**CENTURIES-OLD TRADITOINS - STATE-OF-THE-ART TECHNOLOGIES** 

#1/2021 (28)



Established in 1896

# I DISCOVERIES AND VICTORIES!

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Corporate Edition of Izolyator plant Biannual

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## CONGRATULATION



Vasily Osmakov, First Deputy Minister of Industry and Trade of Russian Federation

#### Zavod Izolyator LLC

#### Dear colleagues,

*My sincere congratulations on the big date - the 125th Anniversary of the enterprise!* 

Founded in 1896, the Izolyator plant began to produce much needed for the power sector goods and make a contribution to supplying the country's population with electricity. In the beginning of the World War II, many workers of the plant went to the front, the enterprise had to relocate and hire new specialists to restart the production. Even under those circumstances, the plant was not only able to reach its pre-war output, but to increase volumes of supplied products, which was especially valuable for the evacuated industry.

Presently, Izolyator makes advanced products that meet all international quality standards and enjoy demand with both domestic power facilities and overseas to reaffirm Izolyator plant's reliable supplier position.

Keeping true to its traditions, Izolyator plant is actively engaged in research and development work, presenting new and unique solutions and projects in regard to high-voltage bushing technology every year. I can mention the opening of a joint Russian-Indian production in 2018 as one of such meaningful achievements.

The staff members of the enterprise deserve a special mention with their professionalism and dedication throughout the many years of their work. I have no doubt that their experience will play an important role in the success of the future projects and achievement of targeted goals.

From all my heart, I wish you good health and every success in your work!

V.S. Osmakov



Evgeny Grabchak, Deputy Minister of Energy of Russian Federation





# Congratulations to the Izolyator team on a significant anniversary - the 125th anniversary of the founding of the enterprise!

Throughout its history, Izolyator plant has been one of the backbone enterprises that predetermine the technical level and development prospects of the country's electric power industry. Thus, in the 20s of the last century, the plant was included in the number of basic enterprises for the implementation of the State Plan for the Electrification of Russia.

During the World War II, the enterprise supplied its products to power plants in the eastern regions of the country, as well as reconstructed power networks in the liberated territories. In the postwar years, the country's electric power industry developed, voltages grew higher, and with them the plant grew up and developed.

Today, like in all the past decades, Izolyator maintains and strengthens its leading positions in the development and production of advanced high-voltage insulation equipment both in Russia and on the global electrical market.

The combination of century of experience and an innovative approach, continuous improvement and implementation of the latest production technologies, highly qualified personnel and effective management allow the company today to make a significant contribution to the creation of the image of the energy sector not only of the present, but also of the future.

*I wish the entire staff of Izolyator plant further successful development, new large-scale projects and professional achievements, good health and happiness!* 

Deputy Minister of Energy of Russian Federation

E.P. Grabchak

# 125 years: a century-long journey of continuous creation and progress



220 kV transformer bushing at the Izolyator plant. 1930s

Izolyator plant was founded back in 1896. To imagine the temporal distance separating us, it is enough to recall that in the same year the Russian physicist and electrical engineer Alexander Popov carried out the world's first radio signal transmission, and only a year earlier cinema was born.

#### Coeval to epoch

The history of the Izolyator plant has become a part of the history of domestic electrical engineering and power engineering, the history of the creation and rapid growth of the country's industrial potential.

Izolyator is an active participant in breakthrough projects on a national scale: the implementation of the State Plan for the Electrification of Russia (GOELRO) in the 1920s and 1930s, the reconstruction of energy sector in the war and post-war times in the 1940s, the establishment of nuclear power in the 1950s, the construction of The Aswan hydropower complex in Egypt in the 1960s, the construction of the Yenisei cascade of hydroelectric power plants in the 1970s, the construction of a unique ultra-high voltage power transmission line Ekibastuz - Kokchetav -Kustanai in the 1980s and 90s. and many many others.

The history of the Izolyator plant is also the evolutionary path that the high-voltage bushing has gone through in Russia as an independent direction of electrical apparatus construction. Until the 1990s, the enterprise remained the only one, and today it is the main supplier of this type of equipment to the Unified Energy System of the country and neighboring countries.

The enterprise has developed at all times, solving large-scale production tasks and being at the forefront of scientific, technical and engineering thought.

#### The modern period

The processes of all-round development gained particular dynamics in the modern history of the company after the construction of the high-tech and powerful Izolyator Production Complex in the Moscow region in 2007.

Today, the company has built a structure that allows not only to accurately and promptly respond to the current needs of the electric power sector, but also to form a long-term technical policy, taking into account the projected needs and development trends of the high-voltage insulating equipment market.



Test center of Izolyator production complex

There is an ongoing transfer of high-voltage bushings to the innovative moistureresistant internal RIN insulation. Today, mass production of such bushings has been mastered up to the voltage class of 500 kV. The result of the diversification of production was the launch of a new popular product on the market - high-voltage cable accessories of voltage classes up to 220 kV inclusive, manufactured using the most modern technologies.

A series of bushings with solid internal insulation has been created and successfully tested for advanced high-voltage direct current transmission systems.

The flagships of the line are transformer and wall bushings for 800 and 820 kV, respectively.

The most significant achievement of international cooperation was the creation of the Russian-Indian joint venture Massa - Izolyator - Mehru, which started production and



sales of high-voltage bushings for power equipment on the territory of India and other Asian countries. The absolute customer focus of Izolyator and the long-term reputation of a reliable partner have borne fruit - the company is an official supplier of such world leaders as Rossiiske Seti Group of companies, Rosenergoatom Concern, the Indian state power grid company Power Grid Corporation of India Limited, the Siemens concern and a number of other energy and industrial companies.

#### A look into the future

Izolyator is actively engaged in research and development at all levels. The management of the company represents Russia in the International Electrotechnical Commission and CIGRE. The enterprise is a leading scientific and technical partner of the Russian National Committee of CIGRE, a corporate member of the Academy



The first day of operation of the Izolyator high-voltage bushings packaging production site, built in the Shakhovskaya city district of the Moscow region

of Electrical Sciences of the Russian Federation and the International Association for Transformers, High-Voltage Equipment, Electrical Ceramics and Other Components and Materials (TRAVEK). There is an R&D center in the structure of Izolyator.

Izolyator gives great importance to the development of production and its effective integration into the industrial sector of the Moscow Region. So, at the end of last year, a production site was put into operation on the territory of the Shakhovskaya city district, where the shipping packaging for the company's products is manufactured now.

Multifaceted activities focused on social responsibility and education have been successfully initiated and developed.

Close work is underway with the leading universities in Russia. In particular, the National Research University MPEI has a thematic classroom, appropriately equipped and decorated by Izolyator. On a systematic basis, educational tours of the plant and student internships are carried out. The company has created a new structural unit, which is actively working now - Izolyator corporate university. A variety of training programs widely ranging in content were developed and implemented for both employees of the enterprise and specialists - representatives of partner companies. The corporate life has also received a new development. A sports hall was built on the territory of the Izolyator Industrial Complex and an exhibition space was organized. Both facilities are multifunctional and are fully used for healthy and fun leisure of the company's staff members, improving their

physical and mental health.

All these activities, just as those not mentioned here, are but stages of a 125-year journey full of accomplishments. This is the story of entire generations and individual destinies of those who, with their work and dedication to their cause, ultimately created Izolyator as it appears in the 20s of the XXI century.

Today's generation of plant workers know the history of their enterprise, are proud of it and celebrate the 125th anniversary of Izolyator plant with dignity!



The Izolyator staff are celebrating the 125th Anniversary with dignity!

# FROM THE FIRST PERSON *The Badge of St.Sergius of Radonezh*



Alexander Slavinsky, CEO at Izolyator was awarded with the badge of St. Sergius of Radonezh for his fruitful work for the benefit of the Moscow Region and in connection with the 125th anniversary of Izolyator plant. Izolyator plant. The badge of St. Sergius of Radonezh is awarded to persons for especially fruitful state, charitable and social activities for the benefit of the Moscow region.



The awards ceremony of Alexander Slavinsky with the Badge of St.Sergius of Radonezh

Gratitude letter from the State Duma of the Federal Assembly of the Russian Federation

Thank you for your great contribution to the development of the country's energy complex and in connection with the 125th anniversary of the Izolyator plant.



IZOLYATOR



Dr. Alexander Slavinsky, CEO at Zavod Izolyator LLC Chairman of the Board of the Russian-Indian Joint Venture Massa-Izolyator-Mehru President of the Board of the Izolyator corporate university Head of the National Study Committee D1 RNC CIGRE Head of the Department of Physics and Technology of electrical materials and components IEEE NRU MPEI

#### Dear colleagues, associates, partners, friends,

Exactly 125 years ago, on June 6, 1896, the Izolyator plant was founded. The XIX century was followed by the XX, followed by the XXI ... From rare electric lights on city streets to megalopolises drowning in a sea of light, from a small factory on the outskirts of Moscow to one of the world leaders in the development and production of modern high-voltage insulation equipment - this is the historical path of continuous creation and development, passed by the enterprise.

Epochs replaced each other, time threw down challenges, but one thing remained unchanged - with each new product leaving the factory gates, there was more light and warmth in the world. It has always been and will be so.

The 125-year mark on the calendar is a great date, and we have every right to be proud of the glorious history of the company and those who were its creators.

First of all, I thank our veterans - people of legendary industriousness and dedication! It was you who paved the way into our day, you set an unfading example for today's and future generations of employees of the enterprise. I wish you health, energy and good spirits!

I would like to thank our entire team, which has repeatedly proved its ability to solve problems of any complexity and is aimed at continuous development! I am grateful to everyone who tirelessly gives their strength and knowledge for the common cause, who sincerely shares our corporate values and daily aspires for new heights of professional excellence.

I wish to thank all our Russian and foreign partners with whom we have come hand in hand to this anniversary and with whom we equally share all our achievements and victories. Thank you for your goodwill for fruitful cooperation, reliability and trust, the ability to see the future and join efforts on the way to a common goal! Cooperation with partners is the key to our common future!

And in that future, we will always be supported by the invaluable experience born of the centuries-old history of the Izolyator plant!

CEO Zavod Izolyator LLC

A.Z. Slavinsky

# Teature story12Celebrations in honorof the 125th anniversaryof the Izolyator plant

Festive events dedicated to the 125th Anniversary of the plant took place on the territory of the Izolyator Production Complex.

The entire staff of Izolyator took part in the event.

Veterans of the enterprise, 'the Gold Talent Pool of the Plant', were invited as guests of honor: Nelya Barkova with over 52 years of experience, Boris Kokurkin, Anatoly Mitroshkin, and Igor Ivanov.

CEO of MPS Center Sergey Dyomin became the honorary guest of the celebration.



▲ The entire Izolyator staff gathered at the anniversary celebration



✓ Alexander Slavinsky together with the guest of honor, CEO of the MPS Center Sergey Dyomin, is opening the awards ceremony of Izolyator staff members with honorable distinctions



Awarding employees with thank you letter of Izolyator plant

Awarding employees with certificates of honor of Izolyator plant



 Veterans of the plant are getting acquainted with everything new at the enterprise



► Veterans of the enterprise set up commemorative plaques near the named fir trees planted in their honor



▼ Veterans of the enterprise — the 'Gold Talent Pool of the Plant' — are given the most honorable places

▼ Izolyator employees busy improving the territory of the production complex





# 14 The 125 Years of discoveries and victories general meeting

In connection with the 125th anniversary of the Izolyator plant, an awards ceremony of honorable distinctions to plant's staff members from municipal authorities of the Moscow region took place.

On behalf of the Moscow region authorities, the awards were presented by the Head of the Administration of the Shakhovskaya city district of the Moscow region, Zamir Gadzhiev.



A Pavel Kiryukhin and Alexander Shornikov (R) are awarded a Certificate of Merit from the Governor of the Moscow Region



Alexey Sipilkin was awarded a Letter of Thanks from the Governor of the Moscow Region

◄ Awarding a letter of gratitude to the administration of the Shakhovskaya urban district



▼ Awarding a letter of thanks from the Ministry of Investment, Industry and Science of the Moscow Region





Awarding a Certificate of merit from the Ministry of Investment, Industry and Science of the Moscow Region



► The honorary title "Honored Worker of Industry of the Moscow Region" was awarded to Vladimir Nikolaev (C), Elena Posokh and Konstantin Sipilkin





▲ A letter of gratitude from the Ministry of Investment, Industry and Science of the Moscow Region is awarded to the Fedorov–Kiryukhins labor dynasty represented by Viktor Kiryukhin

▼ A certificate of Merit from the administration of the Shakhovskaya city district was awarded to Zavod Izolyator LLC



▼ Awarding a certificate of Merit from the administration of the Shakhovskaya city district



# 16 | "For Long-term Conscientious Work" Awards

In connection with the 125th Anniversary of Izolyator, the plant held a ceremony to present its staff members with corporate awards.

Izolyator's corporate award - the Badge of Honor"For Long-term Conscientious Work" of various degrees - was presented by Alexander Slavinsky, CEO of Izolyator and Alexander Sorokin, one of the Izolyator's founders.

Overall, 38 Izolyator staff members were awarded the honorary badge "For long-term conscientious work" of various degrees.



The awards ceremony with the Badge of Honor"For Long-term Conscientious Work" of Izolyator staff members



▼ The honorary badge "For long-term conscientious work" at the enterprise for over 30 years awarded to Assembly floor supervisor Roman Voronin



▼ Awarding with the honorary badge "For long-term conscientious work" at the enterprise for over 25 years







Awarding with the honorary badge "For long-term conscientious work" at the enterprise for over 20 years

Awarding with the honorary badge "For long-term conscientious work" at the enterprise for over 15 years





Awarding with the honorary badge "For long-term conscientious work" at the enterprise for over 10 years

The veterans are getting the first treat of the anniversary cake



## POINT OF VIEW

# From export of products to export of technologies: international integration is the key to the power industry of the future



Experts call the development of international relations one of priorities in the electric power industry. In the era of globalization, special emphasis is placed on international cooperation, free communication among the scientific and professional community, joint solution of urgent problems, development and implementation of innovative technologies.

President Vladimir Putin has repeatedly stated that Russia is open to constructive cooperation with other countries in the energy sector. At the same time, head of state noted that the development of partnerships, experience sharing are the key to the stable and reliable operation of the industry, while technological inequality poses a threat to the global energy sector.

#### INNOVATIVE technologies for NEW sales markets

Over the past few years, leading Russian electrotechnical enterprises pursue a targeted policy aimed at close cooperation with foreign power grid and industrial companies on topical issues of the industry, development of innovative technologies, implementation of international projects.

For several years, Izolyator has been the initiator and organizer of integration processes between representatives of Russian electrical engineering enterprises and the power grid complex with their foreign colleagues. At the same time, all available formats are used for communication between market players and creation of a comfortable environment to discuss topical issues of the industry.

Izolyator's management has chosen the optimal vector of development and found a balance of supplies within Russia and abroad. This balanced policy allowed Izolyator to become one of the leading companies in the international market. Besides, by its active position, the company contributes to strengthening the authority of the country's power grid complex in the international market and facilitates the promotion of other Russian manufacturers.

Izolyator Group is an enterprise with a rich history. This year the company celebrates 125 years since its foundation. The plant has been known since the 90s of the XIX century - then the first enterprise in the Russian Empire was founded, which began to produce porcelain insulators. Even before the revolution, the company achieved great success and recognition, including at international exhibitions for the manufacture of insulating materials. Later, the enterprise was modernized and entered the list of factories performing state order as part of



the implementation of the well-known GOE-LRO plan. In the 30s, it was finally decided that the enterprise specialized in the production of high-voltage bushings. A major achievement was mastering production of bushings of ultra-high voltage class, in particular 1150 kilovolts, for the power line that is still operating in our country and connects Kazakhstan and Siberia.

"The activities of our company have historically been associated with the development of international cooperation, - said the CEO of



- Integration, search of innovative solutions, entry to the international market is a contribution to the overall development of the global electric power industry"

Alexander Slavinsky, CEO at Zavod Izolyator LLC

Zavod Izolyator LLC Alexander Slavinsky, EngD. - In Soviet times, the enterprise performed the function of the sole supplier of bushings for the entire power system of the Soviet Union. The geography of deliveries was very impressive the USSR provided great assistance to friendly countries in the creation of energy systems. The company supports the idea of developing international cooperation as one of the priorities. Foreign orders set us new tasks related to changing the design of products, searching for technical solutions, non-standard approaches in execution.

Since the focus of our company is on a specific product, we have achieved such technical characteristics, which are comparable and sometimes surpass similar characteristics of our colleagues - manufacturers of well-known European and world companies.

Our enterprise takes pride in introduction and manufacture of technology based on solid internal RIP-insulation: paper, impregnated with resin. This insulation is in demand all over the world and at the same time is still considered innovative, since most of the overseas grid companies still work with paper-oil and oil types of insulation. Nevertheless, the enterprise is already prepared to offer consumers bushings with a new generation insulation - RIN - insulation based on the use of nonwovens impregnated with resin. This is a unique technology that aims to maximize equipment performance. Due to the highest hydrophobic properties, the dielectric loss factor becomes absolutely stable. This ensures ease of transportation, guarantees no special storage requirements, as well as reliable operation in adverse weather conditions.

# 125 CONTRIBUTING TO

a stable and sustainable power supply for the benefit of everyone Currently, the technology is patented by the enterprise, there are a couple of analogues in the world, but they do not have as high operational properties. The products are certified by Rosseti and find buyers on the markets in Russia and abroad. In the future, our company intends to completely switch to this

technology. From the production perspective, it is more economical and reduces terms of production. In addition, the active participation in international cooperation and communication with foreign partners pushed Izolyator to a major revision of the entire enterprise.

"Our company has traditionally specialized in the production of high-voltage bushings," says Ivan Panfilov, Commercial Director - First Deputy CEO at Izolyator. "Two years ago we decided to offer our customers a new product - and launched the production of cable sleeves. Until that moment, Russian enterprises were forced to purchase this equipment abroad, now they have a choice, and I hope they will make it in our favor. Federal grid companies, cable plants, transformer plants and switchgear manufacturers can become key consumers of products. The new enterprise was named Izolyator-AKS. Today, we are considering the possibility of launching a renewed brand on the market that will combine all areas of activity of our company".

Izolyator pays great attention to staff training, which is now one of the company's priorities. The plant traditionally cooperates with the leading universities of the country, including the NRU Moscow Power Engineering Institute. A thematic classroom of the company is open in the building of the university, students have the opportunity to take an internship at the enterprise, the specialists of the plant take part in training young power engineers.

"Now is the time for high-tech solutions and highly qualified specialists who will be able to manage innovative processes," explained Alexander Slavinsky. - Personnel is another area of the electric power industry that will dynamically develop and be in demand. That is why our company is interested in and supports various educational programs for the training of Russian power engineers and our colleagues from abroad, who in the future will be able to bring the electric power industry in their countries to a new level of technological solutions".

A corporate university was opened and licensed at Izolyator. As part of the training, the employees of the enterprise take courses of compulsory educational programs, and for specialists and employees of partner companies special programs have been developed for retraining personnel and advanced training in various areas of joint activities.

## POINT OF VIEW



Ivan Panfilov, Commercial Director Izolyator

Collaboration with the leading power grid and electrical engineering enterprises of Russia on promotion of domestic innovative products helps to develop a dialogue with partners from different countries, giving the "Made in Russia" brand a global reach.

The clear understanding of our enables us to set targets and shape VECTORS OF DEVELOPMENT The openness of Izolyator was demonstrated by a series of successful seismic tests of high-voltage bushings in one of the world's leading testing laboratories, CESI S. p. A. in Italy, as well as an international conference and a complex of type tests of high-voltage RIP bushings for extra-high voltage classes at the Central Power Research Institute (CPRI) in Bangalore and Hyderabad in India.

Tests of Izolyator products in the world's leading test centers supported with open technical discussions at conferences provided an excellent opportunity to cover all aspects and technical features of operation, installation and maintenance of high-voltage bushings with internal RIP insulation for high and extra-high voltage classes, which were developed and manufactured at the Izolyator plant.

Izolyator systematically created conditions and reasons for bringing Russian power grid companies and manufacturers of electrical equipment closer to their foreign counterparts. Thus, Izolyator initiated a seminar "Exchange of experience in transmission and distribution of electricity - electrical equipment in Russia" for representatives of generating, power grid and industrial companies in Vietnam, which was attended by the leading manufacturers of power equipment in Russia - SVEL Group, Uncomtech Holding and VO Electroapparat JSC. The seminar became another opportunity to promote the Made in Russia brand in an area where Russia traditionally occupies a leading position - energy and electrical engineering.

Russian manufacturers had the opportunity to present their products on the international market, show their capabilities, and outline the prospects for cooperation.

The event showed interest of foreign partners in Russian innovative developments. In particular, a representative of Vietnam noted the unique experience of mass application of high-voltage bushings with solid RIP-insulation at the power facilities of FGC UES PJSC.

The business networking that we made at the seminar received development during the visit of the delegation of the state power grid company of Vietnam EVN NPT to Moscow. The foreign partners visited the dispatch and R&D centers of FGC UES, and the Russian Energy Week International Forum.

## "MADE IN RUSSIA" brand - on the global scale

Izolyator's active position in development of international cooperation has made it a leading enterprise in the industry with a wide international presence. Currently, the products of the plant are sold in countries of Southeast Asia, India and even China, despite the self-sufficiency in the production of its own electrical equipment. Our company maintains a stable position in the markets of Eastern Europe - Slovakia, Poland, Czech Republic; countries that were formerly part of Yugoslavia: Serbia, Slovenia, Croatia.

We develop partner ties with countries of Western Europe, cooperating with transformer plants in Belgium and power grid operators in Northern Europe.



Anton Tugolukov, Deputy CEO at SVEL Group - There are not only electrical products in demand in the world market, but also numerous services that guarantee the reliability of their use.



Collaboration with the leading power grid and electrical engineering enterprises of Russia on promotion of domestic innovative products helps to develop a dialogue with partners from different countries, giving the "Made in Russia" brand a global reach.

#### From organizing technical WORKSHOPS to CREATING a joint venture

Izolyator also made a strong contribution to the development of Russian-Indian cooperation in the energy sector. Izolyator organized a series of open conferences in India, thanks to which many Russian manufacturers of electrical equipment were able to enter the international market and strengthen business ties.

An important factor in the development of cooperation is the fact that Russia is an active member of the International Council On Large Electric Systems - CIGRE. India is also actively engaged in the work of the Council: the Power Grid's management heads the Indian National Committee of CIGRE.

During the 47th CIGRE session, a landmark

decision was made for the development of the power industry in India and the electrical engineering potential of Russia - an agreement on strategic cooperation was signed between Izolyator and Mehru Electrical & Mechanical Engineers (P) Ltd. (India). In accordance with the Memorandum of understanding, a unique project was implemented in India to create a joint venture to organize the production of high-

voltage bushings with solid RIP insulation. A joint venture was registered with a 65% stake controlled by Izolyator. Last year, a production facility for the assembly and testing of highvoltage bushings up to 420 kV was built in India.



Sandeep Prakash Sharma, Executive Director at Mehru Electrical & Mechanical Engineers (P) Ltd.

- We could create a joint business with a foreign partner only on the basis of confidence and trust. And we are proud of our cooperation with the Russian company Izolyator, which is a new stage of development of electrical market not only in India, but also in the entire Asian region.



Ilya Arsentyev, Head of Sales Department VO Electroapparat JSC - The quality of our products as well as serious scientific approach to the applied technologies raise strong interest with our foreign partners

The joint venture was named MIM (Massa Izolyator Mehru). The production set up ended with the completion of certification process for high-voltage bushings with voltage class up to 420 kV. In the face of an extremely unfavorable epidemiological situation and strict quarantine in India, the opening of new facilities can be compared with an industrial feat. The work did not stop for a minute, the process was controlled by remote communications.

"The creation of a production complex in India based on Izolyator technologies has made it possible to significantly reduce the cost of products without losing quality, shorten the delivery time to Indian power facilities and ensure that the country's growing domestic needs for these high-tech products are met", Alexander Slavinsky said. - "Presentlly, Massa-Izolyator-Mehru in India is approved as an official supplier for the needs of the Indian state power grid company Power Grid Corporation of India. In addition, the joint venture will allow us to further promote our products to promising electricity markets in Asia and Africa. We are currently preparing to launch mass production in India. One can safely say that we are moving from the export of products to the export of technologies. That is, we have created a modern full-cycle enterprise in India in order to gain a foothold in the markets in Asia and develop further".

# Verifiable INFORMATION is a solid BASIS for international cooperation

The development of successful international cooperation in the power industry in recent years entails solution of specific problems of a certain region or country. During the times of the Soviet Union, entire energy systems were created on its territory, as well as on the territory of states to which the USSR provided friendly support, many of them practically from scratch.

The coverage is extensive: these are the states that were previously part of the USSR, the countries of Eastern Europe, Asia, Africa, Latin

for us is a state of MIND, not merely a result of good work.

## POINT OF VIEW



Yaroslav Sedov, Head of Marketing Department Izolyator

- Marketing in our company is not only regular research of possible sales markets, it is a large amount of analytical information that we share with our partners and the market as a whole. For the benefit of its continuous development.

A COMMUNITY OF INTERESTS of management and employees creates a unique GENE CLOUD, in which a piece of everyone's work is preserved

America. Now they appear as a huge platform for the development of innovative solutions, mutually beneficial cooperation between Russian and foreign enterprises, discussion of topical issues of the industry at the level of top officials of states.

Despite the tremendous changes in the political and economic life of those countries that have taken place since the times of the USSR, lzolyator has managed not only to maintain business and partner ties with power engineers of foreign countries, but also to bring them to a new level. In many ways, it was facilitated by the understanding that for a constructive dialogue in modern realities, a solid informational foundation is essential - verifable and relevant data on the needs of potential partners, the state of the power system of a particular country, and the political and economic situation in the region.

Izolyator was one of the first in the country to start marketing research on power markets with cooperation potential. Professionals of the highest level from various fields were involved in the monitoring and comprehensive analysis.

The research was also based on proprietary information obtained as a result of long-term cooperation of the enterprise with foreign partners. "I would like to note that the key successes of Soviet domestic electrical engineering were associated with the achievements of the Izolyator plant," said Yaroslav Sedov, Head of the Izolyator Marketing department. - "The equipment of the enterprise was used at all landmark construction sites, starting with the Aswan hydroelectric power station in Egypt and ending with the Bushehr nuclear power plant in Iran. Our enterprise, one way or another, was involved in key power sector projects of the states that the USSR supported. Despite the radical geopolitical changes in the world, our plant has never lost touch with foreign colleagues. So it is no exaggeration to say that the information at our disposal is unique, exceptional and invaluable for companies interested in cooperation with major foreign power corporations".

Currently, the enterprise has at its disposal marketing studies of the world's most promising energy systems in terms of development and international cooperation, including the countries of Eastern Europe and neighboring countries, countries of Asia, Africa and South America. Information on the dynamically developing power sector of the Persian Gulf countries - India, China, Malaysia, the United Arab Emirates, Saudi Arabia - is being updated. The monitoring reflects the tasks and needs of the industry at the current moment and in the future. There is a most optimal form chosen to present the findings of the research: text information is accompanied by diagrams and graphs - clear and excluding unnecessary elliptical wording.

Marketing surveys have proved effective: according to the experts of the enterprise, the information significantly influenced the success in negotiations with representatives of the Indian energy sector. Basic information about the country, its traditions, needs and tasks of the region's power system provided the ground for mutual understanding and constructive cooperation. The moment of the Russian-Indian joint enterprise creation between Izolyator and Mehru Electrical & Mechanical Engineers (P) Ltd. may well be considered the beginning of regular market research in our company.

"The historical role of Izolyator and the leading position in the industry impose a great responsibility on our company. We emphasize that we are ready to share the accumulated experience, knowledge, research with all our partners, considering it an integral part of our mission - to create the foundations for a stable and sustainable power supply throughout the world", said Ivan Panfilov.

Representatives of Russian power grid and generating companies showed great interest in marketing research materials. One of the global goals is the development of sustainable international cooperation, interaction with historically

IZOLYATOR



## What do the country power market reviews include?



**General information** 





Economy





**Power sector** 



- About the country
- Social characteristic
- Demography
- Natural resources
- External policy
- Political relations with the Russian Federation
- National characteristics
- GDP
- Inflation
- Ease of Doing Business Index
- Corruption Perceptions
  Index
- Economic Freedom Index
- Exports
- Import
- Trade turnover with the RF
  - Taxation

- Generation
- Transmission
- Power companies
- High-voltage bushings market
- Projects

established partners - countries, on the creation of power systems of which Soviet specialists worked at one time. There are the same standards as in Russia still applicable on their territories, and the equipment installed during the Soviet era is serviced by Russian enterprises.

Over 125 years of its activity, Izolyator plant has turned from a small insulator production company into a flagship of the Russian power industry, and the company name has become synonymous to quality, high-tech solutions and the best traditions of the industry.

Today, Izolyator is transforming into an international electrotechnical holding with a wide range of capabilities. From the production of high-voltage insulation equipment to scientific and technical, educational and marketing activities, as well as service support of products around the world.

"From international cooperation at the level of the largest power grid companies and electrical engineering enterprises of the country everyone will win, - Alexander Slavinsky is sharing his confidence. - Russian producers, foreign partners, electricity consumers and the industry as a whole. We are happy to take the most active part in this and are ready to continue working in that direction".

## Advance

THINKING

is the style of operation at Izolyator, which maintains the relevance of

DEVELOPMENT in a long PERSPECTIVE



# OVERVIEW OF PROSPECTIVE INTERNATIONAL ELECTRICAL ENERGY MARKETS



Nigeria · Botswana · Saudi Arabia · Qatar · UAE Thailand · South Korea · Indonesia · Cambodia · Malaysia

# The surveys may be interesting to:

- Assess the possibility of development new markets
- Assess competitors and own competitiveness
- Develop strategic solutions to reorganize own operations
- Collect statistics

#### Key Users:

- Russian power equipment
  OEMs
- Companies, operating in power generation
- Companies, operating in power transmission and distribution

6

Investors

#### **General information**

In this section, special attention is paid to the geographical location, the natural resources mix, which in turn affect both the economy and energy, the intricacies of doing business in connection with national customs, culture, and religion.

Общая	CTORNELA
информация	JEINA
	IL BOBIJA, BA
LEOLEY OF REAL	11 586 KB. KM.
Гоградретно (экарит) на Банжном Востина, расположитето на Катарским попространа и консро постояний части Аранийскиот получетрона. Граничат с Скраженой Аранией на иго, со исс.	онинальны
остального сперен очливатся Парседские чаливно (ат-за тактичка прилами сперено) стеритория между Спраносной Аданной и СМО на наполно портоблица избращей с розвитания такане (40%). На сопере- ницаю палот чарокую приняку с островняя Какройя, на осто-настова —	APAECION
мерокум гранных с ОАЭ.	OOPMA IIPAR II
KINMAT	ABCORDENARN
Послодуя на примерски располодиния, как ней перегодует страна парагодог резон техновских на най натиги. Средокуротения летов позваратура возоблется в райово 250С. Зновей на совередна отрудного вила 200С. Для перек совое задагарана частва позванае бруга потраст раковску суделя райования воздания	IIPABITE-IIACT
нитина В нактых районая Катара средногодской удовить осодон завижения (до 55 мм), о по споре савь достотист 120 мм.	SMEP TANEIM DE A/IL TANE
PAQUE TERME HA PETHONIM	
Beers consumment Kamp mag you an 7 systemment res.	PRANTERS
JOCTVILK MOPIO	IICIAM COTERT
Батар се всек сторея, вроме тога, избавается Персидските залавин. Общая беретники ликии систалият 562 км.	TOTIKA
TANOXEMBLE OF PARPIERIES	
Васнить в налочится напостранную налоту в натороние раз. на в Котаре можно без волого отражителия. Беспоналонно в Котар можно волго во	BABOTA
402 сигарет, а такжа личные всяка и плаврот на сумну не более 3 пакти матерони, ракова. Запредатот вытить в Катар запоселнано награто, практасную	КАТАРСКИЙ РИЛ
наличу, перестока, терекурафия, тралунали из связания, в также рекатичнария алирокуру бие проузканиялура).	BHIA
	OCOMENTOS



#### La halas tarak halas tarak ta

09

#### Economy

Key macroeconomic indicators are considered in retrospect of at least 10-15 years. The correlation between these indicators and the level of the country in various ratings is analyzed. Special attention is paid to trade relations with both Russia and other countries.

#### **Power sector**

(

The overview contains the characteristics of the production, transmission and distribution of electricity. Key players in the market are analyzed, and a number of promising projects are highlighted. The key information is the analysis and assessment of the high-voltage bushings market.







## RNC CIGRE ACTIVITIES



Today, Izolyator plant is among the leaders in the industry thanks to the accumulated experience, strong production base, and professional team.

It is very important that the company is continuously developing and mastering the production of innovative products that are in demand by the Rosseti Group and the market. I would also like to note the strong contribution of Izolyator plant to the expansion of international scientific and technical cooperation

#### **Andrey Murov**

CIGRE Russian National Committee Chairman, First Deputy General Director — Executive Director of the Rosseti

#### The results of the work of the National Study Committee D1 RNC CIGRE in the first half of 2021



Remote participation in the qualifying stage of the IX season of the International Engineering Championship Case-in at the National Research University "MPEI"

On 20 April 2021, the Russian National Committee of CIGRE announced the prolongation of Izolyator's status of Leading Scientific and Technical Partner to RNC CIGRE in study area D1 Materials and Emerging Test Techniques.

In accordance with the terms of the agreement, the status is automatically extended for the next five years - until February 10, 2026.

Taking the opportunity, the Executive Director of RNC CIGRE Olga Frolova expressed deep respect to the head of NSC D1 RNC CIGRE Alexander Slavinsky for fruitful cooperation and expressed hope for further development of interaction.

From 18 to 20 February 2021, representatives of the National Study Committee D1 of the Russian National Committee of CIGRE took part in the International Symposium "Sustainable Energy and Power Engineering 2021" - SUSE 2021.

The aim of the symposium is to demonstrate the prospects, discuss issues of scientific and practical research in the power sector and realize the potential of international cooperation in the power industry.

The event went in full-time and online formats at the Kazan State Power Engineering University (KSPEU). The Symposium was attended by over 800 representatives of universities from 14 regions of Russia, as well as from abroad: Kazakhstan, Tajikistan, Kyrgyzstan, Italy, Bulgaria, Turkey, Belarus, Moldova, Mongolia.

As part of the symposium, a scientific and practical seminar "Diagnostics of power cables and electrical equipment with modern approaches to predicting the residual resource" and scientific and practical workshop sessions were held.

Also, the symposium worked in the format of seminars in 9 sections.

Members of NSC D1 RNC CIGRE took part in the work of section No. 6 "Reliability and diagnostics in the energy sector". The symposium became a platform for discussing the key challenges faced by the power sector of economy for the further development of practical solutions for energy stability and power engineering.

On 5 March 2021, Izolyator took part in the qualifying stage of the Student League of the IX season of the Case-in International Engineering Championship in the Power Engineering section, which was held at the National Research University MPEI in Moscow.

Remote participation in the qualifying stage of the IX season of the International Engineering Championship Case-in at the National Research University "MPEI".

#### The new season is dedicated to sustainable development.

In the Electricity section, the case "Sustainable development of electrical networks" of the Federal Grid Company of the Unified Energy System was proposed for solution.

Izolyator was represented in the expert committee by the CEO of Izolyator Plant LLC, Head of the National Study Committee D1 of the Russian National Committee of CIGRE (NSC D1 RNC CIGRE), Russia's representative of in the Study Committee D1 CIGRE, Doctor of Technical Sciences Alexander Slavinsky.



International symposium "Sustainable Energy and Power Engineering 2021" - SUSE 202



Sergey Dyomin General Director at Main Power Systems of Center, branch of Rosseti FGC UES



Remote open hearings of abstracts of reports at the 48th Session of CIGRE in the study area of the National Study Committee D1

this year's audience is 268 people, including leading specialists and graduate students.

The program of the event includes reports on the most actual issues in the field of testing electronic component base and radio-electronic equipment for radiation resistance.

The conference worked in Lytkarino for 2 days, with the program of the event giving rostrum to 23 reports and over 100 poster presentations on the most developing areas of study of radiation and electromagnetic effects on electronic systems.

Alexander Kononenko, member of NSC D1 RNC CIGRE, Head of the Department for Diagnostics and Testing of Electrical Components of NPPs and NUAO "NIIP" presented the report "AGING MANAGEMENT OF ELECTRIC CABLES AT NUCLEAR POWER PLANTS".



Official banner of the 48th Session of CIGRE, which will be held from 18 to 27 August 2021 in the online format

in the properties of electrical insulating polymeric materials when exposed to ionizing radiation."

On June 8 and 9, the XXIV All-Russian Scientific and Technical Conference "Radiation Resistance of Electronic Systems" was held in Lytkarino city district in the Mir recreation center premises.

The conference is organized under the auspices of NIIP JSC since 1998. The discussion platform is traditionally attended by specialists from more than 50 organizations of the leading research institutes of Rosatom and Roscosmos, enterprises of the defense industries, the Academy of Sciences and the Higher School: On 22 March 2021, a joint meeting of the NSC D1 RNC CIGRE Materials and Emerging Test Techniques and leading specialists of Izolyator was organized in the videoconference mode at the Izolyator plant for remote open hearings of abstracts of reports at the 49th Session of CIGRE in the study area of the National Study Committee D1.

The 48th CIGRE Session, timed to coincide with the 100th anniversary of CIGRE, will be held from 18 to 27 August 2021 in an online format.

This year's e-session will be a unique event and will be broadcast directly from the Palais des Congrès in Paris.

On 18-20 May 2021, the National Study Committee D1 of the Russian National Committee of CIGRE took part in the 15th scientific seminar "Methods for assessing and ensuring the radiation resistance of electronic products" - "Radiation resistance" named after V.N.Ulimov 2021.

The organizers of the seminar are the Scientific Research Institute of Instruments (NIIP) of the State Atomic Energy Corporation Rosatom and the Scientific Research Institute of Space Instrumentation (NII KP) of the United Rocket and Space Corporation.

The seminar went in an online format on the corporate communication platform.

The learning program included lectures on the most topical issues of the physics of radiation exposure to materials used in electronics and electrical engineering, electronic component base and electronic equipment.

More than 50 participants from 23 organizations of Rosatom, Roscosmos and higher educational institutions took part in the event. Lectures were delivered by employees of NIIP, NII KP, National Research Nuclear University MEPhi and the Experimental Research and Production Association "Specialized Electronic Systems".

Member of NSC D1 RNC CIGRE, Head of the Department for Diagnostics and Testing of Electrical Components of Nuclear Power Plants and Nuclear Installations, NIIP Alexander Kononenko, Ph.D delivered a lecture "Changes

## INDUSTRY EVENTS



Maintaining its course of continuous development, now Izolyator is a backbone enterprise, manufactures products using the most promising in the world technologies, while constantly increasing production volumes.

The company's achievements are known not only in Russia, but also on the international level. Of course, such results can only be achieved with the help of a responsible, hardworking team.

Kirill Lunin CEO at ENIN JSC

# *The Xth All-Russian Conference of Chief Power Engineers*

Izolyator plant took part in the 10th jubilee All-Russian Conference of Chief Power Engineers (CCPE 2021) in Sochi.

This already traditional event was organized with the support of the Ministry of Energy of the Russian Federation.

More than two hundred industry professionals took part in the conference: chief engineers and technical managers of electric power entities; representatives of the Russian Ministry of Energy and the Federal Service for Environmental, Technological and Nuclear Supervision; representatives of electrical engineering enterprises and leading specialists of scientific centers.

Izolyator was represented at the event by CEO of Zavod Izolyator LLC, Head of the National Study Committee D1 of the Russian National Committee of CIGRE Alexander Slavinsky; Director of Strategic Sales Alexander Savinov; Partner Relations Director Oleg Bakulin.



Alexander Slavinsky (2nd on R) at a round table with other meeting participants

During the discussions, the participants of the roundtable meeting were asked to work out a common opinion: will the existing and expected parameters of the efficiency of the power system and its elements ensure the operation of market mechanisms in full or the functioning of the system is impossible without constant government support?

#### Scientific and technical conference "Development of the power grid complex"

Izolyator took part in the Scientific and Technical Conference "Development of the Power Grid Complex" in Divnomorskoe, near the resort town Gelendzhik.

The conference was attended by managers and specialists of the following companies: Rosseti Kuban, Rosseti Yug, Rosseti Siberia and their power grid branches; Rosseti Tyumen; State Unitary Enterprise of the Republic of Crimea Krymenergo, as well as enterprises manufacturers of electrical equipment.

Izolyator was represented by Alexander Slavinsky, CEO of Izolyator, Alexander Savinov, Sales and Business Development Director in the Russian Federation, and Alexey Pilyugin, Head of SVN-Service Department.

The conference also served as a venue for the first time announcement about



Alexander Savinov is speaking at the Scientific and Technical Conference "Development of the Power Grid Complex" in Divnomorskoe, Gelendzhik

the repositioning of the Izolyator brand due to the diversification of production and expansion of its presence in the global electrical market. The rebranding concept was presented by Alexander Savinov. ■



For more than a quarter of a century, Izolyator has been an active member of our council, contributing to an increase in the level of knowledge of power engineers in terms of understanding the design features and improving the system for diagnosing and operating high-voltage bushings - an important unit of power transformers, high-voltage switches and other power electrical equipment.

> Alexey Utepov Chairman of the Public Council UralEnergoEngineering





Andrey Mayorov, First Deputy CEO - Chief Engineer of Rosseti Group is addressing the conference participants with a welcome speech

Izolyator took part in a major sectoral event. The VI All-Russian Scientific and Technical Conference "Development and Improvement of Operation Reliability of Distribution Power Networks" was organized by Rossiiskie Seti

## **Best practice**

Izolyator took part in the 24th All-Russian Scientific and Technical Conference "Ways to improve the reliability, efficiency and safety of energy production" in the village of Divnomorskoye in the resort town of Gelendzhik.

The organizer of the conference is the Krasnodar Regional Association "Regional Scientific and Technical Association of Power Engineers and Electrical Engineers" with the support of the Energy Institute for Advanced Studies of the distribution grid company Rosseti Kuban.

The conference was attended by managers and specialists of power grid and power sales companies, manufacturers and suppliers of electrical products, construction and electrical installation organizations, design and research institutes.

Izolyator was represented by Dmitry Ivanov, Director for Testing and Metrological Assurance of Izolyator Production Complex, and Alexander Filippov, Production Process Engineer at Izolyator-AKS. The participants Group of companies in partnership with the Moscow United Energy Company and with the assistance of the CIS Electric Power Council and the Electric Energy. Transmission and Distribution" Magazine. Over 400 professionals - representatives of the largest power grid companies in Russia and the neighboring countries, power equipment OEMs and service providers for electric power companies, experts from industry authorities and organizations and scientists discussed topical issues facing the power distribution grid complex and the most effective solutions that can ensure optimal functioning and development of distribution networks.

CEO of Zavod Izolyator LLC, Head of the National Study Committee D1 of the Russian National Committee of CIGRE Alexander Slavinsky took part in the conference.

During two days of work, the conference participants discussed more than 35 reports of colleagues on the most pressing issues, shared their own opinions and worked out joint solutions necessary to improve work efficiency.

Based on the materials of Electric Energy. Transmission and Distribution Magazine.



Participants in the 24th All-Russian Scientific and Technical Conference "Ways to improve the reliability, efficiency and safety of energy production" in Divnomorskoye, Gelendzhik

discussed problematic issues of efficiency and safety of energy production, ways to

solve them, shared experience and effective practices. ■

EXPORT



We are proud to be associated with Izolyator, an epitome in High Voltage Technology. It is remarkable how the company has maintained the traditions, and at the same time ushered in latest technology, the best in the world with a product unparalled in quality. Izolyator & Mehru are carrying forward the legacy of decades old Indo-Russian friendship, ushering in a new era of cooperation in Power sector of both countries.

Sandeep Prakash Sharma Executive Director at Mehru Electrical & Mechanical Engineers (P) Ltd.

# To be the first!



The Malaysian energy company Tenaga Nasional Berhad officially confirmed the accreditation of the Izolyator test center.

The accreditation was carried out by TNB Labs Sdn. Bhd., Part of TNB. The Izolyator test center became the first and currently the only one from Russia accredited by TNB.

In Russia, the center is accredited by the Federal Accreditation Service as a testing laboratory (GOST ISO / IEC 17025) in the field of high-voltage AC and DC bushings testing, as well as porcelain (ceramic) housings.

Bushings are tested for voltage classes from 10 to 1150 kV for compliance with the requirements of Russian and international standards.

Tenaga Nasional Berhad (TNB) is Malaysia's largest and leading Southeast Asian power company with operations in the UK, Kuwait, Turkey, Saudi Arabia, Pakistan, India and Indonesia.

Test center of Izolyator production complex

# Only with the best

Izolyator is the first supplier ofsolid internal insulation high-voltage bushings to Belgium, in the power system of which a large-scale program of transition from high-voltage paper-oil-insulated bushings solid insulation bushings bushings is being implemented.

NovAcec Services SA purchases and installs Izolyator bushings for the developed power equipment, which is supplied to the system operator in Belgium - the State Power Grid Company Elia.

NovAcec Services SA (formerly CG Services Division) is a Belgian engineering company that provides services for the installation, maintenance, repair, modernization and extension of the technical life of transformer equipment for voltages up to 400 kV. ■



Transformer on the shop floor at NovAcec Services SA, equipped with Izolyator bushings 363 kV, 3150 A



Izolyator has maintained the centuries old tradition & is now renowned as one of the most technological advanced names in Power sector. As we celebrate the 125th Anniversary of Izolyator both at India & Russia, We wish everyone at Izolyator the best of health & prosperity.

> Dr. Ashok Singh Vice Chairman at Joint Venture Massa - Izolyator - Mehru

# Always in touch



Remote meeting of the Board of Directors of Russian-Indian Joint Venture Massa - Izolyator - Mehru

A remote meeting of the Board of Directors of the Russian-Indian joint venture Massa -Izolyator - Mehru took place. At the now systemic remote meetings of the Board of Massa - Izolyator - Mehru, current organizational and technical issues of the enterprise are discussed, the results of work during reporting periods are summed up, and plans for further development are outlined and approved.

In the new conditions, Izolyator has chosen the only correct strategy from the very beginning, allowing not only to ensure uninterrupted release of products, but also to continue the systematic cooperation development with partners around the world.

The remote communications proved the most effective form of cooperation - as a systematic practice of conducting remote negotiations, meetings, presentations and technical seminars in the videoconference mode with the ability to discuss in detail and promptly make decisions on all current issues.

Izolyator's meeting rooms are equipped with modern multimedia facilities that allow organizing online communication with partners anywhere in the world.

## Unique experience for a special project

The Indian transformer plant Transformers & Rectifiers (India) Limited announced the successful completion of type tests of a unique shunt reactor equipped with Izolyator high-voltage bushings.

T&R 420 kV, 50 MVAr three-phase shunt reactor, designed to be installed at one of the substations of the Indian state power grid operator Power Grid Corporation of India Limited, is filled with environmentally friendly and biodegradable natural essential liquid Cargill FR3.

It is the world's first shunt reactor for that voltage, filled with a liquid ether dielectric as an alternative to transformer oil.

In the production of FR3, vegetable oils and highly effective additives are used, which do not contain elements of oil or halogens, sulfur or any other harmful components that negatively affect the environment. The liquid completely decomposes in a short period of time in the environment, and is absolutely non-toxic.

Izolyator is the only manufacturer of highvoltage bushings, which, after appropriate own tests, confirmed the readiness of the bushings to



T&R three-phase shunt reactor 420 kV, 50 MVAr filled with liquid ether dielectric equipped with Izolyator bushings

operate in "ether liquid - air" media under 420 kV and delivered them to the T&R plant. ■ Based on materials of Transformers & Rectifiers (India) Limited

## EXPORT



All over the world, especially in the CIS countries, power engineers are well aware of your plant as a leading enterprise in the production of high-voltage insulation equipment.

For many years, Tajik power engineers have been cooperating with Zavod Izolyator LLC and are proud of this joint, fruitful work. We receive quality products from Izolyator plant and use them with great pleasure.

Ismoilzoda Mirzo Ibrohim Chairman of the Board at HC Barki Tochik JSC

# Tested successfully

Izolyator Production Complex tested highvoltage bushings with the participation of representatives of the National Electric Grid of Kyrgyzstan. The plant ran acceptance tests of 110, 220 and 500 kV voltage class bushings intended for NEGK.

In accordance with the terms of the contract, a test inspection was received, in which the following representatives of NEGK took part:

Ulanbek Zhumaliev, General Director of the Chui enterprise of high-voltage electrical networks, a branch of NEGK; Bolot Batyrbekov, Head of the Central Insulation, Surge Protection and Testing Service; Yryskeldi Myktybekov, Deputy Head of the Operation and Repair Service; 2nd category Engineer of the Procurement and Logistics department Gulgiza Massimova.

The tests were successful and fully confirmed the compliance of the characteristics of the bushings with the requirements of regulatory documents.

The guests were received by the CEO of Zavod Izolyator LLC Alexander Slavinsky and a productive dialogue took place on the

## There is a start!

Rinat Ismailov, General Director of the Kazakhstan engineering company Aziyareme-



Representatives of the National Electric Grid of Kyrgyzstan during the inspection of Izolyator high-voltage bushings. In the background – a 500 kV bushing under test

prospects for the development of cooperation between the two enterprises, taking into account the long-term needs of NEGK in high-voltage insulation equipment, as well as the key trends in the global and regional electrical markets. The parties highly appreciated the results of the inspection and all related activities, noting both the coherence of joint work on existing agreements and the great potential for further strengthening and developing cooperation.

nergo, visited Izolyator for the first time. Director of Neighboring countries sales



General Director of the Kazakhstan engineering company Aziyaremenergo Rinat Ismailov (R) and Maxim Osipov at the test center of Izolyator production complex

Maxim Osipov received the guest, inviting him to see the facilities, and had talks with the visitor.

During the tour of the plant, the guest got acquainted in detail with the technological cycle of production of modern high-voltage bushings with solid internal insulation, visited the test center equipped with the best equipment in the world.

The visitor was also shown to the production area of high-voltage cable fittings of 110–220 kV voltage classes of Izolyator-AKS - a new business line of Izolyator.

During the negotiations, the parties summed up the results of cooperation in the first half of the year and discussed the volumes and timing of supplies of Izolyator high-voltage bushings in the second half of 2021.



On behalf of the entire staff of Tajikenergosnab SCMPO of the Republic of Tajikistan and personally on my own, I congratulate the enterprise on a notable Jubilee from the day of its foundation. We appreciate the huge contribution that your company makes to the development of the entire energy industry of the CIS countries and our Republic, and we wish it to succeed even more in this needed and promising activity.

# With a great interest

Representatives of the management of the Kazakh electrical holding company Alageum Electric visited Izolyator plant in March 2021. Alageum Electric was represented by Erkebulan Ilyasov, Deputy General Director of Alageum Group, Amir Galimov, Export Director of Alageum Electric JSC, and Dmitry Urikh, General Director of the Russian dealer TransTek.

The guests were received by Director of Neighboring Countries sales Maxim Osipov and Head of the Marketing Department Yaroslav Sedov.

The parties discussed the progress of the planned supplies of Izolyator high-voltage bushings to the plants of the Alageum Electric holding.



Sodikdzhon Bobozoda

First Deputy Director at Tajikenergosnab SCMPO

Alageum Electric's representatives showed a strong interest in purchasing Izolyator-AKS's high-voltage cable fittings



Representatives of the management of the Kazakh electrical company Alageum Electric in Izolyator, (L-R): Yaroslav Sedov, Deputy General Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Electric Amir Galimov, General Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Electric Amir Galimov, General Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Electric Amir Galimov, General Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Electric Amir Galimov, General Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Erkebulan Ilyasov, Export Director of Alageum Group Erkebulan Ilyasov, Export Director of Alageum Erkebulan Ilyasov, Erkebulan Ilyasov, Erkebulan Ilyasov, Erkebulan Ilyasov, Erkebulan Ilyasov, Erk

A sightseeing tour of the production took place, where the guests visually familiarized themselves with the advanced manufacturing and testing technologies of high-voltage bushings with solid internal RIP and RIN insulation. When visiting a high-voltage cable fittings enterprise

Izolyator-AKS representatives of Alageum Electric showed high interest in purchasing this type of insulation equipment.

At the end of the visit, the parties outlined ways to expand cooperation and agreed on the next practical steps in this direction.



The tour of Izolyator high-voltage bushings production



The plant's products are well known in the world market, valued for their quality and compliance with the highest standards. Among the best plant's traditions are the constant introduction of advanced production technologies, consistently high quality of products.

Over the years, an excellent team with good traditions has been formed, capable of performing not only production tasks, but also educating new personnel, helping young people find a worthy place in life.

Sergey Rusentsov **Commercial Director at Alyansenergo** 

# There will be a Russian-Kazakh enterprise!

The key topic of the meeting between top management of the Kazakh holding company Alageum Electric and its subsidiary Asia Trafo transformer plant with Izolyator plant representatives was the creation of a Russian-Kazakh joint venture for the production of highvoltage insulation equipment. The new enterprise is planned to be built at the production facilities of the Asia Trafo plant.

The management of Alageum





Acquaintance with the assembly of 220-1150 kV bushings

guests took part in the opening ceremony of the exposition "Immortal Regiment of Izolyator plant", which took place on the eve of the Victory Day in the Great Patriotic War of 1941-1945.

In the result of the meeting, the parties made a joint decision to start preparing an agreement on the establishment of a Russian-Kazakh joint venture.

Omar Asanov, Alexander Slavinsky, Chairman of the Board of Alageum Electric Olzhas Esirkepov and Ivan Panfilov

Electric and Asia Trafo was represented by CEO at the Asia Trafo plant Omar Asanov, Chairman of the Board of Alageum Electric Olzhas Esirkepov, Representative of Alageum Electric in Moscow Dmitry Urikh.

A tour of the Izolyator high-voltage bushings production complex and high-voltage cable fittings facility of Izolyator-AKS took place.

Viktor Pshennov, Technical Director of Izolyator-AKS, presented the latest equipment for the production of cable joints and terminations as well as cable glands for 110 and 220 kV voltage classes.

In addition to the business agenda of the visit, on this day the



Acquaintance with the Izolyator-AKS cable fittings production company



# EXPORT | HALF 2021

# **BUSHINGS DELIVERIES**

22(

kV

**VOLTAGE CLASSES** 

35 <sup>kV</sup>



24 kV

high-voltage bushings delivered in the I half 2021 to neighboring countries and overseas



110

kV

#### **OVERSEAS:**

330 kV

India Vietnam Poland Belgium Italy

%

#### NEIGHBORING COUNTRIES:

75(

kV

Belarus Kazakhstan Moldova Ukraine Kyrgyzstan Uzbekistan

500

kV

Over 200

bushings delivered to transformer plants of neighboring countries and overseas

**Deliveries** 

30 countries

to over

Export share



MIM manufactures / supplies high-voltage RIP bushings (OIL-AIR) for nominal voltage 52 - 420 kV

52-420 kV

MIM has been approved by the state power grid corporation of India (PGCIL) as manufacturer of RIP bushings on the territory of India up to 420 kV

420 kV

## ELECTRICAL ENGINEERING



The Izolyator team is favorably distinguished among our partners by its vast experience, high efficiency, the desire to move forward, resilience and perseverance in achieving goals. May your work bring you joy and professional satisfaction, may there always be opportunities for the implementation of any, even the most ambitious projects! Thank you for your long-term cooperation! We wish you prosperity and new victories!

Alexey Kishko CEO at SVEL Group

# SVEL - Power transformers -Izolyator: new achievements, new horizons



The technical audit by the SVEL Group representatives at the Izolyator production complex

#### Special attention - to nuclear power

The oil transformers plant SVEL - Power Transformers in Ekaterinburg is an old partner of Izolyator. Discussing the results of joint activities during the negotiations, the parties noted a steady trend of constant and multifaceted development of cooperation between the two enterprises.

While planning operations in 2021, the parties paid special attention to joint participation in projects for the development of nuclear energy, based on the tasks of increasing its efficiency in accordance with the Energy Strategy of the Russian Federation for the period up to 2035.

#### Improving interaction

In keeping with the times, remote meetings have become common practice. Thus, at the videoconference with the SVEL Group, the parties discussed several topics related to improving the interaction of the two enterprises:

- joint development of technical documentation,
- the forthcoming technical audit of Izolyator production complex by SVEL Group specialists,

 the procedure for interaction on warranty and service issues and a number of other priority issues.

#### **Technical audit**

Izolyator received a technical audit of high-voltage bushings production, which was done by the transformer equipment manufacturer - SVEL Group.

The audit went as part of a mandatory process of the SVEL Group to assess, control and improve the quality of purchased products.

The audit passed in full accordance with the pre-approved program and was completed successfully.

#### New generation transformer at the Krasnoyarsk HPP

The first three-phase package transformer of a new generation with a capacity of 630 MVA, manufactured by SVEL Group, was connected to the grid at the Krasnoyarsk HPP.

The new transformer is installed to replace the equipment that has been used for more than 50 years.

The transformer was designed and custom-made under an individual order for the Krasnoyarsk HPP by SVEL Group. The transformer is equipped with 220 kV Izolyator high-voltage bushings.

The implementation of the project of step replacement of transformers is expected to last until 2028. Upon its completion, six 220 kV transformers and nine new generation single-phase 500 kV transformers will be installed at the Krasnoyarsk HPP.

#### Bases on materials of En+ Group and SVEL Group



A 220 kV SVEL power transformer, equipped with Izolyator high-voltage bushings


Today, Zavod Izolyator LLC is an enterprise that solves complex tasks of the successful development of the production of modern high-voltage bushings for various purposes in a wide range of voltages. Over 125 years, the plant has gone a glorious path of formation, prosperity, overcoming difficulties, outstanding success and impressive achievements. These achievements are backed by colossal work and high professionalism of the result-oriented team.

> Vladimir Chistyakov CEO of Togliatti Transformer





Acceptance of Izolyator high-voltage bushings by specialists of the Togliatti Transformer plant

# Meeting strict standards

Togliatti Transformer plant's specialists visited Izolyator. The purpose of the visit was acceptance of high-voltage bushings made for installation on power equipment manufactured by Togliatti Transformer, which is intended for delivery to the Nurek HPP in Tajikistan.



Participants in the acceptance of high-voltage bushings manufactured for the Togliatti Transformer plant, (L-R): Viktor Kiryukhin, Ekaterina Zenina, Leading Engineer of the Procurement dpt at TT Anton Chuvashov, Maxim Zagrebin and Leading Designer of the Chief Designer dpt at TT Andrey Russkikh

The acceptance of Izolyator high-voltage bushings was carried out by the specialists of Togliatti Transformer plant: Deputy Head of the Procurement Department Anna Roslyakova, Leading Engineer of the Procurement Department Anton Chuvashov and Leading Designer of the Chief Designer Department Andrey Russkikh.

The bushings acceptance program included checking the conformity of the markings to the drawings, inspecting the surface of the bushings for mechanical damage, checking the geometric dimensions of the bushings and a number of other control operations.

As a result, the acceptance program was fully implemented, the high-voltage bushings manufactured for the Togliatti Transformer plant were accepted without any comments.

Also, representatives of Togliatti Transformer and Izolyator Production Complex discussed current interaction and further development of cooperation between the two enterprises.

## ELECTRICAL ENGINEERING



You are a reliable supplier, whose quality mark has been confirmed by ten years of successful collaboration.

As a key supplier of high-voltage bushings, you fully cover our company's needs in the range of equipment, ensuring high product reliability and prompt delivery.

We wish the staff of Izolyator plant well-being, health and professional success!

Vladimir Kalaushchenko CEO at UETM JSC

# Effective work plan



Meeting at PMTT. High-voltage solutions plant in Saint Petersburg: CEO at PMTT Alexander Mayorov (R) and Maxim Zagrebin

Head OEM Sales at Izolyator Maxim Zagrebin had a series of meetings with the management of the PMTT. Highvoltage solutions transformer plant in St. Petersburg.

The main goal of the meetings was to formulate a strategy for the development of cooperation between the two enterprises for a period up to 2024. Management representatives on PMTT side:

- Alexander Mayorov, CEO,
- Andrey Sidelnikov, Chief Designer,
- Mikhail Melshin, Head of Sales,

• Irina Mamatova, Head of the Supply Department.

The parties also summed up the interim results of the work done and discussed the progress of supplies of Izolyator high-voltage bushings within the framework of existing joint projects.

The parties noted the successful interaction of the two enterprises and broad prospects for its development.

## All in order

Head of OEM Sales at Izolyator Maxim Zagrebin had a meeting with representatives of Procurement department of Power Machines in Saint Petersburg.

The Purchasing division was represented by Head of Supply Chain Veronika Lisnichuk and Purchasing Group Leade Kirill Karpov.

The meeting discussed the procedure for interaction with subsidiaries of Power Machines: establishing long-term cooperation, technical and commercial terms of supply, effective planning of joint activities and a number of other priority issues.



At the Purchasing division of Power Machines in Saint Petersburg: Purchasing Group Leader Kirill Karpov (R) and Maxim Zagrebin

IZOLYATOR

The launch in 2007 of an advanced high-tech complex "from scratch" testifies to the high technical and organizational level of the enterprise, the embodiment of all modern technologies and in-house developments and preserving the long-term traditions of the team.

We are proud of our 25 years of cooperation with the IZOLYATOR company! Over the years, bushings from 20 to 750 kV, ranging from oil-in-paper to RIN insulation, have been supplied to hundreds of enterprises.

Stepan Biryukov President of SP Stan-Komplekt and the team



## World-renowned partner

Izolyator is actively developing cooperation with the Moscow-based Electrozavod.

In the first six months of 2021, several meetings were held with the management of the Electrozavod Holding Company, at which they discussed issues of interaction under existing agreements, as well as plans for the development of relations and promising joint projects.

The holding company Electrozavod is a leading Russian and world manufacturer of various electrical equipment supplied to all sectors of the economy.

## Mutual synergy

It can be possible to develop and multiply the accumulated experience only by being in a permanent mutually beneficial partnership. Izolyator is actively working with both old and new partners.

### **Results of cooperation**

Izolyator had a meeting with the management of the technical and procurement departments of the Uralelectrotyazhmash plant in Yekaterinburg, which was represented by Chief Designer of transformer-reactor equipment Alexey Borisenko and the Head of the Procurement Department for the production complex of transformers Leonid Meshavkin. The parties summarized the results of the yearlong joint work, which has enriched the experience of successful long-term cooperation of the two enterprises.

### Forward planning

Negotiations were held in the engineering company Electroshield Samara. The company was represented by Anton Akimov, Senior Specialist of the Project Procurement Group at Electroshield Samara.

The parties discussed the progress in the implementation of existing joint projects and the procedure for further interaction to achieve the best results.



Power transformer equipped with Izolyator high-voltage bushings as part of a 110 kV complete transformer substation manufactured by Electroshield Samara

#### Building a strategy

In 2021, a number of meetings were held at the Joint-Stock Company of High-Voltage Equipment Electroapparat (JSC VO Electroapparat), at which the cooperation strategy of the two enterprises is being successfully formed, effective interaction is being developed in the course of implementing promising joint projects.

High-voltage test room of the production complex of Electrozavod HC

#### **First delivery**

The first delivery of Izolyator high-voltage bushings to Delta Trafo from Nizhny Novgorod took place.

Delta Trafo offers a full range of high quality and timely services in the field of electrical converters, including design, manufacture, modernization and repair.

### New acquaintances

Maxim Zagrebin visited the exhibition stand at the Electro-2021 exhibition in Moscow and got acquainted with the management of the Podolsk transformer plant Transformer of the Russian Production Group Transformer.

Transformer plant was represented by one of the founders of the Transformer Production Group Sergey Vankov, General Director Ivan Reshetnikov, Commercial Director Veronika Chernykh and Commercial Department Engineer Alexander Metlov.

## POWER INDUSTRY OF RUSSIA



Izolyator is a reliable business partner, with whom we can jointly solve tasks to improve the efficiency of equipment at power facilities in the South of Russia, aimed at stable and reliable power supply to consumers.

Gennday Kovtun 1st Deputy CEO - Chief Engineer for Main Power Systems of South

# Power grid complex is a priority

Active participation in the modernization and development of the power grid complex of Russia invariably remains one of the highest priority areas of activity of Izolyator.

In the first half of the year, Izolyator entered and won tenders for the centralized procurement for the needs of subsidiaries and affiliates of the Rossiiski Seti Group of Companies: Rosseti Kuban, Rosseti North-West, Rosseti Volga, Rosseti Ural, Rosseti Siberia, Rosseti Tyumen and Rosseti Moscow Region.

In the first half of the year, under a longterm supply agreement, a batch of bushings was shipped to the address of Rosseti



FGC UES for the implementation of the Program to improve reliability and observ-

ability of the Unified national (all-Russian)

electrical network.

## **Interested dialogue with MPS Center**



First Deputy CEO - Chief Engineer of the for Main Power Systems of Center Andrey Gorbunov is learning about the key production stages of Izolyator high-voltage bushings

Working with MPS Center is an important long-term project for Izolyator plant. The company is actively building fruitful communications with the partner.

### Senior executives

Andrey Gorbunov, First Deputy CEO - Chief Engineer of the Main Power Systems of Center visited Izolyator. The program of the visit was opened by talks about volumes and terms of delivery of high-voltage bushings in 2021 against the existing long-term contract concluded with the Federal Grid Company.

Later, the guest was shown to the main production facility where he familiarized himself with all stages and modern technologies of manufacturing of highvoltage bushings with solid internal insulation. At the same time, a special focus was given to the acquaintance with the bushings with moisture-resistant internal RIN-insulation, as the most promising today.

Andrey Gorbunov's visit ended with an acquaintance with the Izolyator-AKS high-voltage cable accessories plant - a new enterprise within the Izolyator structure, created with a view of diversification for the development, production, testing and sales of cable joints and outdoor termina-tions, as well as cable glands in the 110 to 220 kV range.

### Acquaintance with new products

A meeting was held between representatives of Izolyator's management and Main Power Systems of Center.

The meeting took place at the Bely Rast Personnel Training Center of the MPS Center. At the end of the meeting, experts MPS Center got acquainted with a new line of business of Izolyator - the production of high-voltage cable accessories of voltage classes 110-220 kV.



Today, such enterprises as Izolyator plant, without exaggeration, form the basis of Russia's energy production. The recognized quality of your high-voltage bushings, their competitiveness, effectively contribute to the import substitution of power equipment, the development and strengthening of the domestic power industry.

Anatoly Kushnerov Deputy CEO - Director of Murmansk branch of Rosseti North-West

## To see the perspective

Several meetings took place with MPS Siberia's management in the first half of 2021.

### Meeting in person...

Alexander Savinov, Sales and Business Development Director in Russian Federation at Izolyator, met with the management of the Main Power Systems of Siberia in Krasnoyarsk.

At the head office of MPS Siberia, the guest was received by CEO Alexander Terskov, First Deputy CEO - Chief Engineer Maxim Militsyn and Deputy Chief Engineer for Main Equipment Operation Maxim Smolentsev.

There was a discussion of the upcoming deliveries of 1150 kV bushings to MES of Siberia in 2021, planned under the current long-term agreement between the two companies.

Negotiations were also held on the prospects of introducing distance learning for MPS Siberia employees at Izolyator corporate university.

### .. and online

Izolyator took part in a meeting of chief engineers of enterprises of MPS Siberia in Krasnoyarsk.



Alexander Savinov (L) and Deputy Chief Engineer for Main Equipment Operation at MPS Siberia Maxim Smolentsev at the head office of MPS Siberia in Krasnoyarsk



Head of SVN-Service Alexey Pilyugin is making a report at the meeting of chief engineers of enterprises of MPS Siberia in Krasnoyarsk

During the meeting, Izolyator representatives made the following reports.

Chief Engineer of the R&D Center Pavel Kiryukhin made a report "Bushings with RIN-insulation. Expansion of the range of products".

Aleksey Pilyugin, Head of SVN-Service Department - "Specifics of operation and installation of Izolyator high-voltage bushings".

Alexander Filippov, Production Process Engineer at Izolyator-AKS - "Cable fittings 110–220 kV manufactured by Izolyator-AKS".

We are grateful to MPS Siberia for the invitation and the opportunity to participate in such a representative meeting!

## OWER INDUSTRY OF RUSSIA From theory to practice



Lecture "Technology of high-voltage bushings production"

The theoretical units were devoted to acquainting the audience with the production complex and the production technology of high-voltage bushings with internal RIP-insulation, as well as the details of their operation. The material included lectures "Technology of high-voltage bushings production" and "Technology of production of RIP and RIN insulation".

The lecture material was supported by a tour of the entire plant showing the technological cycle of high-voltage bushings production.

Also, MPSs's specialists visited the production of high-voltage cable accessories at Izolyator-AKS, where Technical Director Viktor Pshennov presented the latest technologies and equipment.

At the Izolyator Production Complex, a full-time training program was provided to technical specialists of Main Power Systems, branches of Rosseti FGC UES - MPS East and MPS Ural.

The training took place under the advanced training program "Installation of high-voltage bushings on power equipment", developed by Izolyator Corporate University with the participation of leading specialists from the R & D center, production and technical service and the testing and metrology service of Izolyator Production Complex. The training was conducted by the Head of the SVN-Service department Alexey Pilyugin.

The two-day program consisted of a theoretical part on the first day of training and a practical part on the second day.



Acquaintance with the technology of high-voltage bushings assembly



A group of trainees - specialists of the Main Power Systems of FGC UES in the test center of the Izolyator Production complex

During the practical part of the program, which took place in production, the following steps were studied: acceptance of the bushings, removing a bushing from the package and transferring it to a vertical position, testing the bushing before installation, preparing equipment for the installation of the bushing and a number of other operations. Technological operations were demonstrated using replicas of bushings and imitation of their installation on equipment.

Upon completion of the practical part, the students were tested and the results of the training were drawn up. Everyone who successfully passed the test was given a personal certificate confirming the acquisition of the necessary knowledge and skills.

According to the general opinion of MPS specialists, the training became became an important step in improving their qualifications and professional growth.



Acquaintance with the technology and equipment for the production of high-voltage cable accessories



Practicing the operation of setting the bushing into a vertical position after removing it from the packaging



Presentation of a personal certificate confirming the acquisition of the necessary knowledge and skills related to the installation of high-voltage bushings on power equipment



Training at the Izolyator Production Complex was very beneficial for the professional growth of specialists of the Main Power Systems of FGC UES



# SALES GEOGRAPHY IN THE I HALF OF 2021 13 COUNTRIES



SuperOx

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EVN

VNIIR Hydroelectroavtomatika

Kθ

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## POWER INDUSTRY OF RUSSIA



We can say with confidence that thanks to the accumulated experience, competent management, unique technologies and a close-knit team, Izolyator is a recognized leader in Russia in the development, production and service support of modern high-voltage bushings of all voltage classes. Long-term trouble-free operation of high-voltage bushings of transformers and wall bushings of Izolyator in switchgears of power plants of the Bashkir generating company has become synonymous to high reliability and quality.

Victor Larioshkin CEO at Bashkir Generating Company



Alexander Slavinsky is making a report on Izolyator and its products at the meeting of heads of departments of Gazprom and industrial companies and R&D organizations of the Moscow region in the Government House of the Moscow region

# *Reliable power generation*

It is one of key tasks on our side to ensure an uninterrupted work of power engineers. Presenting innovative developments, fulfilling all orders on time, always being in touch - Izolyator makes every effort to fulfill its obligations.

And those efforts do not go unnoticed. So, the accreditation of Izolyator as a supplier of equipment for the needs of a company in the thermal power generation sector has been extended for a year (until June 23, 2022) in Russia - Unipro.

### To show and to tell

A presentation of the company products at the Bashkir Generating Company took place. At the head office of BGC in Ufa, the guest was received by the Leading Specialist of the electrical equipment department, Yury Gerasyov, after which a presentation of Izolyator high-voltage bushings with moisture-resistant internal RIN insulation was made for the company's technical specialists.

The advantages and prospects of using bushings with a new type of insulation, their design and technical features, specifics of operation were considered. Then a dialogue on the experience of operation of Izolyator bushings, which are in service at power facilities of BGC followed. There was another, just as productive, product presentation at the Dagestan branch of the Federal Hydrogenerating company RusHydro in its head office in Kaspiysk.

The guest was received by the First Deputy Director - Chief Engineer Magomed Magomedov and Deputy Chief Engineer for Technical Affairs Magomed Suleymanov. The presentation was also attended by employees of the production and technical service of the Dagestan branch of the RusHydro Group.

#### What's new?

Director of Partner Relations at Izolyator Oleg Bakulin presented new products of Izolyator at the Stavropolskaya SDPP. The guest was received by Deputy Director - Chief Engineer Pavel Filaretov, Deputy Chief Engineer of Repair Alexander Syromyatnikov and Deputy Head of the Technical Service Organization of the Stavropol SDPP V.A. Matushkin.

The technical leaders and specialists of the power station were presented the new Izolyator products - high-voltage bushings with moisture-resistant solid internal RIN insulation.

### Keeping in touch

Izolyator plant took part in a remote meeting with the departments of the energy company Gazprom, which was held by the Ministry of Investments,

Industry and Science of the Moscow region. The meeting was held in the press center of the Moscow Region Government House via videoconference.

Izolyator plant was represented at the meeting by Alexander Slavinsky, CEO at Zavod Izolyator and Oleg Bakulin, Director of Partner Relations.



A 330 kV transformer with Izolyator high-voltage bushings at the Irganayskaya HPP of the Dagestan branch of the RusHydro Group



Your rich experience and unique competencies in the development and production of high-voltage bushings have no analogues in domestic electrical engineering and allow you to provide both Russian and foreign enterprises with high-quality and high-tech products. The products of your plant - high-voltage bushings, supplied to the Leningrad NPP for many years, feature reliability, a long period of trouble-free operation and have significant competitive advantages over imported counterparts.

> Pavel Lavrentyev Acting Deputy General Director – Branch Director at Leningrad NPP

# Under special scrutiny



Inspection of tests of Izolyator high-voltage bushings is carried out by the Leading Engineer of the Leningrad NPP-2 Dmitry Kruglov (R) and the Leading Expert of VO Bezopasnost Victoria Goryachava

The safety of the supplied equipment is a top priority for Izolyator. That is why ensuring the highest standards is not an empty phrase for our enterprise, but rather a daily work obligation.

### **Quality inspection control**

The Quality Supervision Agency carried out an inspection control of the Izolyator Production Complex in accordance with the instructions of Rosenergoatom Concern. The inspection was carried out in compliance with the guidelines of the Voluntary Certification System of the enterprises - manufacturers of NPP equipment for observing the requirements of the operating organization - Rosenergoatom Concern.

The control was carried out under an agreement between QSA and Rosenergoatom Concern within the framework of the current Certificate of Conformity. The inspection control commission included QSA experts: Leading Expert Andrey Brizhankin and Deputy Head of the conformity assessment department Tatyana Golkina.

All the necessary documents were prepared and full access to all technological operations was provided to assist the commission's work.

The inspection control program of the certified production of the NPP equipment manufacturer was fully implemented and completed successfully.

### From inspection to delivery

Delivery of 750 kV voltage class bushings to Kursk NPP was carried out. Previously, this bushing was tested at the stand of the Center for Complex Seismic Testing in the Leningrad Region. Full-scale bench tests were carried out for seismic resistance under dynamic loads equivalent to seismic impact with an intensity of 9 points on the MSK-64 scale at elevations up to 10 meters (for operation at nuclear power plants).

### Completed successfully

Leningrad NPP-2 carried out a test inspection of Izolyator high-voltage bushings together with the VO Bezopasnost, an inspection organization. Acceptance tests of 330 kV RIP bushings, intended for the needs of Leningrad NPP-2, were carried out at the test center of the Izolyator Production Complex.

The inspection group included Dmitry Kruglov, Leading Engineer of the Leningrad NPP-2, and Victoria Goryachaya, Leading Expert of VO Bezopasnost. The work of the inspectors was supported with the presentation of all requested documents by the Leading Specialist of the Attestation and Certification office Tatiana Vasina.

The tests were completed successfully in full scope.

### **Close examination**

Inspection of tests of Izolyator high-voltage bushings intended for the needs of Smolensk NPP was carried out by the inspection organization VO Bezopasnost.

Acceptance tests were carried out at the test center of the Izolyator Production Complex.

VO Bezopasnost was represented by the Leading Expert Victoria Goryachaya. The tests ended successfully.

## TECHNOLOGIES AND INNOVATIONS



Cooperation between our companies ELSYTECH GmbH and Izolyator Plant began in 2004. Almost 20 years of partner work have allowed us to appreciate the high scientific potential, the highest professionalism, solidarity and irrepressible determination of your team. Only these qualities allowed you to develop your own state-of-the-art technologies, set up the production of such science-intensive and competitive products and join the ranks of the world's leading companies.

Waldemar Koch CEO at ELSYTECH GmbH

# A scientific view of manufacturing

A delegation from the All-Russian Research, Design and Technological Institute of the Cable Industry visited Izolyator. The delegation included Deputy General Director, Director for Development of Foreign Economic Activity Vitaly Meshchanov; Head of Department, Director of Scientific Section, Doctor of Technical Sciences Mikhail Shuvalov;

Deputy Head of the Department, Head of the Laboratory, Vladimir Ovsienko, PhD; Leading Researcher Lev Makarov.

At the meeting, the parties discussed issues of cooperation in the field of scientific and technical work, development and testing of new products for the needs of customers, and also touched upon a number of



Delegation of VNIIKP at Izolyator (L-R): Pavel Kiryukhin; Konstantin Sipilkin; Leading Researcher at VNIIKP Lev Makarov; Deputy Head of the Department, Head of the VNIIKP Laboratory Vladimir Ovsienko; Head of the Department, Director of the Scientific Section at VNIIKP Mikhail Shuvalov; Victor Pshennov; Alexander Slavinsky; Vitaly Meshchanov, Deputy General Director, Director for the Development of Foreign Economic Activity of VNIIKP; Konstantin Murzin



Representatives of VNIIKP on a plant tour at the Izolyator-AKS cable fittings plant

current projects for testing high-voltage cable accessories.

A tour of the shops of the plant was organized for the VNIIKP delegation. All stages of modern production technology and testing of high-voltage bushings with solid internal RIP and RIN insulation were presented.

The guests were particularly interested in the Izolyator-AKS cable fittings plant and the production and testing equipment installed therein, which has no analogues in the world.

The guests studied the injection molding machines and molds for various voltage classes and cable cross-sections, the capabilities of the testing laboratory and the service center. The result of the tour was expressed in the words of high appreciation of everything that the quests saw.



There are not many manufacturing enterprises with a century-old history in Russia that managed to survive the dashing 90s and retain the leadership in their field. Izolyator plant is currently a truly modern, high-tech enterprise with unique experience in the high-voltage bushing technology. We have been cooperating for over 20 years and we are proud of our

participation in projects for the development of new technological and testing equipment for your enterprise.



Victor Turkot Technical Director at Research and Production Enterprise Diatrans

## Test Laboratory of Izolyator-AKS is ready for operation



In January 2021, installation and commissioning work was completed at the high-voltage

testing laboratory of the Izolyator-AKS cable

The work was carried out with the direct supervision of technical specialists from the German companies HIGHVOLT Prüftechnik Dresden GmbH and Ackermann Anwendungstechnik & Vorrichtungsbau GmbH.

A unique test laboratory, unmatched in Russia, is designed for acceptance tests of all types of cable accessories for 110 to 220 kV voltage classes and provides measurement of partial discharges from 1 pC with voltages up to 650 kV.

The advanced technology of production and testing with such a low level of interference will ensure a consistently high quality of Izolyator-AKS cable accessories and their full compliance with all the requirements and specifications.

With the test laboratory commissioned, Izolyator has organized a full production cycle of 110-220 kV cable accessories for the first time in Russia.

# Voluntary certification of Izolyator-AKS high-voltage

Serial high-voltage cable accessories manufactured by Izolyator-AKS have been successfully certified for compliance with the requirements of Russian and international standards.

Izolyator-AKS is a new enterprise within the Izolyator structure, created for diversification in the development, production, testing and sales of connecting joints and terminations, as well as cable glands for 110-220 kV voltage classes.

Izolyator-AKS products are certified in the Pribor-Expert voluntary certification system.

Based on the protocol of the Meliss testing laboratory, the certification body Cetrim issued a certificate of compliance with the requirements of GOST 1516.1-76, GOST 1516.3-96, GOST R IEC 60840, GOST R IEC 62067.

accessories production plant.

# cable accessories



High-voltage accessories - products of Izolyator-AKS

EVENT



### Izolyator is 125 years old !!!

Such a long and successful work is the result of work of many generations of employees. Our joint project to create a domestic 110-220 kV cable system using cables manufactured by the Kirskabel plant and cable fittings manufactured by Izolyator is another step towards the implementation of a more ambitious task - the creation of a 550 kV cable system, the components of which will be designed and produced in Russia, assembled with the efforts of domestic specialists.

The Uncomtech team

## International exhibition of cable and wire products Cabex 2021

Izolyator for the first time publicly presented samples of produced stress-cones of cable joints at the 19th Cabex International Exhibition of Cable and Wire Products in the Moscow Expocenter.

The exhibition was attended by the CEO at Zavod Izolyator LLC Alexander Slavinsky and management representatives of Izolyator-AKS LLC - an enterprise producing high-voltage cable fittings within the Izolyator structure, which is engaged in the development, production, testing and sales of cable joints and outdoor terminations, as well as cable glands for voltage classes 110 and 220 kV.

Izolyator-AKS LLC was represented by Deputy General Director Ellada Ismayilova, Technical Director Victor Pshennov, Deputy Technical Director Alexander Danilov, Head of the Service Center Sergey Kodemaskin.



Representatives of Izolyator-AKS LLC management demonstrate samples of the company's products – stress-cones of 220 kV cable sleeves. In the photo (L-R): Alexander Danilov, Victor Pshennov, Ellada Ismayilova and Sergey Kodemaskin

Stress cones of 220 kV cable joints manufactured by Izolyator-AKS were demonstrated at the exhibition stand of the Uncomtech Trading House - the largest supplier of cable and wire products in Russia and the CIS. ■



In the picture(L-R): Director of Information Systems Development at Uncomtech Trading House Alexander Afanasyev, CEO of Uncomtech Trading House Sergey Chirkov, Alexander Slavinsky and Victor Pshennov



コリビス

Meetings with partners at the Cabex 2021 Exhibition. In the picture (L-R): Deputy General Director - Director of Industry-specific Issues and Innovative Development of VNIIKP Evgeny Vasiliev, President of the Electrokabel Association Maxim Tretyakov and Alexander Slavinsky



# POWER INDUSTRY OF RUSSIA 1 HALF 2021



## Over 1976 bushings 24-750 kV delivered in the I half

2021 to the Unified energy system of Russia

Including 36 bushings 500-750 kV

Transformer plants of Russia received

**IDGC Center PJSC** 

Over 2000 high-voltage bushings



Production of innovative and high-tech Russian cable accessories launched: cable joints and terminations, dry pluggable connectors 110 - 220 kV for power facilities of Russia, neighboring countries and overseas.

## Izolyator plant 70-80% high-voltage bushings

high-voltage bushings market in Russia and neighboring countries



## PARTNERSHIP



Effective management, innovative technologies, modern production facilities, professionalism and reliability of employees are the basis for the success and development of the enterprise! We are grateful to you for the opportunity to work with you and we hope that our partnership will be even more successful and long-term!

Andrey Bashkov CEO at Metal Processing Center Most-1

# A strategic tandem

Representatives of the management of the Kamyshlov plant Uralizolyator visited the Izolyator production complex.

The group was headed by Commercial Director of the Kamyshlov plant Uralizolyator Alexander Frantsuzov.

The guests were received by the Head of the Purchasing Department Dmitry Karasev.

Dmitry Karasev gave a plant tour showing the workshops of the enterprise, during which the guests got acquainted with the most advanced equipment and modern technologies for the production and testing of high-voltage bushings.

The guests traced all the stages of Uralizolyator's products movement in the technological cycle of bushing manufacturing: from storage and preparation of porcelain insulators to their use in the assembly process, followed by testing and packaging of the finished product.

The sides also discussed the progress of joint work and the further procedure for inter-



Representatives of the management of the Kamyshlov plant Uralizolyator in the test center of the Izolyator Production complex, on the R - Commercial Director of Uralizolyator Alexander Frantsuzov

action under the existing supply contracts of Uralizolyator products.

The partners paid special attention to the long-term planning of cooperation, based on

the prospected product range and dynamics of production volumes of Izolyator high-voltage bushings with porcelain external insulation.

## **Connected without borders**



Remote talks with management representatives of the chemical company Wacker Chemie AG

Remote talks were held with representatives of the management of the chemicals supplier Wacker Chemie AG. From the head office of Wacker Chemie AG in Germany, a member of the Board of Directors Christian Gimber joined in the negotiations via videoconference, while Wacker Chemie Rus was represented by its CEO Alexander Serov from the Moscow office and Sales Manager for engineering silicones of the Dmitry Kosov.

At Izolyator, the remote negotiations were attended by Director of Production and Technical Service Dmitry Lopatin, Deputy General Director of Izolyator-AKS Ellada Ismaylova, Head of Procurement Department Dmitry Karasev and Lead Manager of Procurement Department Yury Kukhtin.

The talks were dedicated to discussing volumes and timing of deliveries of the components of the organosilicon composition in the near and long-term outlook. The sides agreed a set of measures and an order of interaction to implement the forthcoming and next scheduled shipments.



For 125 years, the plant has gone a colossally difficult path, outstanding in professional achievements and impressive success. So we wish your company to write many more glorious pages in its history, to multiply the number of victories and achievements, reliable partners and loyal friends! Our wishes of stable, confident and reliable work for the enterprise! Health, happiness, optimism and confidence in the future to the entire team and veterans of the plant!

> Elena Lebedeva CEO at KirovCenterMetall

# Reliable partnership



Management representatives of the KirovCenterMetall metal trading company at the Izolyator plant, (L–R): Valeria Prudnikovich, Dmitry Karasev, Commercial Director of KirovCenterMetall Dmitry Butorin and Head of the Sales Department of KirovCenterMetall Ksenia Chuprakova

A working meeting was held at the Izolyator plant with management representatives of the KirovCenterMetall metal trading company -

## Attention to detail

The Izolyator production complex was visited by representatives of the management of the Avtocom Industrial Group's enterprises: Deputy General Director for Procurement of the Avtocom Industrial Group Evgeny Gutgartz, Commercial Director of the Key KAC company Mikhail Kiselev, Acting Executive Director of the Kaluga Automotive Electrical Equipment Plant (KZAE) Sergey Sirenko, Head of the Marketing Department of the Electrocontact enterprise Dmitry Shitov. The guests were received by the Head of the Purchasing Department Dmitry Karasev.

The parties clarified plans for the supply of products of the Industrial Group Avtocom in the second quarter of this year and agreed on the joint activities until the end of 2021. Evgeny Gutgarts informed about the progress of the plan of technical re-equipment of the group's enterprises, which will allow increasing production capacity under the orders of Izolyator. With representatives of Electrocontact and KZAE, a discussion was held on the prospects Commercial Director Dmitry Butorin and Head of the Sales Department Ksenia Chuprakova. The guests were received by Director of the Production and Technical Department Dmitry Lopatin, Head of the Purchasing Department Dmitry Karasev and Purchasing Specialist Valeria Prudnikovich.

The meeting was dedicated to cooperation plans for 2021: the product range, volumes and delivery terms of KirovCenterMetall products, used as parts in the production of high-voltage bushings. The technical characteristics of the products were specified and agreed upon, taking into account the new serial products in development at the Izolyator plant.

Metal trading company KirovCenterMetall is a supplier of a wide range of non-ferrous metal products of copper, brass, bronze, aluminum; rolled stainless steel, and other materials. The company has well-established partnerships with Russian metal rolling plants.

KirovCenterMetall, one of the main suppliers of rolled metal products to the Izolyator plant, has established itself as a reliable partner, cooperation with which is developing on a systematic long-term basis.



Management representatives of the Industrial group Autocom in a plant tour of the Izolyator high-voltage bushings production

for the development of cooperation in terms of aluminum casting and machining of non-ferrous metal products.

Then Dmitry Karasev gave a tour of the Izoly-

ator Production Complex. Special attention was paid to the use of the products of the Industrial Group Autocom in production as components of the Izolyator bushings.

## PARTNERSHIP



Thanks to production innovations, professionalism and conscientious work, new power facilities are being built in the country, major projects are being implemented and Russian enterprises, institutions, and social facilities are operating smoothly. Based on the rich experience of generations, the scientific and technical

based on the inclusive of generations, the scientific and technical base, the employees of the enterprise can work conscientiously, solving the assigned tasks on a daily basis.

Sergey Burago CEO at Sovtransavto – Moskva

# Returning a visit



Director Tatyana Zhizneva.

The parties summed up the results of joint activities of the enterprises from August to December 2020

of the year. During this time, more than 55 deliveries of Izolyator products to various regions and federal subject of the Russian Federation, including the Far East, Siberia, the Komi Republic, and the Yamalo-Nenets Autonomous Okrug, have been carried out.

Then the parties discussed the prospects for developing cooperation in the delivery of Izolyator products to neighboring countries and the Asian region - India, Vietnam and China, as well as organizing the work of a partner consolidation warehouse for shipping products using railway service.

The management of the logistics department of lzolyator visited the Moscow office and met with the management of the transport and logistics company Sovtransavto-Moscow and the forwarding company Rusta Logistic. The lzolyator colleagues were returning visit after receiving one of Sovtransavto-Moscow and Rusta Logistic's management in September 2020.

The logistics department of Izolyator was represented by the Head of the Department Andrey Pavlov and Group Leader Irina Shevchenko.

The guests were received by the CEO at Sovtransavto-Moscow Sergey Burago and the management of Rusta Logistic: CEO Ekaterina Kuzina, Commercial Director Maria Safronova, Operational Director Sergey Snezhko, Financial



forwarding company Rusta Logistic

The management of the transport and logistics Sovtransavto-Moscow and the forwarding company Rusta Logistic, L-R: Finance Director at Rusta Logistic Tatiana Zhizneva, Operational Director at Rusta Logistic Sergey Snezhko, CEO at Rusta Logistic Ekaterina Kuzina, Commercial Director at Rusta Logistic Maria Safronova and CEO at Sovtransavto-Moskva Sergey Burago



On behalf of the international logistics group of companies AsstrA-Associated Traffic, we congratulate Izolyator on its 125th anniversary! Thank you for the fruitful cooperation and we wish you active development, prosperity, stable financial growth and interesting, socially significant projects. And also to continue to maintain a leading position in the high-voltage insulation equipment market.

Dmitry Lagun Chairman of the Board of Directors at AsstrA-Associated Traffic

Representatives of the management of Rusta Logistic visited Izolyator to congratulate the staff on the 125th anniversary of the plant and presented an original memorable gift.

We would like to thank our colleagues for the kind words and wishes addressed to the Izolyator team. We continue active cooperation for the benefit of the development of the power complex of Russia and other countries.



Rusta Logistic forwarding company is congratulating Izolyator on its anniversary

# Our transportation partners congratulate us

ORANGE

LOG

The Pervaya Oranzhevaya Kompaniya's team



Pervaya Oranzhevaya Kompaniya congratulates the management and staff of Izolyator

plant on the anniversary date, the 125th anniversary of continuous production activity.

We wish you many, many years of successful activity, to just as effectively continue to keep up with the times, grasping the needs of the present and the future.

Separately, we would like to congratulate the staff of the plant, with whom it is very pleasant to work. Strict, demanding, responsible, well-versed in their business.

A competent management team, a professional team, reliable partners, we wish you to preserve for a long time the balance built over many years.

Pervaya Oranzhevaya Kompaniya is a longterm logistics partner of Izolyator plant and is determined to remain so for many years. Happy Birthday! The Krafttrans' team



The international logistics company KRAFT-TRANS sincerely congratulates the Izolyator team on the 125th anniversary!



During our cooperation, we witnessed that your company rightfully occupies a leading position in the production of high-voltage bushings in Russia, and contributes to the development of the energy industry.

Undoubtedly, the achieved success is primarily the result of high professionalism and dedication of the company's team. Therefore, KRAFT-TRANS wishes personal and professional victories, peace and prosperity, happiness and good health to all your employees, their families and friends! We are sincerely glad to cooperate with the largest manufacturer in its field, which gives us a reason to be proud. You are not just a partner for us, but a motivator for further development!

## PULSE OF THE COMPANY



Izolyator has developed its own unique technology for industrial production of bushings with RIP-insulation, launched a new production of cable accessories for 110-220 kV. The company set up a Russian -Indian joint venture to manufacture high-voltage RIP bushings. May the accumulated professional experience contribute to the implementation of new projects and the realization of plans.

General Director at Production Center Gefest

# In memory of the heroes

A commemorative event in honor of the 76th anniversary of the Victory in the Great Patriotic War of 1941-1945 was held on the territory of the Izolyator Production Complex. According to the established tradition, opening the annual solemn ceremony, the Izolyator management laid wreaths at the monument with the names of the plant workers - front-line soldiers and home front workers of the Great Patriotic War of 1941-1945.

The factory workers forged Victory both on the fronts of the Great Patriotic War and on the round-the-clock labor front. In June 1941, many employees of the enterprise were drafted into the army, and those who were not subject to conscription volunteered to join the people's militia. Those who stayed at the machine, all the war years provided the country's restored power industry with the plant's products and carried out defense orders under the slogan "Everything for the front! Everything for the victory!"

Following the wreaths laying, people carried red carnations to the monument - a symbol of spilled scarlet blood. And also - a



symbol of victory, courage and nobility of the victorious soldier.

And then came a Minute of silence. Everyone in those moments was left alone with his memory of those who defended our country and life itself at an inconceivable cost.

Eternal Glory and Memory to the heroes who defended the honor and independence of our Motherland in the Great Patriotic War of 1941-1945!

## The Immortal regiment of Izolyator plant



Viewing of the Immortal Regiment exposition of the Izolyator plant

On the eve of the Victory Day in the Great Patriotic War of 1941-1945, Izolyator hosted the grand opening of the Immortal Regiment exposition.

The exposition is based on photographs and combat paths of participants in the Great Patriotic War - relatives of Izolyator employees.

The event began with a speech by Alexander Slavinsky, CEO at Zavod Izolyator LLC. Words of endless gratitude were expressed to the war generation, who defended the honor and independence of our Motherland at an inconceivable cost.

Guests of honor from Kazakhstan took part in the solemn ceremony: CEO at Asia Trafo plant Omar Asanov, Chairman of the Board of Alageum Electric Olzhas Esirkepov, representative of Alageum Electric in Moscow Dmitry Urikh.



Izolyator has walked a glorious path of formation, prosperity, overcoming difficulties, outstanding professional success and impressive achievements of high-tech production. We wish you stable, reliable and confident work, new victories and achievements, reliable partners and loyal friends! Health, happiness, optimism, stability and prosperity to you and your entire team and veterans of the glorious enterprise! We look forward to further fruitful cooperation! May success accompany you in every undertaking!

# *Four generations of a labor dynasty*



Izolyator representatives at the Labor Day of the Moscow Region at the Palace of Culture of Istra

A celebration of work collectives, family dynasties and honored workers of the Istra city district took place, timed to coincide with the Labor Day of the Moscow Region.

The Fedorovs-Kiryukhins labor dynasty was awarded with letters of appreciation from the Minister of Investments, Industry and Science of the Moscow Region and the Istra City District Administration for achievements in labor and active participation in the Moscow Regional Competition "Best Labor Dynasty".

The Fedorovs-Kiryukhins dynasty began their labor history at the Izolyator plant in 1922 with the arrival of Leonid Ivanovich Fedorov at the plant (worked at the plant in 1922-1962, awarded the Order of the Red Banner of Labor). For four generations this family has been working at the enterprise, which this year celebrates the 125th anniversary of its foundation!

Today in the ranks at the plant, there are Lead Technical Support Specialist Viktor Kiryukhin and his wife, Leading Designer Natalya Kiryukhina, the granddaughter of Leonid Ivanovich. The fourth generation of the dynasty is represented by their son - the Chief Engineer of the R & D center Pavel Kiryukhin.

A letter of appreciation from the Head of the city district of Istra was awarded to Maxim Makarov, an electrician of the repair and maintenance of electrical equipment at Izolyator Industrial Complex.

The letter expresses gratitude for many years of conscientious work, high professionalism and decent performance in work.

# Visit of representatives of the Administration of the Shakhovskaya city district

Representatives of the administration of the Shakhovskaya city district visited Izolyator.

The administration of the Shakhovskaya city district was represented by Deputy Head of the Administration, Chairman of the Committee on Economics and Investments Lyubov Ganina and Deputy Chairman of the Committee on Economics and Investments, Head of the Economics Department Gulia Markova.

The guests were received by the CEO Massa LLC Sergey Moiseev and Julia Turina, HRM.

The key topic of the meeting was the coordination of efforts to explain the expediency and procedure for mass vaccination against coronavirus infection COVID-19.

A tour of the Izolyator Industrial Complex and Izolyator-AKS enterprise was also organized for the guests, after which a visit to the corporate museum took place.



Ivan Lupashko Director at Valkiria

Visit of representatives of the Shakhovskaya City District Administration to Izolyator: Deputy Head of Administration, Chairman of the Committee on Economics and Investments Lyubov Ganina (R), Deputy Chairman of the Committee on Economics and Investments, Head of the Economics Department Gulia Markova and Sergey Moiseev

A visit to the corporate museum finalized the excursion part of the visit. Here the guests got acquainted with the centuriesold history and major achievements of the Izolyator plant, which is celebrating its 125th anniversary this year.

## PULSE OF THE COMPANY



Our companies have been successfully cooperating for over 20 years and, as of today, Izolyator is one of our most important partners in terms of supplies of insulating materials, in particular, crepe paper. Over the entire period of our cooperation, your company has constantly confirmed the status of a stable, reliable and professional partner, who strictly fulfills all business obligations.

Head of Representative Office Weidmann Electrical Technology AG

# *Recertification audit of Izolyator plant*

The standards of the Integrated Management System for Quality, Environment, Health and Safety at work are very much appreciated in the global professional community. It was them that were assessed by the recertification audit in the period from 15 to 19 February 2021 at the Izolyator Production Complex (Massa LLC). The audit was performed by the auditors of the Swiss company SGS. SGS is represented in the Russian Federation by SGS Vostok Limited, 100% of which is owned by SGS S.A.

SGS auditors noted a good level of preparation of the enterprise for a recertification audit, motivation, involvement and commitment of personnel to the function-

Recertification audit of the Integrated Management System for Quality, Environment, Health and Safety at Izolyator

ing of the Integrated Quality Management System (IMS), as well as compliance of the

IMS of the enterprise with the criteria of international standards. ■

# Subscribe to the channel!

The official chat of the Izolyator Production Complex has started working on the Telegram messenger platform.



The new communication channel is a consequence of the company's commitment to maintain an open dialogue and cooperation in all aspects of its activities.

The Telegram cloud messenger is available on any devices that have an Internet connection - computers, smartphones, tablets, etc.

Now everyone can get up-to-date information about the functioning of any of the company's processes in a few clicks and directly by asking a question to the mosizolyator chat bot.

Izolyator consistently and steadily continues to implement the policy of raising the awareness of its employees and partners, attracting and developing the most effective communication technologies.





Container for collection of waste batteries for recycling

On the territory of the Izolyator Production Complex, specialized containers are installed for storing spent electrochemical sources of electric current.

The containers were installed in order to consistently reduce the negative impact of the company's activities on the environment, which is the main goal of Izolyator in the field of environmental protection.

To effectively solve this problem, the enterprise operates an Environmental Management System ISO 14001 (GOST R ISO 14001), which operates and develops as part of the Integrated Management System for Quality, Environment, Occupational Safety and Health.

Izolyator, realizing its responsibility, annually makes environmental payments to the federal budget of the Russian Federation, monitors and develops measures to reduce the level of negative impact on the environment.



All these years you have invested in the development of power sector, especially domestic, your talent, work, and, one might say, your soul. Thanks to your efforts, the connection between generations of electrical engineers is maintained, technologies are developing, and the reliability of the domestic power system is increasing.

It is a great honor for us to be a representative of your company, thanks to which we learn and improve every day.

Mikhail Vorontsov CEO at Osteron

# *Reconstruction of the electrochemical laboratory completed*



Reconstruction of the electrochemical laboratory of the test center has been completed at the Izolyator Production Complex. A modern interior that fully corresponds to the functionality of the electrochemical laboratory (ECL) has been created. The most advanced equipment was

Alexander Slavinsky is examinining the reconstructed electrochemical laboratory

installed and put into operation, providing an effective solution to all tasks assigned to the laboratory.



New interior and equipment fully correspond to the purpose of the laboratory



The laboratory personnel consists only of highly qualified specialists

## CORPORATE UNIVERSITY



I express my deep respect and special gratitude to the staff of the enterprise for the fruitful cooperation with our university. It is a great pride for MIET that the Chairman of the Board of Directors is our graduate, and I am particularly pleased that Alexander Zinovievich has maintained good relations with alma mater.

We do appreciate the company's contribution to the development of MIET and look forward to further successful cooperation. We are confident that through joint efforts we will be able to make a significant contribution to the development of the technological potential of the Russian Federation.

Vladimir Bespalov Rector at National Research University Moscow Institute of Electronic Technology

## *Development of human resources is a comprehensive concept*



Julia Turina, Head of Human Resources at Izolyator (L) is working at the plenary session within the framework of the project "Competences of the XXI century" at the State Institute of the Russian language in the name of A.S. Pushkin

Izolyator always emphasizes that the core value of the enterprise is its people. In order for the team to develop, grow and acquire new knowledge and skills, the company conducts systematic work both within the enterprise and by attracting third-party educational organizations.

### Competences in order

Izolyator took part in a plenary meeting of the expert group of the analytical session on finalizing the descriptions of general competences for professional standards, which took place within the framework of the project "Competences of the XXI century: definition, formation and assessment".

The plenary session opening the discussion was held at the Pushkin Institute, where Izolyator was represented by Julia Turina, Head of Human Resources and Deputy Chairman of the Board of the Izolyator Corporate University.

## Working with the National Agency for the Development of Qualifications

Izolyator plant took part in the online seminar "Education and Business: Best Interaction Practices" organized by the National Agency for the Development of Qualifications.

Izolyator plant was represented at the seminar remotely by the Head of the Human Resources, Deputy Chairman of Izolyator Corporate University Julia Tyurina.

Besides, the company took part in a press conference dedicated to the signing of cooperation agreements by

the National Agency for the Development of Qualifications with the State Institute of

the Russian Language in the name of A.S. Pushkin and the Association "Digital Energy" in the framework of the project "Competence of the XXI century: definition, formation and assessment."

One more special project involved participation of Julia Turina, Head of HR dpt of Izolyator. In the first in 2021 consulting workshop the professional community discussed application of professional standards, procedures and techniques for independent assessment of qualifications in the staff training, which was carried out by the National Agency for the Development of Qualifications.

## Occupational safety in working at height

Izolyator hosted a lecture "Labor protection when working at height", which was delivered by an instructor of the Autonomous Non-Commercial Organization of Continuing Professional Education "Poisk Training and Certification Center".

The lecture considered the means of worker protection and the requirements in accordance with GOST EN 795-2019 "Oc-cupational safety standards system. Personal protective equipment against falls from a height. Anchor devices"



Instructor of Poisk Training and Certification Center is giving a lecture "Labor protection when working at height" to Izolyator staff members



During cooperation with NRU MPEI, Izolyator plant proved to be a reliable partner, clearly fulfilling its obligations and investing maximum effort and creative energy in the implemented projects. Izolyator plant is one of the employers that are very popular among graduates of NRU MPEI. An important role in this is played by the constant readiness of the plant's management to participate in the life of the university and maintain a direct dialogue with students and employees.

## We will tell and show



An educational tour and quest "Let there be light!" for students of the Electric Power Institute of the National Research University MPEI went with great practical benefit and were fun

Prof. Nikolay Rogalev, D.Eng.Sc.

**Rector at National Research University MPEI** 

An educational tour of the Izolyator plant was organized for students of the Electric Power Institute of the National Research University MPEI.

The excursion for the 4th year undergraduate students studying at the Department of High-Voltage Engineering and Electrophysics of the Electric Power Engineering Institute of the MPEI was held within the framework of the social partnership between MPEI and Izolyator. The visit opened with an excursion in the Izolyator company museum. Here, Victor Kiryukhin, Lead Technical Support Specialist presented to the students of MPEI the century-old history of the enterprise. Further, the sightseers got acquainted with all stages of the technological cycle of modern high-voltage bushings production.

The tour of the enterprise served as a source for the tasks of the quest "Let there be light!",

which was conducted by employees of Izolyator corporate university.

CEO at Izolyator Alexander Slavinsky congratulated the winners of the "Let there be light!" quest and awarded them with the certificates of appreciation, and handed over to all the rest a personal certificate of the participant. Everyone received presents with company corporate souvenirs.



Teamwork on completing the quest task



Acquaintance with the technology of manufacturing of internal insulation of high-voltage bushings

## CORPORATE UNIVERSITY People do business Julia TURINA,

## Julia TURINA, Head of Human Resources Izolyator

In the modern economy, it is difficult to count on a breakthrough if the company is not aimed at modernizing technologies and developing human resources. The old Soviet slogan: "Cadres decide everything!" in the XXI century can be read as "People to business". In the first half of 2021, Izolyator implemented several projects at once to develop the talent pool and improve the qualifications of personnel.

### Learning together

"Training in the field of company management" is a longterm professional development project, which involves all leader of structural divisions, young specialists, engineering and technical personnel. The project consists of several training programs: from electricity fundamentals to business negotiation skills. Such a wide range of programs allows listeners to choose a topic of interest to them. The great value of this project is represented by instructors real professionals in their field.

The course "Fundamentals of Electricity" was presented in the classical university version: a cycle of lectures, continued by a traditional exam by drawing tickets to check the knowledge of material. The lectures were given by the faculty members of MPEI: M.A. Kozinova, M.P. Zhokhova, D.A. Matveev, L.K. Osika. The exam was received by a representative board consisting of Alexander Slavinsky, CEO of Izolyator, Yury Nikitin, Chief Designer; Dmitry Mashinistov, Head of the technical control and quality assurance department. The university format was chosen for a reason. The specialists of the enterprise should not only have a good knowledge of the specifics of own production, but



also understand the technological chain of the entire industry.

The course, first of all, was focused on those who are not engineers by education. On-the-job students received the required university minimum in a short time. The course was also interesting for those who finished their studies long ago and wanted to "refresh their memory", to learn about the current state of affairs in science.

The rest of the courses were taught by managers of structural divisions of Izolyator. It is worth mentioning that none of them received a pedagogical education, but responsibility, understanding of the common cause, maximum involvement in this work allowed them to perform the role of teachers.

Elena Posokh, Chief Accountant, showed how complex calculations form the basis of the balance sheet. Elena Zubakova, Director of Legal Affairs, tried



Exam in the basics of electrical engineering and power engineering within the "Advanced training in the field of company management" of the Izolyator corporate university



Negotiation skills practice

to "interpret the letter of the law" in such a way that a complex legal language became understandable like a decoded information. Boris Sobelman, Associate

General Director for Safety, "made it simple" telling about the actions of each in the event of an emergency. Alexander Golikov, Environmental Safety Specialist, proved that environmental problems are not abstract concepts, but concern every employee of the enterprise.

#### Public speaking skills

Alexander Slavinsky, Chairman of the Board of the Izolyator corporate university, has allocated time to conduct a practice-oriented course "Public Speaking Skills" in his busy schedule. At the first session, Alexander Zinovievich showed a master class in oratory, decomposing his own speech and demonstrating techniques for controlling the audience's attention. He showed how to get out of difficult situations that may arise during a spontaneous speech, and also gave examples of correct answers to the sharpest questions of the audience. During the practical sessions, the listeners presented their reports on a free topic, applying the knowledge gained at the lectures.

How interesting and emotional the practical sessions were! Everyone tried to present himself from the best side: someone was focused on work and talked about prospects in professional development, others tried to captivate the audience with their hobbies, some colleagues advertised the company's products. Not a single speaker was left without a fair teaching grade. Alexander Zinovievich noted the "pluses" and "minuses", gave personal advice and recommendations on how to avoid mistakes in the future.

As a result, practice-oriented courses have outgrown into the training format. In January 2021, Alexander Zinovievich gave the first training on business negotiation skills. Three typical situations were identified in the mainstream of which business negotiations can develop. As a homework as-



Alexander Slavinsky is highlighting the critical role of mentoring

## CORPORATE UNIVERSITY



signment, it was proposed to break up into groups with different roles and at subsequent meetings to act out the "purchase and sale" situations at negotiations. All the training participants did an excellent job with the task.

### English language in priority

The world froze in anticipation of a new super-perfect linguistic program with which you can communicate with the interlocutor in any language. Maybe tomorrow there will be no need to pay money for English courses and cram words ... But today it is still important to study English using the old proven methods: with a textbook under your pillow and a tutor several times a week.

Izolyator has big plans to develop foreign sales markets and one of the determining factors for the competence of employees working with foreign partners is fluency in English.

To ensure that employees improve their language skills, the enterprise has been operating a long-term multilevel educational program for the study of the English since

Exam for Izolyator employees studying English under the corporate university program

2019. It can be studied not only by the specialists dealing with foreign economic affairs, but also by any of the company's employees. In 2020, employees were trained remotely in their free time in partnership with Skyeng.

In January 2021, students took the test to confirm the level of knowledge of the English language. The examiners were employees of the department of foreign economic activity and the commercial division of the company.

This kind of language practice in the role of teachers was also very useful and new to them. Several students confirmed the Intermediate level. Remember that at this level, language skills allow a person to communicate freely with the interlocutor. The exam was held in an informal setting over a cup of fragrant tea. Alexander Slavinsky, Chairman of the Board of the Corporate University, set the tone for the conversation.

His fluency in English allows him to freely speak,



Lecture on the topic "Normative documents for power transformers and high-voltage bushings. Russian National Committee CIGRE"- one of the areas of advanced training in the field of company management



write, present at international conferences. All students have confirmed their knowledge.

The participants liked the format of the event so much that a decision was made to have regular meetings of the English Conversation Club in the company.

### Forewarned is forearmed

On 1 January 2021, a number of new labor protection rules came into force. During the first half of the year, 209 people underwent extraordinary safety competence assessment: 159 people - in person and 50 people - remotely.

Panfil Fostikov, Head of the Labor Protection Office, introduced employees to the basics of labor safety at the enterprise, spoking about the changes in legislation and answering questions from the audience. During the lecture, Panfil drew on a wealth of practical experience, showed videos of safety violations and asked provocative questions about the material viewed. These pedagogical insights helped transform traditionally boring activities into memorable lessons.

Another meeting of the participants of the English Conversation Club of Izolyator

#### Integration is a sign of modernity

Specifics of products manufactured by Izolyator plant is that high-voltage bushings are part of the global energy system. The company's products are supplied not only to the Russian market. Bushings are an integral component of many foreign nuclear, thermal and hydroelectric power plants; trunk and distribution networks; substations of the largest industrial enterprises. It is safe to say that the enterprise is integrated into the global power system. The principles of integration dictate compliance with international standards for product certification and participation in international public organizations of the CIGRE level.

Izolyator understands the degree of responsibility towards product consumers and is open to any partner dialogue. The topic of the conversation was set by Vladimir Ustinov, Director of the Moscow branch of the Izolyator plant. He developed a new distance course "Power Transformers and High-Voltage Bushings". Vladimir Nikolayevich reflected his many years of experience at a transformer plant and at the Izolyator plant in the course modules.



Managers of structural divisions of Izolyator at the presentation "Efficient mentor"

## CORPORATE UNIVERSITY

The course covers:

- design features of power transformers and high-voltage bushings;
- testing of transformers and high-voltage bushings at the factory and during commissioning;
- European IEC standard and American IEEE standard, their comparative characteristics;
- activities of the Russian branch of CIGRE.

Vladimir presented some of the prepared materials in full-time format for employees of the commercial division. Modern technical and technological knowledge in the field of electric power is essential for them in the process of communication with engineers of partner enterprises.

The materials of the distance course "Power transformers and high-voltage bushings" will be of interest to chief engineers, heads of electrical shops and test engineers of high-voltage electrical equipment.

### A simple answer to difficult questions

Izolyator continues to develop a mobile application that demonstrates the entire process of high-voltage bushings installation on power equipment.

The user of the mobile application will be able to undergo a virtual training on the installation of bushings, read the technical documentation of the selected unit in the corresponding menu and, if necessary, export it for further use.

A special tab contains the current catalog of all types of bushings. In addition, the application provides a virtual assistant that will analyze the bushing data in operation, correlate them with the characteristics of modern models and give a ready result for replacing equipment. The application will be an additional tool for presenting lzolyator products.

### Mentor is a guide to the professional world

Mentoring is one of the basic methods of transferring knowledge. It is widely used in the practice of staff training and adaptation of new employees. Izolyator is implementing a project to adapt both newly employed employees and those who have changed positions and moved to another structural unit.

"Professional standard is a characteristic of the qualifications necessary for an employee to carry out a certain type of professional activity, including the performance of a certain labor function" Article 195.1 of the Labor Code of the Russian Federation

> At the job start, a new employee gets acquainted with information about the history of the enterprise, organizational structure, internal labor regulations, and is trained in labor protection. The HR specialist issues an adaptation plan to the new employee and introduces the newcomer to the future mentor. The mentor coordinates the activities of the newly arrived employee and helps to resolve emerging issues. For the efficiency of issues resolution that arise with new



Remote meeting with specialists of Rosseti FGC UES following up the results of their training in the installation of high-voltage bushings

team members in the first days of their employment, HR representatives have developed a chat bot in Telegram.

After the first month of the new employee's work, the HR specialist organizes a meeting, during which the newcomer and the mentor share their impressions of the work done and discuss possible problems. The following meetings are held approximately once a month. In order for the entire adaptation process to be transparent and easy to understand, all stages are recorded in the plan. The process of adaptation of a new employee ends with a test.

It checks whether the employee is prepared for independent work at the enterprise or needs additional training.

At the moment, a mentor base is being formed in the company from various structural divisions, which will include the best employees with many years of experience in the enterprise.

### Implementation of professional standards

Since 2016, the implementation of professional standards became mandatory in the formation of the personnel policy of enterprises. In the Labor Code of the Russian Federation, there were corresponding articles introduced that legislatively consolidate the concepts of "employee qualifications" and "professional standard".

This year, Izolyator's human resources division has launched a project to introduce professional standards in the company. The project consists of several stages. Many have already been implemented in the first half of the year according to the developed roadmap of professional standards introduction.

HR specialists analyze the staffing table, select specific positions and correlate them with professional standards from the approved register of the Ministry of Labor and Social Protection of the Russian Federation. The heads of the company's structural divisions, if necessary, make adjustments reflecting the specifics of the labor functions of specific positions. After the approval of professional standards, the qualifications and experience of employees are analyzed for suitability for the position.

Once any non-compliance with the requirements of professional standards is detected, corrective measures are taken. For example, changing the job responsibilities of employees, raising qualifications or professional retraining, and more.

One of the stages of the professional standards implementation - certification of personnel with the subsequent attributing of qualification categories.

There is still a lot of work to introduce professional standards at Izolyator. But the set goal of building a unified personnel policy will ensure the growth of labor efficiency due to the high level of professionalism of employees.

#### The birth of a new tradition

The company has a good tradition - to have monthly meetings with students of the Istra branch of Krasnogorsk College. In the first half of 2021, sophomore students visited Izolyator several times. In college, students are receiving training in "Operator of machine tools with programmed control" profession and it is important for them not only to be able to work on machines, but also to understand the entire technological process of manufacturing finished products. A meeting was organized for them at the design office of the R&D Center. The head of the office, Ivan Egorov, talked about how the elements of the high-voltage bushing are being developed, showed computer programs that allow them to be designed. Then the students visited the museum of the plant and production workshops. Viktor Kiryukhin, Lead Technical Support Specialist, as always, emotionally, enthusiastically and inspiredly led the excursion.

At the end of the excursion, the students visited the test center, where bushing tests were simulated especially for them. The glare of lightning and thunderstorms impressed the students very much. After the plant tour, the hosts arranged for a quest "Let there be light!". The winners received certificates and small gifts. In their comments about the excursion, they concisely and accurately wrote: "I liked everything! The polite attitude of the employees, an incredibly eventful excursion and a delicious lunch!"

### Ten out of ten

In April 2021, specialists of Rosseti FGC UES were trained in the course "Installation of high-voltage bushings on power equipment". After the training, some listeners noted in the questionnaire the main advantage of distance learning: the possibility to read the material carefully in a calm atmosphere at a convenient time and, if necessary, return to the topic.

The final class was organized in the video conference mode. The listeners had the opportunity to communicate with Izolyator specialists and get answers to all their questions. Viktor Kiryukhin, Lead Technical Support Specialist, spoke about the peculiarities of the operation of high-voltage bushings with polymer external insulation. The Head of the SVN-Service department Alexey Pilyugin gave recommendations on replacing old bushings with new ones.

The listeners highly appreciated both the organization of training and the completeness of the course that is important for them with information. G.M. Rusanov, Senior Foreman at Specialized Electric Grid Service Company of the Unified National Electric Grid JSC, wrote in the questionnaire: "An interesting and very informative course of studies. Everything is done in a modern style. Lots of information, lots of illustrations and videos. All that conveys the meaning of the teaching material very well. Interesting tests with no time limit".

D.N. Komissarov, Senior Foreman at Specialized Electric Grid Service Company of the Unified National Electric Grid JSC, wrote: "On a ten-point scale it is definitely 10 points. Success and prosperity in your hard work! Thank you so much for providing a new opportunity to improve our qualifications".

### **Reciprocal processes**

Izolyator has a social partnership project between the plant and educational institutions. We are actively cooperating on several aspects with Krasnogorsk Polytechnic College, Moscow Electrotechnical University and Moscow Institute of Electronic Technology. We conduct excursions for students, the most interested ones come to do their internships with us and some of them stay to work at the plant. We invite university professors to read lectures for our specialists on topical issues of the industry. Thus, we feed our intellectual potential with modern ideas.

Last year, a corporate university was created at the enterprise, which deals with the issues of professional development. We invite university professors as experts to evaluate distance learning programs created by our specialists.

Social partnership is mutually beneficial: students get a real idea of their future profession in the production settings of the enterprise, advice and assistance from professionals, university staff can use the technical base for conducting scientific experiments, and Izolyator - creative ideas of young minds and new knowledge in the field of electrical engineering.

# 68 Testing knowledge by practice

Students of the Istra branch of Krasnogorsk College completed an internship at Izolyator.

Students undergo practical training in the profession "Operator of machine tools with numeric control" (machines operator) under the guidance of experienced foremen in the shops of the Izolyator Production Complex.

During the internship, the students solidified theoretical knowledge gained in college, got acquainted with production and received practical skills in the chosen specialty. It is important to note that the practice became possible largely thanks to the social partnership agreement between the college and lzolyator.



Sophomores of the lstra branch of Krasnogorsk College took internship in the machining section of the insulation making shop



Internship of students of the Istra branch of Krasnogorsk College in the mechanical shop of the Izolyator Production Complex

Students in practice consolidate the theoretical knowledge gained at college



The birth of the basics of professional excellence









## Compulsory programs

- Labor protection
- Basics of fire safety
  General industrial safety (A1, B.9.31)
- Electrical safety (III electrical safety group)
- First sides what is a set of the set of the
- First aid regulations

### Retraining

- Professional teaching staff
- Human resource management

### Advanced training

- Installation of high-voltage bushings on power equipment
- Power transformers and high-voltage bushings
- MS Excel. Quick start
- MS Word. Working with templates
- MS Power Point. Not only presentations
- Cloud technologies. Working in a team

 License to carry our educational activities



## **7** REASONS TO STUDY WITH US

BUILD

YOUR

CAREER

WITH US

An optimal and efficient staff training program

can be developed specially for you. We offer further

personnel development recommendations as you



ON-THE-JOB TRAINING

completed the course.



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## vernissage *Through the eyes of our employees*



An updated exhibition was opened at the Izolyator plant, which united in one space the artwork of two employees of the enterprise.

The authors of the exhibited works were introduced by Alexander Slavinsky, CEO at Zavod Izolyator LLC.

The author of the paintings series "I am not an artist ..." is Yulia Orekhova, Deputy Chief Accountant. Yulia confessed: "Crazy emotions, positive energy, delight, inspiration - all this I fully invest in my work".

The decorative and applied part of the exposition "Works of authorship for the soul and not only ..." was composed of works that were provided by Elena Mazova, a labor veteran, former Head of the Transport Department of the enterprise.

Elena Mazova's participation in the project

Alexander Slavinsky opens a renewed exhibition of artwork by the staff of Izolyator

is far from accidental. One of the long-standing and unfailing traditions of the Izolyator plant is deep respect, attentive and careful attitude towards its veterans who have completed their career and are on a well-deserved rest The company does not lose touch with them in everyday life - participation of veterans in festive celebrations and especially significant corporate events is much desired. This exhibition was no exception.



Walking of the exposition of artwork by Izolyator employees



# 71 | A recorded history

A photo exposition reflecting the historical milestones of the centurylong path and the present day of the enterprise was opened on June 4, 2021 in the exhibition space of the Izolyator Production Complex.

The spirit of the era, the versatility of the life of the Izolyator team, the stages of a long journey and the continuous development of the enterprise - all this was united by the new exhibition. The photo exposition will be a vivid addition to the festive events on the occasion of the 125th anniversary of the Izolyator plant.



A photo exposition dedicated to the 125th Anniversary of Izolyator plant



The photo exposition is installed in a specially organized exhibition space of the Izolyator Production Complex



▲ The exposition tells about the century-old history of the enterprise, about the glorious people and deeds

▼ Photo chronicles show both the daily life of the staff members and the outstanding achievements of the enterprise



# 72 | Team building dedicated to the 125th anniversary of Izolyator plant

Izolyator employees had an active team building dedicated to the 125th anniversary of Izolyator plant.

The script for the team building was based on the motives of the well-known television game show "Fort Boyard".

The format is based on the principles of team interaction, aimed at rallying and combining leadership qualities and team unity. Here, each participant must contribute to the achievement of a common goal on the team's path to victory. The main idea of the game is a joint search for solutions, interaction and mutual assistance.

The participants split into several teams and proceeded to the group assignments, moving one after another from trial to trial.

And now, all the trials have been passed and the keys have been obtained, with which the captains of the teams jointly open the coveted cage. After turning all



Sophisticated masters of the game do not portend easy victories

the keys, a mechanism is triggered and a bright "rain" of prize coins wakes up from the cage to the applause of those around them - the game is over!



The team building took place on the days when Izolyator celebrates its 125th anniversary, and a flash mob dedicated to this event became guite natural.

All participants gathered together on one site, where each became a part of the big "live" number "125".

So, the symbol of the centenary has become a symbol of unity and solidarity of one purposeful team - the entire staff of Izolyator!

At the end of the event, dozens of balloons soared into the sky, symbolizing new peaks - a new stage in the development of lzolyator.

The task of the team is to lead the ball from the side to the center of the labyrinth, preventing it from falling into open spaces. Allows one to identify people seeking to lead and take responsibility for the achieved result



▲ The goal of the assignment is to build a tower of seven rectangular "blockhouses". The task identifies people who take responsibility for the overall result




Accuracy check. The overall result of the stage depends on the actions of all team members





All keys must be turned at the same time so that to open the cage with the prize

**v** Ending of the festive celebrations – launch of baloons





▲ The 125th Anniversary of Izolyator plant flashmob

# 74 Energy of competition and friendship

Izolyator team took part in friendly volleyball games at the sports complex of the National Research University Moscow Institute of Electronic Technology.

The friendly matches were attended by the teams of the Mikron Group of Companies, the Electronic Computing and Information Systems Research and Production Center, Izolyator and the team of MIET faculty members.

Despite the competitive spirit and exciting moments, the games were played in a friendly atmosphere.

And, of course, what a competition without fans, whose energy was transferred to the players throughout the matches.

The main result of the games was the joy of communication and strong friendship!

Izolyator supports the development of extracurricular activities and student sports and, in particular, is an official partner of the student hockey team Elektronik of MIET, a co-founder of the Moscow Student Hockey League.

We appreciate the administration and faculty of MIET for organizing the matches and look forward to new meetings!



Lizolyator team is a participant of friendly volleyball games at the National Research University Moscow Institute of Electronic Technology







Lzolyator team in the game

 An exciting moment





Friendship always wins in friendly games



An ultimate team concentration

▼ The teams of MIET and Izolyator are tied with warm relations



# 76 With sports in life

Having a sports festival in the anniversary year of Izolyator was filled with deep meaning and importance. Here, the glorious sports traditions of the enterprise's team, inextricably linked with its multifaceted and eventful history, were reflected and multiplied at a new level.

The program of the sports contest included futsal, volleyball, badminton and table tennis tournaments.



▲ Sports festival dedicated to the 125th anniversary of Izolyator plant is open!



Women's badminton tournament



▲ Table tennis tournament

Volleyball tournament





The teams of the insulation-making and mechanical shops are playing futsal



► The select team of the plant met with the insulation-making shop's team in the futsal final



The Khorovod volleyball team is aimed solely at winning





A Prizes of the Corporate Sports Contest in honor of the 125th Anniversary of Izolyator plant

▼ Prize-winners of men's singles badminton tournament



igvee Prize-winners of women's singles in badminton



Awarding table tennis tournament winners in group A







Prize winners, Group B, table tennis



Awarding prize winners, group C, table tennis





Awarding team – prize winners in futsal

▼ Awarding teams - prize winners in volleyball



# JR PARTNERS Thank you for the kind words of congratulations on the 125<sup>th</sup> anniversary of Izolyator plant!

On the days of the 125th anniversary of the lzolyator plant, hundreds of congratulations were received by our team.

We thank everyone for the warm words of congratulations, in which we see an objective assessment of our long-term work, achievements and aspiration for open and fruitful cooperation!

With you, the co-authors of all our victories, we inextricably link our common future, the future of the electrical industry and the power complex of Russia and the

Electrical engineering company

**ELSYTECH GmbH** 

GROUP

**PREIS GmbH trading** 

company

ELSYTECH

energy sector of all the countries of the world.

And the invaluable experience born and multiplied by the centuries-old history of the Izolyator plant will always be our common asset and support on this path!



International logistics group AsstrA-Associated Traffic



Joint Venture Massa - Izolyator - Mehru



Aetos Trading company



Альянс узнерго

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State National Electric Power Company of the Republic of Tajikistan Barki Tochik



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Branch of Rosseti North-West in the Komi Republic



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National Research University 'Moscow Power Engineering Institute'



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Russian National Committee CIGRE



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Stan-Komplekt Trading company



Togliatti Transformer plant



Uralelectrotyazhmash Transformer plant





The Ministry of Energy of the Russian Federation



Metal processing center Most-1



Main Power Systems of Center Rosseti FGC UES



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Transport and logistics company Sovtransavto-Moskva



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# **Facts and achievements**



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