

**REQUEST FOR PERSONNEL REQUIREMENTS**  
**Accelerator Division № 1 LHEP**

	Profession, position, indicating the specialty by education	qualification	Required number	Nature of work		Work regime	Professional qualification requirements, education, additional skills, work experience	Additional requirements for the candidate of the employee	Notes
				Permanent, temporary, combination, seasonal, home		Working day duration			
	1	2	3	4	5	6	7	8	9
1.	Physicist-specialist in the analysis of ion beam instability in proton synchrotrons and ring colliders and methods of its suppression	Highest	1	Contract work, 1+ years		Irregular working hours at the main place of work	Higher professional education. Experience of at least 5 years of work as a researcher (group leader), specialist in proton synchrotrons and ring ion colliders. Experience in developing focusing systems for such accelerators and devices for suppressing particle motion instabilities.	Ability to analyze and give an expert assessment of the proposed technical solutions of the project The ability to plan, organize the assigned work and be responsible for their implementation (for 1 cat.). The ability to develop the necessary technical documentation of the project. Knowledge of English at the level of negotiating with foreign specialists	YO
2.	Physicist-specialist in optimizing the impedances of the Collider beam chamber and its elements, analyzing the associated instabilities of the ion beam	Highest	1	Contract work, 1+ years		Irregular working hours at the main place of work	Higher professional education. Experience of at least 5 years of work as a researcher (group leader), specialist in proton synchrotrons and ring ion colliders. Experience in developing focusing systems for such accelerators and devices for suppressing particle motion instabilities.	Ability to analyze and give an expert assessment of the proposed technical solutions of the project The ability to plan, organize the assigned work and be responsible for their implementation (for 1 cat.). The ability to develop the necessary technical documentation of the project. Knowledge of English at the level of negotiating with foreign specialists	YO

3.	Physicist-specialist in suppressing the effect of "Electron clouds" in proton synchrotrons and ring ion colliders	Highest	1	Contract work, 1+ years		Irregular working hours (remote work is possible)	Higher professional education. Experience of at least 5 years of work as a researcher (group leader), a specialist in proton synchrotrons and ring ion colliders. Experience in the field of suppression of the effects of "Electron clouds" in proton synchrotrons and ring ion colliders.	Ability to analyze and provide expert assessment of the proposed technical solutions of the project. Ability to develop the necessary technical documentation for the project. Knowledge of English at the level of negotiating with foreign specialists.	УО
4.	Engineer-physicist specialist in pulsed beam injection/extraction systems in synchrotrons		1	fixed-term employment contract, 2+ years		8 hours, normal	Higher professional education. Work experience in engineering and physical positions for at least 5 years. Experience in the development and design of pulsed devices: kicker magnets and septum magnets with electromagnetic shielding. Experience in the development, creation and operation of pulse generators (modulators) and their components (forming lines, pulse transformers, etc.).	The ability to develop the necessary technical documentation for the project. Experience in working with high-voltage vacuum-electronics and semiconductor switches (thyratrons, thyristors, transistors). Knowledge of English at the level of negotiating with foreign specialists	АЛФИОЕН
5.	Engineer-physicist (specialist in power pulsed electronics)		1	fixed-term employment contract, 2+ years		8 hours, normal	Higher professional education. Work experience in engineering and physical positions for at least 5 years. Experience in the development and design of pulse control systems. Experience in the development, creation and operation of electrical pulse generators, thyatron drivers.	The ability to develop the necessary technical documentation for the project. Ability to work with state standards and regulatory documents, project documentation Knowledge of English for conducting negotiations (or basic Russian in the case of foreign specialists)	АЛФИОЕН
6.	Software Engineer		1	fixed-term employment contract, 2+ years.		8 hours, normal	Top-level programmer Experience in creating programs for power supply setups under windows operating system, with knowledge of top-level languages C++, C#, AVR studio, KEIL, etc. with subsequent debugging and development.	The ability to develop the necessary technical documentation for the project. Ability to work with state standards and regulatory documents, project documentation Knowledge of English for conducting negotiations (or basic Russian in the case of foreign specialists)	НЕСОИН

7.	Power Electronics Engineer (design engineer, electronics engineer...)	1 - 2 category	1	fixed-term employment contract, 3+ years		8 hours, normal	Higher professional education. Work experience in engineering and technical positions for at least 5 years, - strong knowledge of SOC, reading the electrical schematic and routing diagrams, - ability to use computer-aided design systems, - - experience in the development of basic electronic circuits, commissioning of complex power supply systems	Ability to analyze and give an expert assessment of the proposed technical solutions of the project, Ability to plan, organize and be responsible for the assigned work on the implementation of the project, The ability to develop the necessary technical documentation for the project. Ability to work with state standards and regulatory documents, documentation, contracts, invoices, etc. Knowledge of English for conducting negotiations (or basic Russian in the case of foreign specialists)	НЕСОИИ
8.	Accelerator Control Systems Engineer		2	fixed-term employment contract, 2+ years		8 hours, normal	Higher technical education. Experience as a software developer - at least 3 years. Experience in designing and working in the control systems of accelerators or other physical installations. Software development in Windows, Linux. Expert knowledge of C++ and Python programming languages. Knowledge of the GIT version control system.	Knowledge of JavaScript, HTML is welcome. Knowledge of software networking protocols over TCP / IP. Strong command of MySQL. Knowledge of PostgreSQL is welcome. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	ИТОИ
9.	Electronics Engineer	2 - 3 category	3	fixed-term employment contract, 3+ years		8 hours, normal	Higher technical education. Experience as a developer for at least 5 years. Experience in the development and commissioning of analog and digital electronic equipment and circuitry for beam diagnostics, monitoring and control devices at the "intermediate and higher" level, knowledge of programming techniques and basic routes for designing systems on FPGA at the "above average" level. Possession of CAD for PCB trace at the level of "Above average".	Knowledge of tools for planning the labor process Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	ИТОИ

10.	Engineer physicist, expert in beam diagnostics	Highest	2	fixed-term employment contract, 2+ years		8 hours, normal	Higher technical education. Experience in the development of beam diagnostics systems, analog and digital electronic equipment, signal acquisition and processing circuitry. Experience as a developer for at least 5 years.	Experience working with diagnostic devices for high-energy ion beams in colliders. (proportional multi-wire cameras, strip-line monitors, push-button pickups, induction sensors, etc.) Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	ПОИП
11.	Senior Electronics Engineer of the synchronization system	1 - 2 cat	1	fixed-term employment contract, 3+ years		8 hours, normal	Higher technical education, Team Leader, performs task setting, analysis of existing problems and solutions in this area, makes strategic decisions on the development of the system.  Knowledge of digital circuitry at the "Pro" level, knowledge of programming techniques and basic routes for designing systems on FPGA at the "Pro" level (knowledge of Verilog and VHDL hardware description languages), Programming of microcontrollers. Proficiency in CAD for tracing printed circuit boards at the "Pro" level. Experience as a developer for at least 5 years.	Senior engineer, team leader, performs task setting, analysis of existing problems and solutions in this area, makes strategic decisions on the development of the system. Knowledge of tools for planning the labor process. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	НЭИОСН
12.	Senior Software Engineer of the synchronization system	highest	1	fixed-term employment contract, 3+ years		8 hours, normal	Higher education. Knowledge of programming languages C++, Python, development environment in these languages at the "Pro" level. Knowledge of the Linux OS at the "Pro" level. Knows and is able to build network systems, configure, program network equipment based on TCP/IP, RS-485 ModBus interfaces. Knowledge of techniques for working with industrial network equipment. Experience as a developer for at least 5 years.	Head of synchronization system software development. Develops the software structure based on the conceptual decisions made together with the team leader and invited experts. Deals with the structural decomposition of software and the distribution of tasks among junior programmers. Proficiency in English at the level of technical translation and participation in negotiations.	НЭИОСН

13.	RF Systems Engineer (Cavities)		1	fixed-term employment contract, 3 years		8 hours, normal	Expert in the field of high-power microwave technology (high-voltage cavities, waveguide technology, knowledge and experience), knowledge of English.	Leading engineer. Experience in organizing and safely conducting experimental and commissioning work. Planning and analyzing experiment results. Training of operational personnel. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	НЭОРС
14.	RF Systems Engineer (High-power RF amplifiers)		1	fixed-term employment contract, 2+ years		8 hours, normal	Expert in the field of generation and transportation of high-power microwave energy (Solid-state generators, transmitting devices, knowledge and experience), knowledge of English.	Leading engineer. Experience in organizing and safely conducting experimental and commissioning work. Planning and analyzing experiment results. Training of operational personnel. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	НЭОРС
15.	Electronics Engineer/RF Systems Programmer	1 - 2 kat.	1	fixed-term employment contract, 2+ years		8 hours, normal	Knowledge and experience of working with software and digital electronics for controlling and collecting data in RF accelerator systems.	Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	НЭОРС
16.	Cryogenic Systems Specialist	Highest	2	2-3 years		8 hours	Higher professional education. Experience working with liquid nitrogen systems: liquefiers, pumping units, tank equipment.	Development of technology for the operation of the cryogenic equipment. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences..	НИКО
17.	Software engineer	Highest	1	2 years		8 hours	Higher technical education. Experience as a software developer - at least 3 years. Experience in designing and working in the control systems of big compressor or cryogenics facilities. Software development in Windows, Linux. Expert knowledge of C++ and Python programming languages.	Knowledge of JavaScript, HTML is welcome. Knowledge of software networking protocols over TCP / IP. Strong command of MySQL. Knowledge of PostgreSQL is welcome. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	НИКО

18.	Radiation Control Engineer	Highest	1	fixed-term employment contract, 3+ years		8 hours, normal	Higher education. Expert in the design, implementation and operation of radiation monitoring systems at accelerator facilities. Knowledge and experience in working with dosimetric devices for neutron and gamma radiation detection, spectroscopy, and RC automation.	Lead engineer. Experience in organizing and conducting ASRC projects, commissioning, and technical training. documentation in accordance with the current regulations and regulations and commissioning. Training of operational personnel. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences..	ДЧН
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19.	Automated Process Control System Engineer (in the electric power industry and converter equipment...)	1 - 2 category	1	fixed-term employment contract, 3+ years		8 hours, normal	Higher professional education. Work experience in engineering and technical positions at least 5 years, an understanding of the principles of information transmission (types of signals, communication lines, etc.), knowledge of programming languages, working with PLC (controllers), understanding of the logic of building automation systems, knowledge of DCS (distributed control system) and SCADA understanding of server equipment, experience of carrying out start up and adjustment works of ASU from scratch.	Ability to analyze and give an expert assessment of the proposed technical solutions of the project, The ability to develop the necessary technical documentation for the project. Ability to work with state standards and regulatory documents, documentation, contracts, invoices, etc. Knowledge of English for conducting negotiations (or basic Russian in the case of foreign specialists)	с/л НЕСОИИ рус
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20.	Electronic engineer of the synchronization system	Master's degree	1	fixed-term employment contract, 3 years		8 hours, normal	Master's degree (postgraduate study). Requirements: knowledge of digital circuitry at the level of an Above-average mastery of the technique of programming and the main routes of system design on FPGA level "Beginner" (knowledge of hardware description languages Verilog or VHDL). Programming microcontrollers Above average, Possession of CAD for PCB trace at the level of "Above average".	Engineer. The ability to perform the assigned tasks with the proper quality and within the specified time frame. Also, in the event of non-standard situations, he must be able to make (offer) decisions independently. Proficiency in English at the level of technical translation and participation in conferences.	HKMOEH
21.	Synchronization System Software Engineer	postgraduate study	2	fixed-term employment contract, 2+ years		8 hours, normal	Master's degree (postgraduate study). Knowledge of programming languages C++, Python, development environment in these languages at the level of "Above average". Knowledge of the Linux OS at the "Initial" level. He is familiar with the network device and is able to configure and program network equipment based on TCP/IP, RS-485 ModBus interfaces at the "Initial" level.	Engineer. Development and debugging of modules / blocks of the software components of the synchronization system of the complex. Performs the tasks set by the manager with proper quality and on time. Proficiency in English at the level of technical translation and participation in conferences.	HKMOEH
22.	Senior Engineer for High-voltage Systems of ECS		1	fixed-term employment contract, 3+ years		8 hours, normal, RHC	Higher specialized education. Experience working with megavolt-range electrostatic accelerators, high-voltage accelerator technology, electronics of electrostatic generators, systems for forming and transporting electron beams. Work experience in research and engineering positions for at least 5 years.	Head of work on high-voltage Electronic cooling systems. Experience in organizing and safely conducting experimental and commissioning work. Planning and analyzing the results of the experiment. Training of operational personnel. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	OECH

23.	Compressor equipment Engineer	Highest	1	2 years		8 hours	Higher professional education.	Development and implementation of automated compressor equipment. Experience in automation of large-scale cryogenic systems. Working with algorithms, mnemonic circuits, and controllers. Knowledge of English at the level of negotiating with foreign specialists and participating in international conferences.	НИКО
24.	Mechanic	Secondary special	1	permanent		8 hours, periodic shift work	Secondary special education	Maintenance of cryogenic equipment, participation in accelerator runs–Knowledge of English at the level of negotiating with foreign specialists.	НИКО
25.	Specialist in the liquefaction of hydrogen and helium	Secondary special	2	permanent		8 hours, periodic shift work	Secondary special education	Work on cryogenic equipment, participation in accelerator runs. Knowledge of English at the level of negotiating with foreign specialists.	НИКО
26.	Compressor operator	Secondary special	3	permanent		8 hours, periodic shift work	Secondary special education	Staffing of the new cryogenic compressor station. Knowledge of English at the level of negotiating with foreign specialists.	НИКО
27.	Electrician	4-6 category	2	fixed-term employment contract, 2+ years		8 hours, normal	Experience in the field of mechanical assembly work, experience in the field of cable systems laying. Admission to work with electrical equipment. Accuracy, responsible attitude to business.	Engaged in the installation and mounting of network equipment, synchronization system units, electrical cabinets. Makes or controls the manufacture of mechanical products for the synchronization system. Knowledge of English at the level of negotiating with foreign specialists.	