NIIEFA, Russia	Busbar monitoring system for the ITER
7.	12.30–12.55	Darya MAKHINA	Kompozit, Russia	The properties and structures of CuCrZr-316L electrical strap pedestal blanks made by HIP diffusion weld
8.	12.55–13.20	Dmitry ALEKSEEV	NIIEFA, Russia	Test of switching network system for ITER superconducting magnet system

*Lunch 13.20–14.20*

**Chairman Maksim Sviridenko**

9.	14.20–14.45	Yury PONKRATOV	Branch IAE NNC RK, Kazakhstan	Study of deuterium sorption processes by lithium CPS under irradiation in the IVG.1M reactor (Kurchatov, Kazakhstan)
10.	14.45–15.10	Andrey SYSOEV	NIKIET, Russia	Hybrid blanket of fusion neutron source and its neutronic characteristics
11.	15.10–15.35	Sergey TOMILOV	NIKIET, Russia	EHF FW panel for ITER blanket module with mechanical attachment of the plasma facing components

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12.	15.35–16.00	Anastasiya CHEBUROVA	NIKIET, Russia	Integrated tests of the ITER first wall panel and blanket module connector structural components
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*Coffee break 16.00–16.30***SESSION 6 (continued)****Room 306, floor 3****Chairman Yury Strebkov**

13.	16.30–16.55	Ivan PODDUBNYI	NIKIET, Russia	Optimization and adjustment of impact set-up for testing of insulated pads of ITER blanket module connectors and first wall
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14.	16.55–17.20	Vladislav VASILIEV	NIIEFA, Russia	Preparation for hydro-vacuum tests of the ITER in-vessel components
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**End of Session 6****Poster session****Conference hall foyer, floor 3****3 October 2018, 18.00-19.00**

<b>№</b>	<b>Reporter</b>	<b>Organization</b>	<b>Report title</b>
1.	Valery ASTAKHOV	OKB «GIDROPRESS», Russia	Sensitivity analysis in severe accidents modeling with SOCRAT/B1 code for VVER-1000 reactor
2.	Roman AFANASENKO	Kurchatov Institute, Russia	Scenarios of nuclear power development in Russia with closed U-Pu fuel cycle and fusion-fission hybrid systems
3.	Tatyana VORONINA	Kurchatov Institute– PNPI, Russia	Detection of the PIK reactor vessel failure based on measurements of deuterium concentration in the heavy water loop
4.	Boris GABARAEV	NIKIET, Russia	Nozzle limiters of the emergency coolant flow in water-cooled nuclear reactors
5.	Oleg GOLOSOV	INM, Russia	EP-823 steel corrosion rate in molten chlorides of alkali metals
6.	Victoria GRIGORYEVA	MCC, Russia	Process development for silver removal from nitrate products at radiochemical plant
7.	Anton GRITSAI	NITI, Russia	A method for estimating uncertainties in models used in thermal-hydraulic computer codes
8.	Yury GROZDOV	Afrikantov OKBM, Russia	Experience of actual operation model generation based on the automated recognizers of SGP modes

3 October 2018, 18.00-19.00

9.	Alexander DYAKOV	IRM, Russia	Feasibility study of neutron transmutation doping of silicon ingots of large diameter at IVV-2M reactor
10.	Alexander ELSHIN	NITI, Russia	Experience of computation support for commercial $^{60}\text{Co}$ production at Leningrad NPP
11.	Gennady ZHERDEV	IPPE, Russia	MMK-RF program complex for precision calculations of neutron and gamma fields using BNAB-RF and ROSFOND constants
12.	Arslan ZABIROV	SEC NRS, Russia	On experimental database creation for validation of software intended for justification of nuclear facility safety
13.	Igor ZOTOV	Afrikantov OKBM, Russia	The results of implementation of NPP control system bench debugging technology based on the complex mathematical models
14.	Svetlana IVANOVA	Institute of Industrial Nuclear Technologies of MEPhI, Russia	Development of composite zirconium materials with increased level of properties and multifunctional protective coatings for core components of innovative light-water reactors of Generation 3 + and reactors of new Generation 4
15.	Arsen ISKHAKOV	MPEI, Russia	Thermodynamic analysis of molten lead-water interaction
16.	Oleg KABAN'KOV	MPEI, Russia	Experimental study of heat transfer and hydrodynamics in two-phase natural circulation loop as applied to passive cooling systems of NPP
17.	Pavel KANIN	MPEI, Russia	Experimental investigation of heat transfer in unsteady pool film boiling of subcooled liquid
18.	Evgeny KINEV	IRM, Russia	Structural behaviour and gas release from high-temperature nuclear fuel
19.	Yulia KOZINA	Mayak PA, Russia	Development of high-active cobalt-60 production technology
20.	Yulia KOZINA	Mayak PA, Russia	Laser treatment of radioactive metal waste
21.	Sergey KOMAROV	Sosny R&D Company, Russia	Fire and explosion safety assurance in damaged spent nuclear fuel handling
22.	Aleksey KOTLYAR	MPEI, Russia	Hydrodynamics and heat transfer in molten salts in Tokamak
23.	Nataliya KUZNETSOVA	Mayak PA, Russia	On equipment decontamination against tritium
24.	Denis LAPSHIN	Afrikantov OKBM, Russia	Use of computational methods to evaluate damping device efficiency in nuclear power plant component development
25.	Leonid LEVKOV	CNIITMASH, Russia	Development and mastering of the technology for cyclic electroslag steel ChS-82 remelting for canisters of packed fuel storage racks
26.	Vyacheslav OKUNEV	Bauman MSTU, Russia	Power facility implementing collective decays of stable nuclei initiated by external mechanical impact

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27.	Ekaterina ORLOVA	MEPhI, Russia	Increase in hydrogen safety of the VVER NPP by means of hydrogen separation through a nickel membrane and absorption by zirconium
28.	Andrey PAUTE	SNPO "Eleron, Russia	Gas purification of head operations of the Pilot Demonstration Center
29.	Nikita PIMENOV	TPU, Russia	The neutronic analysis of VVER fuel loads based on dispersion nuclear fuel
30.	Yury PONKRATOV	Branch IAE NNC RK, Kazakhstan	Methodology of conducting experiments on tritium generation and release from lead-lithium eutectics Li15.7Pb under reactor radiation conditions
31.	Valery PROZOROV	RAOPROEKT, Russia	Method of neutral-oxygen water chemistry efficiency improvement
32.	Mikhail PROKURONOV	Veteran of the branch, Москва, Russia	Research in feasibility of high-sensitive gamma-introscope
33.	Vladimir PUKHLY	Sevastopol State University, Russia	Why the Navier–Stokes equations for continuous viscous medium cannot describe the flow with current lines having torsion
34.	Maria SAMOYLOVA	Kurchatov Institute, Russia	Development of the device for visualization of gamma-emitting radionuclides distribution
35.	Vladislav SIZAREV	NIKIET, Russia	Development of analytical and experimental technique to study wear process in friction unit "tube - spacer grid" in steam generator of a lead cooled nuclear reactor
36.	Svyatoslav SIKORIN	JIPNR – Sosny of NAS of Belarus	Experiments on criticality of small-sized multiplying systems with HEU and LEU nuclear fuel, hydrogen-containing moderator and without moderator
37.	Sergey SINEGRIBOV	NRS, Russia	Modeling of the heat removal upset in the spent nuclear storage using APROS 6 code
38.	Vladimir UL'YANOV	IPPE, Russia	Hydrogen removal from the cover gas of nuclear reactors with heavy liquid metal coolants
39.	Dmitry SOROKIN	NRS, Russia	The software implementation of the method for determining the level of nuclear and radiological events in the INES scale
40.	Igor STRULYA	Kompozit JSC, Russia	The implementation of new beryllium processing techniques while manufacturing articles for power plants, precision hardware and rocket-&-space technology
41.	Arthur SURAEV	Branch IAE NNC RK, Kazakhstan	Nondestructive method for chlorine measurement in the system of irradiated beryllium purification
42.	Andrey UVAROV	NIKIET, Russia	Development, fabrication and testing of steel-titanium joints for the actuator of an innovative facility's scram system
43.	Anton USHATIKOV	Afrikantov OKBM, Russia	Virtual power unit application for analysis of a possibility for a fast neutron reactor to participate in daily maneuvering
44.	Vladimir FOLOMEEV	SAEC, Russia	Numerical investigation of hydroelastic oscillations of fuel rods assembly in lead coolant flow
45.	Igor KIRILLOV	NRS, Russia	Criteria of hydrogen explosion safety for stratified hydrogen-air-steam mixtures at nuclear facilities

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46.	Dmitry CHULKIN	JSC VNIINM, Russia	Evaluation of in-cycle behavior of some advanced options of 3D virtual prototypes of fuel rod designs for VVER of new generation
47.	Sergey SHAYDULLIN	FSUE Mayak PA, Russia	Use of advanced nanoporous adsorbents in inert gases separation under standard conditions
48.	Rinat SHAMSUTDINOV	Sosny R&D Company, Russia	Computational and experimental design justification of furnace channel for sintering of mixed uranium-plutonium nitride fuel pellets
49.	Victor YURMANOV	NIKIET, Russia	Experimental development of phosphate water chemistry for the intermediate circuits of the Akkuyu NPP
50.	Vladimir UL'YANOV	IPPE, Russia	The filtration equipment for ice breakers of new generation
51.	Dmitry YASHNIKOV	NRS, Russia	Evaluation of calculation inaccuracy in safety analysis of nuclear facilities

5 October 2018  
Conference hall, floor 3

**10.00–12.00 Round Table «NUCLEAR POWER DEVELOPMENT IN THE WORLD AND CURRENT CHALLENGES»**

**Moderators: Boris Gordon, Rafael Arutyunyan**

**Boulat NIGMATULIN. The state and forecast of electric power production and installed capacity of nuclear power plants in the world in 2018-2050**

**12.00–13.00 Concluding meeting. Chairmen – Boris Gabaraev, Yury Strebkov**