

IZOLYATOR *120 years*

CENTURIES-OLD TRADITIONS – STATE-OF-THE-ART TECHNOLOGIES

#3/2016 (10) JULY – SEPTEMBER

RESULTS OF THE THIRD QUARTER 2016

THE MAIN EVENT IN THE WORLD'S POWER INDUSTRY!

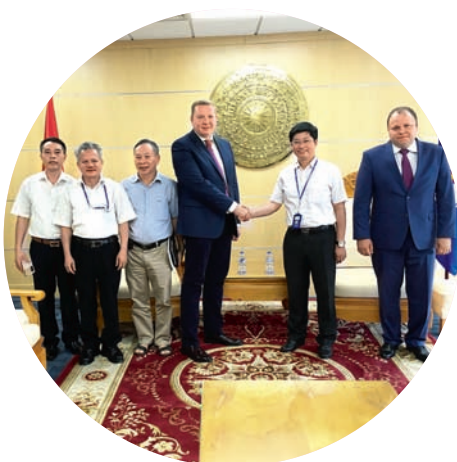


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ALEXANDER SLAVINSKY

EngD

Representative of Russia
in CIGRE SC D1,
Head of SC D1 RNC CIGRE,
Chairman of the Board
of Directors at Izolyator
Vice-President of AES RF
Vice-President of TRAVEK

On 21–26 August 2016, Izolyator took part in the work of the 46th Session of the International Council on Large Electric Systems — CIGRE that took place in the Palace of Congress in Paris, France.

Conseil International des Grands Réseaux Électriques (CIGRE) is the largest international non-profit Association for promoting collaboration with experts from all around the world by sharing knowledge and joining forces to improve electric power systems. Founded in 1921 in France and headquartered in Paris CIGRE is one of the most authoritative and significant international associations which unites scientists and power engineers from all over the world and makes significant impact on the strategy of the electricity industry in many countries.

Our company received status of the leading science and engineering partner of the Russian National Committee of CIGRE, and today, we actively engaged in research activities in CIGRE SC D1 and D1 Subcommittee of RNC CIGRE «Materials and emerging tests techniques».

THE MAIN EVENT IN THE WORLD'S POWER INDUSTRY!

Izolyator Is an Active Contributor to Scientific Research



Opening of the 46th CIGRE Session

Izolyator took an active part in the work of the 46th CIGRE Session (International Council on Large Electric Systems), which was held in the Congress Palace in Paris, France.

The CIGRE Session, held every two years in Paris, is the key event among activities of this largest international power industry organization. The main objective of

the session is scientific exchange and knowledge sharing among engineers, scientists and technical experts from all over the world in regard to high-voltage electric power generation and transmission.

Oleg Budargin, General Director at Rosseti JSC and Andrey Murov, Chairman of the Board of Directors at FGC UES JSC and RNC CIGRE Association Chairman headed

CIGRE
is present
in **90** countries
of the world



The 46th Session Sitting



Andrey Murov, right-forefront at the 46th CIGRE Session



Conseil International des Grands Réseaux Électriques (CIGRE) is the largest international non-profit Association for promoting collaboration with experts from all around the world by sharing knowledge and joining forces to improve electric power systems. Founded in 1921 in France and headquartered in Paris CIGRE is one of the most authoritative and significant international associations which unites scientists and power engineers from all over the world and makes significant impact on the strategy of the electricity industry in many countries. The mission of CIGRE as pertains to its Charter is to coordinate research, scientific knowledge and practical experience sharing on issues of power networks operation. The issues of design, creation and operation of high-voltage equipment, grids planning and operation, implementation of new technologies for data mining and processing and control systems are in the spotlight.

Izolyator is an official PARTNER OF RNC CIGRE

the delegation of the Russian National Committee of CIGRE.

The RNC CIGRE delegation included: Dr. Alexander Slavinsky, Representative of Russia in SC D1, Head of SC D1 RNC CIGRE, Chairman of the Board of Directors at Izolyator; Vladimir Ustinov, SC D1 RNC CIGRE Coordinator, Dty Quality Director at Izolyator and Valery Rusov, Chief Engineer at Dimrus Ltd.

Association The Russian National Committee of the International Council on Large Electric Systems (RNC CIGRE) occupies one of the leading positions in CIGRE in terms of both members quantity and high level of research in power industry and operation reliability of the unique Unified Grid of Russia. The Committee's purpose is to represent Russia's interests in CIGRE and promote technical knowledge exchange among RNC CIGRE members and cooperation with foreign colleagues. A clear and important



Alexander Slavinsky (L) and Vladimir Ustinov at the 46th Session of CIGRE

objective for the Committee is to attract leading Russian power industry enterprises to scientific and technical cooperation as research base organizations of study committees within RNC CIGRE.

The Study Committees in CIGRE structure are the main form of re-

search activities, experience and scientific information sharing in accordance with the mission of the organization. The aim of the study committee SC D1 Materials and Emerging Test Techniques is to promote engineering progress and international exchange of informa-

tion and knowledge in the areas of materials application and new test techniques.

The committee makes an input in that information and knowledge flow summarizing advanced methods and developing recommendations.



SC D1 Session in progress

This activity includes monitoring and evaluation of innovative development in the new and existing materials for electrical engineering, diagnostics methods and relevant procedures of scientific research, new test techniques that will significantly influence power grids at present and in the long term outlook.

During technical discussions and poster sessions on the topics of SC

Alexander
Slavinsky
is CIGRE SC D1
representative in Russia

D1 the following subjects were considered:

- application and measurements of various compact insulation systems of alternating and direct current;
- new materials application in high-voltage equipment;
- development of new procedures and test techniques for insulation systems used in electric equipment.

SC D1 RNC CIGRE members took part in the technical meeting of SC D1 where the Chairmen of the consulting and working groups of the Committee made their reports.

The working groups of the Study Committee D1 interacted with their counterparts in relevant fields during the session. The work helped outline directions of research for SC D1 for the near years.

Izolyator and international dialog development

Thanks for an active preparation by RNC CIGRE, a number of events aimed at the Russian science's authority promotion in the professional power industry and scientific community were held. Thus, several member societies of RNC CIGRE exhibited their products, services and innovations at the technical exhibition CIGRE 2016. Russia's achievements in Youth Section of RNC CIGRE were presented at the stand of CIGRE youth societies.

Parallel to the main agenda at the 46th Session of CIGRE, FGC UES and Izolyator delegates had business meetings with such companies as GE Grid Solutions, European System Operator Terna S. p. A., Belgian State Power Grid Company

Elia, CG Power Systems Belgium NV transformer maker.

MEETING WITH GE GRID SOLUTIONS REPRESENTATIVES

GE Grid Solutions was represented by Gerhard Seirling, VP Central Europe and Russia and Steffen Breuer, Commercial Director in Central and Eastern Europe.

The starting point of the trilateral talks was FGC UES's interest in cooperation with large foreign power grid companies. In this respect, GE Grid Solutions and Izolyator's positive experience with multinational companies, operating in power transmission and distribution provided a good basis for discussion. The sides agreed on the next steps that would help further develop

business ties in the global power system.

No less important was the topic of activities consolidation in CIGRE's study committees. The preceding

discussion took place during Steffen Breuer's visit to Izolyator on the eve of the Session. The sides outlined the main directions of cooperation meeting their common interests.



Federal Grid Company is the operator and manager of Russia's unified electricity transmission grid system, including high voltage transmission lines, and holds the status of a natural monopoly. The Company's assets include more than 139,000 km of transmission lines and 924 substations with more than 332 GVA of 35–750 kV transformer capacity. Based on the length of transmission lines and installed transformer capacity, Federal Grid is the largest publicly traded electricity transmission company in the world. Federal Grid's business is to provide electricity transmission and technological connection services. It maintains and develops the grid system and supervises grid facilities and infrastructure in 77 Russian regions, covering a territory of 15.1 million square kilometres. Its customers are regional distribution companies, electricity suppliers and large industrial enterprises. The Company is a natural monopoly with 80.13% stake controlled by Russian Grids.

MEETING WITH TERNA S. P. A. REPRESENTATIVES

Terna S. p. A. was represented by Andrea Valant, Substation Technology Development Manager / Technologies and Specialist Support.

Terna S. p. A. and FGC UES executives made their first contact and set up business ties with Izolyator's assistance. The sides shared interest to develop interaction by discussing various aspects of power networks operation.



The Terna Group (Terna S.p.A.) is the first grid operator for electricity transmission in Europe. Through Terna Rete Italia the Group safely manages the National Transmission Grid with over 72,000 km of HV lines. Terna Rete Italia is the company belonging to the Terna Group that deals with the national electricity grid's operation, maintenance and development fully respecting the environment and communities.

MEETING WITH ELIA AND CG POWER SYSTEMS BELGIUM NV REPRESENTATIVES

The meeting of the representatives of Elia, CG Power Systems Belgium NV, FGC UES and Izolyator appeared as a follow-up and development of Russia-Belgium business talks held earlier at FGC UES headquarter in Moscow.

Elia was represented by Markus Berger, President of the Board of the CIGRE National Belgian Committee, Member of the Executive Committee of Elia, Managing Director of Elia Grid International,

Markus Berger, Board Member of the National CIGRE Committee of Belgium,

Didier Wiot, Board member of the CIGRE National Belgian Committee, Chief Solutions & Services Officer Elia Grid International

Bert Wouters, Expert, Substations.

CG Power Systems Belgium NV representatives were Jean-Michel Obertin, Executive VP and General Director/ International Power Business, Gemilia Reimbolt, Strategy & Marketing Director, Dirk Cousy, Head of Procurement, Coen Werhardt, Sales Director BeNeLux.

The sides discussed and outlined the nearest steps in joint activities in several directions:

- international cooperation experience sharing;
- sharing information on the structure and key indicators of systems



Meeting of Terna S. p. A., FGC UES and Izolyator representatives

terms of power generation, transmission and distribution in Russia and Belgium;

- experience sharing on high-voltage equipment application in power facilities of Belgium and Russian Federation, benchmarking plans of power networks

development with use of innovative technologies;

- maintaining dialogue about co-operation prospects in power industry as part of multilateral cooperation between Russian and Belgium.

Izolyator again confirmed readiness

to provide facilitation and assistance in development of FGC UES and Elia exchanges.

All meeting participants expressed interest and intention to continue cooperation on power business related topics, joint activities and within CIGRE organization.



Elia is not just Belgium's transmission system operator — it is also a key player at European level. Elia is Belgium's high-voltage transmission system operator (30 kV to 380 kV), operating over 8000 km of lines and underground cables throughout Belgium. Elia plays a crucial role in the community by transmitting electricity from generators to distribution systems, which in turn deliver it to the consumer. Elia also plays an essential part in the economy, as our system supplies power directly to major companies connected to the grid.



CG Power Systems Belgium NV (formerly Pauwels Trafo Belgium NV) with manufacturing units in Belgium, Ireland, USA, Canada and Indonesia is a developer of innovative, high-quality, reliable products and turnkey solutions for a wide range of power applications. CG Power Systems Belgium NV Businesses: transformers, switchgear, systems, automation, services. The CG strategy is based on creating solutions for its customers, combining state-of-the-art technology and manufacturing with international systems

The 46th CIGRE Session resulted in the expansion of international contacts, scientific and technical exchanges and a productive dialogue on the present issues of the global power industry development, including cooperation plans between the combined Russian delegation and the partners.



Meeting of Elia, CG Power Systems Belgium NV, FGC UES and Izolyator representatives

WINNING CONFIDENCE FROM PARTNERS



In the modern world only advanced companies offering hi tech services and technologies can enjoy continued success. Izolyator proves it by example as it presents innovative technologies and advanced HV RIP bushing designs for virtually all voltages while paying attention to demands of every client or partner. Ivan Panfilov, Commercial Director at Izolyator is telling about the ability to combine a century long experience and innovations.

Prospects of international cooperation

We are open to cooperation and it is an important component of our strategy of Izolyator brand promotion.

We keep developing partner relations incessantly in order to take them to a new level and we are using a variety of venues.

In July we took an active part in the inter-regional exhibition and forum "Modern trends in the distribution of electric energy", which was organized by our strategic partner Rosseti JSC and dedicated to the topic of import substitution of power equipment in Russia.

In September, Izolyator representatives took part in the first conference of current and potential suppliers of GE called "Together for Russia, together for global markets". In the framework of the two day event the organizers gathered more than 150 leading Russian manufacturers of parts and materials for transport machine build-

ing, power industry and oil and gas sector as well as representatives of the Ministry of Industry and Trade of the Russian Federation.

Hi tech equipment production in the context of import substitution is a burning issue and we do have what to say about design, production, installation and operation of power equipment with high-voltage bushings. Izolyator in its 120 years history won trust with consumers and proves it by unstopping improvement: presently, only the most advanced equipment is used at the plant with ongoing automation upgrades. At the same time, we manage to retain highly qualified personnel as the key value of our company.

Research and development activities receive a lot of attention at Izolyator. All-new products and modernized designs are needed for Izolyator products to meet the highest international quality standards.



Izolyator invited experts from all over the world to the open seismic tests of bushings to CESI S. p. A.

Izolyator Bushings Serve in Vietnam for Over 30 Years

The market of Vietnam is yet another market of special interest for Izolyator. The mere fact that our products are well known and widely used in this country since the Soviet Union days is worth attention on its own. However, since that time we have been able to achieve a technological breakthrough, so we hope that Izolyator's achievements will be available to grid companies everywhere in Vietnam.

Having visited HPC Hoa Binh, which has operated Izolyator bushings for over quarter-century, we discussed with our partners a possibility of evaluation of the technical condition of operating bushings on the basis of electrical and physical-chemical parameters values provided by HPC Hoa Binh.



Hydropower plant Hoa Binh — Hoa Binh Hydropower Company (Hoa Binh HPC) is the largest in Vietnam and the whole South East Asia on a par with Son La HPP.



Hoa Binh HPC. HV bushings have served for over 30 years proving the high quality and longevity of Izolyator products



220 kV RIP bushings installed in transformers at Hoa Binh HPC in 2016

Izolyator expresses profound gratitude to Mr. Nguyen Van Minh, Director at Hoa Binh HPC and the entire team of the power plant for cooperation and delivery of the first lot of HV RIP bushings for the needs of the power plant!

The high level of operation and functioning of the power plant deserves a special mention.

We hope to continue cooperation to maintain security and reliability of Hoa Binh HPP operation!

RIP Bushings are Strategic Pathway for the Global Power Industry

We appreciate sincere interest to our products shown by our partners all over the world. Izolyator became the first in the world supplier of high-voltage RIP bushings to the state Indian company Power Grid Corporation of India Limited. It is an honor for us to prove the trust and we proudly design and make bushings for our Indian partners receiving customer inspections at our plant.

It is important to understand that we provide a product that has become a result of a unique mass application experience of high-voltage RIP bushings. RIP bushings of up to 750 kV voltages have not only performed well in the field, but also showed high quality at tests. PowerGrid experts had many opportunities to familiar-



Izolyator bushings installation at SS Bamnauli in India

ized themselves with products design features, our technologies and witness their quality.

The Indian market was and remains particularly attractive to us as a high-potential direction. We hope that we have been able to build a strong fundament in our relations, so our cooperation will continue in future.



Power Grid Corporation of India Limited (PowerGrid) is an India-based company engaged in construction, operation and maintenance of inter-state transmission system (ISTS). The company's core business is transmission of bulk power across different States of India.

We value our relations with partners and on our way to leadership in design, production and implementation of modern technologies in power industry we always remember that behind any specific project there is a vital task of a reliable power supply.



OLEG BAKULIN
 Director on Partner
 Relations

Izolyator always has something to say to those who are unfamiliar with its products and those who partnered with the plant a long time ago. It is our regular activity to take part in exhibitions of advanced achievements of Russian and foreign electrical engineering and special power equipment plants. That is why Izolyator presented its stand at the Modern trends in power distribution International Exhibition and Forum. It was possible not only to meet our company representatives at the stand, but also to view a video showing the complete HV bushings production process. Yet, for us it became a special event as it allowed for a direct communication with Rosseti management and get in the spotlight.

Saying about our activities, we always emphasize that our ultimate goal is to ensure reliability of power supply to consumers. We regularly follow this motivation in doing as well, e.g. our recent shipment to MOESK JSC was sent strictly according to the schedule and that allowed the client to officially confirm their status of readiness for winter season to the Moscow city government.

Meeting delivery deadlines is an essential part in our work that has direct impact on efficiency of our partners, therefore we accurately track our projects performance and keep up with the schedule.

SECURITY OF POWER SUPPLY TO CONSUMERS IS TOP PRIORITY

Presentation in Tomsk Generation

Oleg Bakulin, Director on Partner Relations at Izolyator visited Tomsk Generation JSC.

The sides established business contacts and Izolyator representative made a corporate presentation introducing the company products. He emphasized the advantages of high-voltage bushings with RIP insulation. The sides discussed cooperation plans.

We wish to thank Tomsk Generation JSC for the invitation and a warm welcome.



Tomsk Generation JSC unites generating capacities of the city of Tomsk. Tomsk Generation JSC enters Inter RAO Group. It produces and distributes electric and thermal power in Tomsk.



Headquarter of Tomsk Generation Company JSC

Meeting Tomsk Distribution Company



Photo courtesy of Press Service, Tomsk Distribution Company

Oleg Bakulin, Director on Partner Relations at Izolyator visited Tomsk distribution company.

The sides established business contacts at the official meeting. Mr. Bakulin also made a corporate presentation of Izolyator and its products detailing advantages of HV RIP bushings. Potential cooperation was discussed at the meeting.

Our thanks to TDC for the invitation and a warm welcome.



Tomsk Distribution Company (TDC JSC) enters Rosseti group of companies and is a regional energy supplier that ensures transmission and distribution of electricity across the region.

Shipment to MOESK

Izolyator delivered 100 RIP bushings for 110 and 220 kV voltage classes to Moscow Unified Grid Company (MOESK) in the third quarter of 2016.



Substation Polyanka in Moscow Region. Photo from official website of MOESK



MOESK JSC is one of the largest distribution companies in Russia. The key activity is power transmission services and grid connection to the electric networks on the territory of Moscow and the Moscow Region. MOESK JSC receives electric power from generating companies — subjects of wholesale and retail markets, from the Unified National (All-Russian) Power Grid and from the adjacent networks located in the neighbouring regions of the Russian Federation.

Consultations in Volgogradenergo



Photo from Volgogradenergo website

Vladimir Ustinov, Deputy Quality Director at Izolyator visited Volgogradenergo, a branch of MRSK South JSC.

During the visit, he had a meeting with specialists of Volgogradenergo

where they received all required advice on operation of HV RIP bushings made by Izolyator.

We would like to thank Volgogradenergo for the invitation and interest in cooperation.



Volgograd power system is located in the lower reaches of the Volga 950 km to the South-East of Moscow. Volgogradenergo, a branch of the Interregional Distribution Grid Company of the South, is one of the largest grid companies of the Volgograd Region.

High Appraisal From FBU Rostest-Moscow



FBU Rostest-Moscow making a visit to Izolyator plant

A landmark meeting was held at Izolyator plant in September: representatives of the Federal budgetary office The State Regional Center of Standardization, Metrology and Testing (FBU Rostest-Moscow) paid a visit to the plant.

The delegates were led by Evgeny Morin, Deputy General Director at FBU Rostest-Moscow. Vladimir Ustinov, Deputy Quality Director and Dmitry Ivanov, Head of Test Center received the guests.

The visitors familiarized themselves with the equipment configuration and the technical features of the test equipment noting a high

level infrastructure and wide capabilities of the test center at Izolyator plant.

The sides discussed cooperation issues in metrology provision of high-voltage equipment.



In the basis of the metrological infrastructure of the national economy of Russia there are state regional metrology centers. Moscow assigned the function of "the precision factory" to the Federal budgetary office Rostest-Moscow. The standards serve to ensure uniformity of measurements as the technical basis of the system.

Tests Passed Rostovenergo

Vladimir Ustinov, Deputy Quality Director at Izolyator visited the tests of HV bushings at the production department of North-Eastern electric networks Rostovenergo in Kamensk-Shakhtinsky, Rostov Region. The guest was welcomed by the Chief Engineer Vladimir Buga.

110 kV Izolyator transformer RIP bushings were tested at the HV laboratory. All the tests went successfully with an official conclusion from Ros-

tovenergo issued about serviceability of the bushings.



Rostovenergo is a branch of Interregional Distribution Grid Company of the South that ensures power supply to consumers and power transmission via distribution networks on the territory of the Rostov Region with 100.8 thnd square km and a population of 4.4 mln people



Office building Rostovenergo

Eventful Program for MPEI Students



MPEI students on a plant tour

Work with the future human resources should be done well in advance. This point was proved true at Izolyator where a plant tour for students of electric engineering faculty of NIU MEI was organized on 6 July 2016. Dmitry Ivanov, Head of Test Center and Victor Kiryukhin, Head of Design Bureau gave the class and the tour.

The students were introduced to designs and main production stages of high-voltage bushings.

Besides SC D1 RNC CIGRE Materials and new test techniques gave a presentation to the students familiarizing them with the activities of the organization.

Izolyator is a leading science and technology partner to RNC CIGRE. The production base of the company allows for making of 12 thnd high-voltage bushings annually.

The company constantly expands products range of high-voltage bushings by offering new designs and re-designing and modernizing existing products.



MPEI trains Bachelors, Masters and Specialists (Engineers) in 15 fields and 73 majors. The National Research University «Moscow Power Engineering Institute» is the one of the largest technical universities in Russia.



ALEXANDER SAVINOV
Strategic Business Development Director

We are used to set ambitious goals for ourselves and reach them, and that requires constant development. We appreciate our partners' intention to take part in training programs and professional development of specialists. Thus, at the meeting with representatives of Gazprom energoholding Ltd in July we discussed both company plans till 2016 and an outlook of 2017 as well as possibilities of technical seminars for staff. Izolyator regularly trains specialists of companies that have our equipment as it allows for achieving optimal operational results and avoiding fatal mistakes. By now, we have already received feedback from our partners and are now discussing where exactly the training could be done.

Apart from that, it is important for companies representatives to have an opportunity to personally see the production stages of our equipment — and we give it with pleasure. During our Enel visit we planned steps to implement the quality plan and will be glad to develop partnership.

Izolyator finds it important that the innovative technologies that we can offer were put to work right at the moment when they are needed. When an urgent old OIP bushings replacement need arose with TGC-1, the plant was able to deliver in the shortest period of time and ensure quick commissioning of modern HV RIP bushings. Reliability of power supply to consumers is a key factor in our work and in our partners' work, therefore our reaction is as fast as possible.

Doing Work for the Long Run

Alexander Savinov, Strategic Business Development Director at Izolyator visited the Territorial Generating Company #1 in July in Saint



Alexander Savinov at TGC-1

Petersburg. He told the meeting participants about existing designs offered by Izolyator and advanced projects.

For example, TGC-1 staff members learned about modernization of existing HV bushings designs and advanced projects at Izolyator. The partners also discussed professional training of TGC-1 personnel in high-voltage insulating equipment.

We would like to thank TGC-1 JSC for invitation and a cordial welcome.

Shipment to TGC-1

Izolyator delivered RIP bushings of 110 and 220 kV voltage classes to the Territorial Generating Company #1 in the third quarter of 2016.



TGC-1 is the leading producer of electricity and heat in the North-West region of Russia. It operates 53 electric generating stations in four regions of Russia: St. Petersburg, Republic of Karelia, Leningrad Oblast, and Murmansk Oblast.

Meeting at Enel Russia JSC

Alexander Savinov, Strategic Business Development Director visited Enel Russia JSC in August.

Representatives of Enel Russia were informed about the last designs of high-voltage bushings and

achievements of Izolyator on the Russian and foreign markets. The sides discuss further cooperation plans at the meeting.

We would like to thank Enel Russia for the invitation and a warm welcome!



Alexander Savinov in Enel Russia JSC



Enel Russia JSC is one of the leading Russian wholesale producers of electric and thermal power. The company was founded in 2004 in the result of Russia's power industry reform aimed at creation of an efficient competitive market with invitation of private investment into the sector. Enel Russia is a dynamically developing company with central office in Moscow and four production branches across Russia: Reftinskaya GRES, Sredneuralskaya GRES, Nevinnomyskaya GRES in the Caucasus, Konakovskaya GRES in Central Russia. Enel Investment Holding B.V. controls a 56.43% stake in the capital of Enel Russia JSC.

Meeting at Konakovskaya GRES

Alexander Savinov, Strategic Business Development Director at Izolyator visited Konakovskaya GRES in August in the Tver Region. Sergey Malyshev, Head of Electric Shop welcomed the guest.

During a technical meeting the sides discussed a new design of the voltage measurement device, interchangeability of high-voltage bushings of new and obsolete de-

signs as well as technical peculiarities of long term storage of bushings. Izolyator representative gave

much attention to the achievements in installation and operation of high-voltage bushings.

We appreciate Konakovskaya GRES for the invitation and openness to cooperation!



Meeting at Konakovskaya GRES



Konakovskaya GRES is a branch of Enel Russia and is one of the largest producers of electric power in the central Russia. The total installed capacity is 2520 MW. The plant runs on gas, reserve fuel is mazut.

RIP Bushings for SIBEKO JSC



Photo from SIBEKO JSC webpage

Izolyator delivered RIP bushings for 110 and 220 kV voltage classes to SIBEKO JSC in the third quarter of 2016.



Public listed company Siberian energy company (SIBEKO JSC) is the largest company in Siberia that produces electric and thermal energy in the Novosibirskaya Region and Altaysky Krai. There are six thermal power plants in its structure. SIBEKO JSC enters RU-COM group.

Izolyator is an official supplier of Unipro



Yaivinskaya GRES. Photo from official webpage of Unipro JSC

On 2 September 2016, Izolyator received accreditation as official supplier of Unipro JSC and is entered in supplier database.



Unipro JSC (before June 2016 — E.ON Russia) is a thermal generation company in Russia. There are five thermal power plants in Unipro structure. The main activity is production and sale of electric and thermal power.

Transformer Modernization at Yuzhnouralskaya GRES

A transformer at Yuzhnouralskaya GRES was modernized with 220 kV Izolyator high-voltage RIP bushings installation.



Yuzhnouralskaya GRES enters Inter RAO — Power Generation JSC and is one of the first in the country thermal power plants with projected capacity 1000 MW and one of the first in the Urals and Siberia where they used domestic equipment designed for supercritical steam properties.



Yuzhnouralskaya GRES. Photo from Inter RAO – Power Generation JSC website



MAXIM ZAGREBIN
 Head of OEM Sales

In Q3 2016, our company continued to cooperate with transformer plants in Russia and the CIS countries.

We sent a shipment of high-voltage bushings to one of our key partners Togliatti Transformer, which were intended for projects realization not only in Russia, but also in the CIS countries. We negotiated and effected delivery of bushings for Power Machines — Toshiba. High-voltage transformers Ltd. It is also worth saying about shipment of high-voltage bushings for transformer reactor equipment of SVEL Group, Uralelectrotyazhmash JSC and Electrozavod holding.

Our company maintains the practice of seminars for design offices and commercial divisions of our partners. In September we organized a seminar for Uralelectrotyazhmash plant where we demonstrated design and technological capabilities of our company and a training film about HV bushings installation.

We sincerely thank our partners for the fruitful cooperation we enjoy and hope to see it continued.

INNOVATIVE EQUIPMENT FOR TRANSFORMER PLANTS

Meeting in Ekaterinburg



Izolyator bushings installation in a transformer by SVEL Group

One of the leading Russian power equipment OEMs SVEL Group received Izolyator delegation in its headquarter in Ekaterinburg.

The visiting company consisted of Maxim Zagrebina, Head of OEM Sales and Victor Kiryukhin, Head of Design Bureau. Alexey Kishko, General Director, Denis Grigoriev, Chief Designer of 500 kV products and Daniil Safin, Purchasing Manager welcomed the guests.

The parties discussed technical details of current and future projects, possibilities of partnership development and cooperation. We sincerely thank SVEL Group for the invitation and a warm welcome.

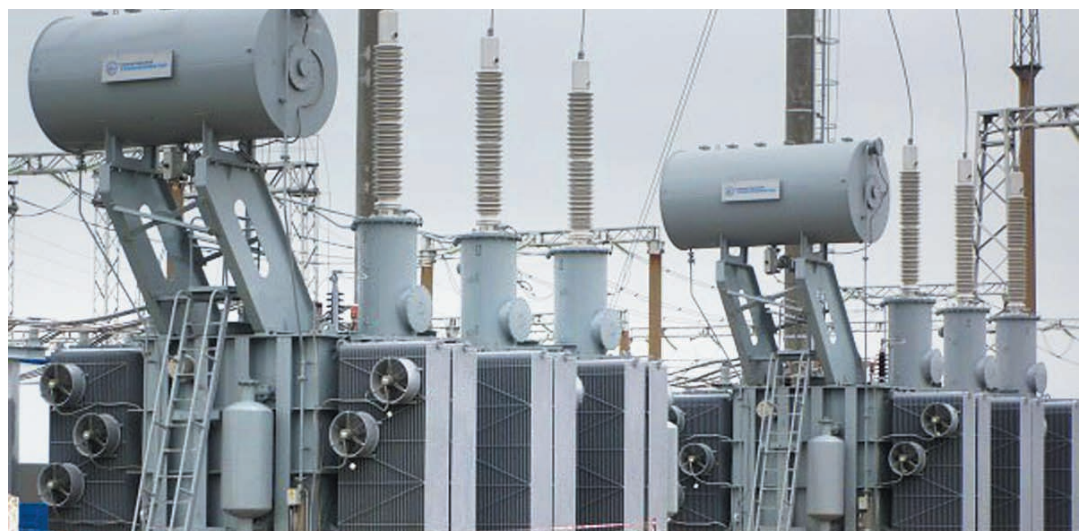
SVEL

SVEL Group CJSC is a leading power equipment manufacturer in Russia. The company boasts one of the impressive growth modernization rates in the industry. SVEL Group's cooperation with leading Russian power market players allows for an efficient implementation of import substitution program declared by the Government.

Shipment to Togliatti Transformer Ltd.

Izolyator shipped RIP bushings with voltage classes of 24, 66, 110, 220, 330, 500 kV to Togliatti Transformer in the third quarter 2016.

 Togliatti Transformer Limited is one of the largest designers and makers of electric engineering equipment in Russia and the CIS countries. As of today, the company's main business is high-voltage power transformers production.



Izolyator bushings in a transformer made by Togliatti Transformer Ltd.

Seminar at Uralelectrotyazhmash

Izolyator gave a technical seminar “Design and operation of Izolyator high-voltage bushings with RIP insulation” for technical specialists of Uralelectrotyazhmash.

Izolyator was represented by:

- Maxim Zagrebin, Head of OEM Sales,
- Victor Kiryukhin, Head of Design Bureau.

The topic of the seminar raised a strong interest and the specialists were able to receive exhaustive advice on a wide range of issues from the first hand.

At the end of the seminar, all the participants received certificates from Izolyator company.

Apart from the seminar, the partners had a business meeting with the following Uralelectrotyazhmash colleagues joining:

- Pavel Patrushev, Procurement Director;
- Leonid Meshavkin, Head of Purchasing for Transformer Production;
- Stanislav Zverev, Lead Specialist.

The topics included several commercial issues, cooperation plans in the near and distant perspective.

We would like to thank Uralelectrotyazhmash JSC for their invitation and seminar organization on a highest level!



Victor Kiryukhin Giving a Seminar



Maxim Zagrebin giving the certificates to the seminar attendants

Shipment to UETM

Izolyator delivered RIP bushings of 35 and 220 kV voltage types to Uralelectrotyazhmash in the third quarter of 2016.



Photo from UETM webpage



JSC «Uralelectrotyazhmash» (UETM) is the biggest Russian developer and producer of electric power equipment for generation, transmission, distribution and consumption of energy. High-voltage equipment, transformers and reactors, converter equipment and electric machines of UETM brand are world known and enjoy a good reputation.

Cooperation With Power Machines - Toshiba. High-voltage Transformers Ltd



Photo from Power Machines — Toshiba. High-voltage transformers Ltd website

Izolyator shipped RIP bushings of 110 and 220 voltage types to Power Machines — Toshiba. High-voltage transformers Ltd in the third quarter of 2016.



Power Machines — Toshiba. High-voltage transformers Ltd is a joint venture of Power Machines JSC and Toshiba Corporation. The project started in September 2011 with signing of a JV set up agreement and construction of power transformers manufacturing facility in Russia.

High-voltage Bushings for Electroavod HC



Photo from Electroavod Holding webpage

Izolyator supplied RIP bushings of 24, 110, 220, 500 kV voltage classes to Electroavod Holding in the third quarter of 2016.



Open Joint Stock Holding Company «Elektrozavod» (OJSHC «Elektrozavod») is known as the leading Russian and world-wide manufacturer of various transformer equipment being supplied for all industries including electric-power industry, metallurgy, machine building, transport, oil and gas complex, housing and utilities infrastructure.



MAXIM OSIPOV
Head of CIS Sales

Power Industry has always been attractive for students in spite of complexity and responsibility of the profession. In July, our partners in Kazakstan — TOO DOC Co. LTD offered to visit Almaty State College of Power and Electronic Technologies that trains specialists who would operate our equipment in the future. Talking to the principals of the college, we discussed possible involvement of Izolyator's leading specialists in training the students of relevant specializations in theoretical foundations, principles of design and competent operation of modern high-voltage equipment.

Time passes, human resources renew — so it is important that they come prepared and with good understanding of what they are going to deal with in reality.

While we value new contacts and tell about our work with pleasure, keeping contacts with old partners is what matters a lot for our business. Personal ties have a huge impact: when you talk to a partner personally it is much easier to make a contact and find a common language. Our longtime partner Kentau transformer plant in Kazakhstan invited us to visit them, and we gladly accepted. We spoke to the technical service, sales people and purchasing department. At the end of September, we were already receiving a return visit of their representatives at Izolyator plant.

We sincerely hope to develop further our partnership openly telling about all technical details and processes of our production.

PARTNERSHIPS DEVELOPMENT IN CIS COUNTRIES

Meeting With the Top Management of GPO Belenergo



Grodnenskaya HPP. Photo from official website of GPO Belenergo.

Alexander Slavinsky, Chairman of the Board of Directors at Izolyator visited the State Power Production Enterprise Belenergo in Minsk.

Alexander Moroz, Deputy General Director at GPO Belenergo received the guest.

The sides discussed modern

trends in power industry, efficient forms of interaction, programs of joint activities and other strategic issues of advanced planning.

We would like to thank GPO Belenergo for the invitation and the strong intention to develop co-operation!



The main activity of the state power production enterprise Belenergo (GPO Belenergo) is organization of reliable, safe, economically efficient operation and innovative development of production, transmission, distribution and sale of electric and thermal power.

Building partnership With Belarus



Talks at Izolyator plant, L-R: Ali Churaev, Maxim Osipov and Alexander Slavinsky

Ali Churaev, Izolyator Partner in Belarus visited our plant in September. Alexander Slavinsky, Chairman of the Board of Directors and

Maxim Osipov, Head of CIS Sales received the guest.

The sides discussed dominating trends in power industry and

the market of HV equipment in Belarus summarizing successful results of joint activities.

The main agenda of the talks were prospects and the strategy of further cooperation with enterprises of the power sector in Belarus

The partners expressed intention to continue active partnership setting a number of practical steps for the near future.



Power Industry is one of the key sectors of the national economy of Belarus. The state strategy and a number of programs define its development and achievement of set priorities. The Ministry of Energy of the Republic of Belarus is the state body to regulate the industry, formulate and realized the energy policy of the country.

Visit of Kentau Transformer Plant Representatives

On 21 September 2016, representatives of Kentau transformer plant — Adilbek Tazhibaev, Chief Designer and Askar Kobdikov, Purchasing Manager — visited Izolyator plant.

Dmitry Karasev, Sales Manager and Victor Kiryukhin, Head of Design Bureau welcomed the guests at Izolyator.

The hosts arranged a plant tour familiarizing the guests with designs, modern production technologies and testing of high-voltage bushings with RIP insulation.



Visit of Kentau Transformer plant representatives



Kentau Transformer Plant JSC (KTZ JSC) makes modern highly productive equipment allowing for efficiency increase of industrial enterprises. The key strategy of Kentau transformer plant is supplying the best electric engineering products to the market that meet consumer demands in quality, price, delivery terms and service support. The high quality and reliability of the products is possible due to application of modern and highly efficient equipment from leading western and European brands. Kentau transformer plant is part of Alageum Electric JSC.

Dialog With Almaty State College of Power and Electronics Technologies

Izolyator representative discussed cooperation prospects with the Principal of Almaty State College of Power and Electronic technologies in Kazakhstan.

Maxim Osipov, Head of CIS Sales at Izolyator represented the plant while the organizers of the event were top managers of TOO DOC Co. LTD — Izolyator partners in Kazakhstan — Murat Rakhimjanov, General Director, and Nurlan Sarbalin, Executive Director. On behalf of the college, Toleugali Taituleev, Principal and Kuatbek Abildinov, Deputy received the visitors.

After the college introduced the latest technical development works, the sides discussed possible directions of scientific and technical cooperation and joint research of innovative technical and technological solutions in the field of modern and advanced insulating equipment design.

Opportunities and possible forms of participation of leading specialists of Izolyator in the student training process were also a topic of discussion, especially in regard to industry-specific subjects as the foundations of the theory, principles of design and competent operation of modern high-voltage insulating equipment.

We wish to thank Almaty State College of Power and Electronic Technologies and Toleugali Taituleev and Kuatbek Abildinov personally for the invitation, hospitality and openness to dialog and cooperation ! Our thanks and appreciation for Murat Rakhimjanov and Nurlan Sarbalin for the visit organization at the highest level!



Visit to Almaty State College of Power and Electronics Technologies



Almaty State College of Power and Electronic Technologies is one of the leading educational institutions of technical and vocational training of the Republic of Kazakhstan in the energy sector. For 50 years, it has provided educational services to the population in the training of highly qualified specialists.



NATALIA MAZOVA
International Business
Development Manager

The conference held in Italy in the beginning of June became an important milestone for business development with European partners. We ran seismic tests of HV bushings that know no equals in one of the world's leading test laboratories - CESI S. p. A. Presently we have already received the long awaited test protocol and certificate and can officially announce that the tests went successfully. Also, we collected an extensive video footage during the tests that we put into a film that presents capabilities of Izolyator plant. We are sending this informative video to our current and potential clients all over the world. It is a pleasure to know that the viewers witness the huge volume of work that we have accomplished.

Izolyator is expanding its strategic presence in Europe and Asia. We had a number of shipments and meetings this summer: e.g., with the Belgian state grid Elia, GE, Italian Terna, Federal Grid Company of Unified Energy System of Russia.

We are confident that with the appearance of our new representative in Vietnam Izolyator brand visibility will only improve. As follows from the partnership agreement, Vatco will provide updated information about the structure, trends and indexes of the Vietnam's power equipment market and above all – the high-voltage bushings market. Vatco is also prepared to set up direct business contacts in coordination with Izolyator and further develop long term relations with HV bushings consumers — electric power and industrial enterprises of Vietnam.

Expanding our presence in Asia, we signed an agreement with Vatco to represent Izolyator interests in Vietnam. In the frame of partnership, Vatco will provide effective data about the trends and parameters of the power equipment market in Vietnam with focus on high-voltage bushings.

TESTS AT CESI S.P.A. — NEW LEVEL OF COOPERATION

Certificate of Successful Tests Completion at CESI S.p.A.



Participants in seismic tests of Izolyator Bushings at CESI S.p.A.



Izolyator bushing in laboratory at CESI S.p.A.

Test Report

Document No.	B6012361	Copy No.	1	Number of pages	62
Apparatus	Bushings for Transformer 420 KV				
Designation	TCSIV-90-420/1250				
Serial Number	55934 201505				
Manufacturer	Massa LLC (Izolyator Company)				
Client	IZOLYATOR Company Izolyator Company (Massa LLC) 77 Lenina st., Pavlovskaya Sloboda Village 143581 ISTRRA DISTRICT, MOSCOW REGION Russia				
Tested for	Seismic Test				
Date(s) of tests	June 06 – 08, 2016				
Tested by	CESI - IFS Laboratory Testing & Certification Division via Pastrengo, 9 24068 SERIATE BG - ITALY				

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this document has been subjected to the series of proving tests in accordance with:
IEC 60068-2-57: 2013
IEC 61463: 2000
Specification POWERGRID Co. of INDIA

The results are shown in the record of proving tests and the oscillograms attached hereto. The general performance is considered as mentioned above. The ratings assigned by the Manufacturer are based on the ratings range.
The document applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

June 24, 2016
Date
Test Engineer in charge: *Paolo Bonfanti*
Approved By: *Lorenzo Arcidiaco*

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The authenticity of this document is guaranteed by the integrity of the signature.



Trust the Power of Experience

Protocol of successful tests



CESI is an independent center of expertise and a global provider of technical and engineering services to customers throughout the energy value chain, including business and technical consultancy, engineering and operational support.

Video About The Tests in Italy

Izolyator created a video for partners and customers about the International Conference dedicated to

the 120th Anniversary of the company and the open seismic tests of Izolyator bushings in CESI S. p. A.

in Italy — a new step in international cooperation development in power industry.

The video with 3 min 37 sec runtime is available for viewing on Izolyator's channel on YouTube.



INTERNATIONAL CONFERENCE IN ITALY



A frame of the video

Dear Colleagues,

Thank you, I've watched your video and saw the products with advanced technology. Wish you will install the product worldwide
In the future, We hope to have the cooperation with you.

Best Regards,

Vu Kim Huong
Manager — International Relation Dept.
Hanoi Power Corporation

Dear All,

I have met this morning with Pucci at Ismes and have watched the video together with one of his aides Bontempi.

He has acknowledged the high quality of the work and of the video as a very well done job!

Once again my congratulations for the job well done.

Ciao
Giuliano Bertolazzi



The experts are overseeing the tests



YAROSLAV SEDOV
 Business Development
 Manager

Over the past two years, Izolyator has actively expanded in Europe and today we can see results: we are recognized in the region. There is also our marketing team's input that adds to the brand recognition: our name is not only pronounced but they really listen to and trust our initiatives.

Thus, Izolyator products raised interest with the Czech Republic. Representatives of the Czech company ENERGO-PRO — an independent company in power industry and renewable energy sources — told about their demand in high-voltage bushings and our specification fully matched their requirements. In a month's time we reached final agreement. The customer was fully satisfied and we hope to see continued cooperation with Czech companies.

Other meaningful projects for us: delivery of a lot of bushings to GE, Turkey, and Vuje in Slovakia. We once again demonstrated that our experience of operation of HV RIP bushings of various applications allows to find optimal solutions for our partners. Izolyator, by its work, proves that its products meet the highest quality standards and is a prospective and reliable partner.

OPTIMAL SOLUTIONS FOR EUROPEAN PARTNERS GE Suppliers Conference

On 13 September 2016, Izolyator took part in the first conference of suppliers to GE called "Together for Russia, together for global markets" in Moscow.

Yaroslav Sedov, Business Development Manager and Victoria Loshchinina, Manager of Commercial Department represented Izolyator at the event.

GE gathered leading suppliers of components and materials for the first time in order to discuss partnership opportunities. Izolyator received an invitation as a potential supplier to GE.

The conference was called to consider increase of equipment purchasing from Russia for GE needs and discuss competitive advantages of Russian products in foreign markets.

Izolyator and GE representatives set up business contacts. The Rus-

sian side was interested in the details of the application procedure for the status of the official supplier to GE, while GE representatives expressed interest in purchases of

Russian-made equipment.

We would like to thank GE for the honor to take part in the event and for the confidence in the quality of our products.



Yaroslav Sedov at the GE suppliers conference



GE (NYSE: GE) is a global industrial and digital technologies leader. 300 000 people work in 175 offices of this company across the globe. GE contributes to the world's industry move to a whole new level. Combining digital and industrial equipment, GE offers its customers advanced, well-predictable, interconnected technical solutions. GE has been present in Russia for almost 100 years using its international reach and localizing advanced technologies in cooperation with strategic partners in power industry, oil and gas, transport and healthcare in order to solve key infrastructure tasks in the region for the improvement of living of people.

Developing Cooperation With GE (Turkey)

Izolyator delivered RIP bushings of 35 kV to GE Turkey in the third quarter 2016.



Facility in Turkey. Photo from GE website

Visit of GE Grid Solutions Representative

In August Dr. Steffen Breuer, Commercial Director Eastern Central Europe, Central Europe Region, GE Grid Solutions visited Izolyator.

The visitor was received by Alexander Slavinsky, Chairman of the Board of Directors and his colleagues Vladimir Ustinov, Deputy Quality Director, Natalia Mazova, International Business Development Manager and Yaroslav Sedov, Business Development Manager.

The sides exchanged opinions about the regional power equipment markets condition, trends and development forecasts agreeing that the main direction of corporate development in modern conditions is a long term partnership on the basis of joint activities to introduce and implement innovative technical and engineering solutions in power industry.

On the eve of the 46th Session of the International Council on Large Electric Systems — CIGRE — a special focus in the talks was given to interaction between GE and Izolyator within this largest international non-governmental and non-commercial organization in power industry. Alexander Slavinsky represents Russia in the Study Committee CIGRE SC D1 and leads the Subcommittee D1 of the Russian National Committee in CIGRE (RNC CIGRE) "Materials and development of new test techniques and means of diagnostics". Izolyator is a member organization of RNC CIGRE with a



At the assembly shop of Izolyator plant, L-R: Steffen Breuer, Alexander Slavinsky, Yaroslav Sedov, Natalia Mazova and Vladimir Ustinov

status of the Leading science and engineering partner of RNC CIGRE.

The visit agenda included a tour of Izolyator plant that familiarized Steffen Breuer with the design and modern production technologies of high-voltage RIP bushings. Dmitry Ivanov, Head of Test Center at Izolyator showed the guest

the test facility equipment and its capabilities.

Steffen Breuer praised innovative technical solutions, advanced equipment and production potential of Izolyator as meeting the most modern perceptions of high-tech power equipment OEM with global operations.



GE Grid Solutions is serving customers globally with over 20,000 employees in approximately 80 countries. GE Grid Solutions helps enable utilities and industry to effectively manage electricity from the point of generation to the point of consumption.

Shipment to VUJE, a.s.



Photo from VUJE a.s. website

Izolyator delivered RIP bushings for 110 to VUJE a.s. in the third quarter 2016.



VUJE a.s. is an engineering company, which is engaged in project, contractor, sales, research and training activities mainly in nuclear and traditional power industry. The company deals with a wide range of power equipment installing, commissioning, operating and modernizing it.

Bushings for Energo-Pro a.s.

Izolyator delivered RIP bushings of 10 and 35 kV RIP bushings to Energy-Pro a.s. in Czech Republic in the third quarter 2016.



Energo-Pro is an independent power producer engaged in the generation, delivery and trading of electricity from renewable energy sources. We are specialists in the hydro power sector. We build, own and operate hydro power plants and electricity infrastructure in Central and Eastern Europe.



Photo from Energo-pro website

VIETNAM - RUSSIA: NEW STAGE OF STRATEGIC PARTNERSHIP

Ivan Panfilov, Commercial Director and Dmitry Mashinistov, Head of SVN-Service at Izolyator visited industrial, grid and generation companies in Vietnam. The visit went with organizational support from representatives of Industrial Equipment and Material Joint-Stock Company - Izolyator's Partner in Veitnam.

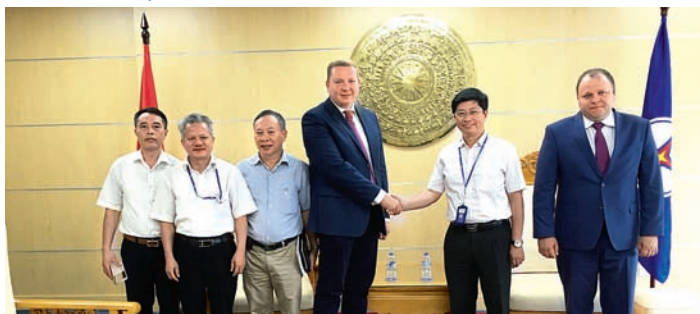
Vietnam Electricity

The visit went with the kind facilitation of Industrial Equipment and Material Joint-Stock Company representatives, Izolyator's partner in Vietnam.

On EVN side the guests were received by:

- Tran Tuan Dzung, Director / International Relation Dept.
- Nguyen Quang Viet, Deputy Director / Science Technology and Environment Dept.

In the course of talks, EVN representatives informed that Izolyator high-voltage RIP bushings have been



Meeting at EVN

awarded the top assessment in EVN, so the company is intended to use them in its new projects by inclusion in the terms of EPC contracts. Besides,

EVN has planned further activities to better familiarize its staff with Izolyator-made products.

The sides expressed a shared inter-

est to deepen interaction in order to implement innovative technologies in the power industry in Vietnam, which falls in line with the general trend of Russia-Vietnam economic cooperation dynamics.

We would like to thank Vietnam Electricity for their invitation and a productive dialogue!



The State Power Company Vietnam Electricity (EVN) EVN takes full responsibility for transmission and distribution of electric power across the country.

EVN National Power Transmission Corporation

On EVN NPT side the visitors were received by Dr. Dang Phan Tuong, Chairman of the Board of Directors and top management of the company: Vu Ngoc Minh, Executive Director, Phan Le Vinh, Technical Director, Do Duc Hung, Planning Director, Luong Lan Dung, Director / International Cooperation Dept; To Van Dan, Deputy Purchasing Director and Bui Duy Hung, Deputy Investment Director.

At the meeting, EVN NPT representatives expressed interest in cooperation with Izolyator in regard to residual operating life evaluation and replacement of the high-voltage bushings, some of which have been in operation for 25-30 years.



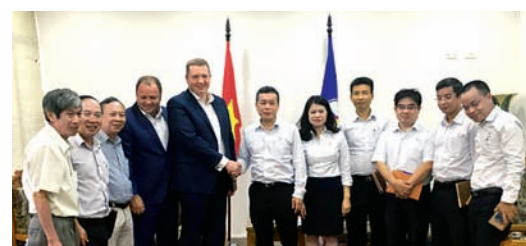
Meeting with EVNNPT management, L-R: Dmitry Mashinistov, Ivan Panfilov, Dang Phan Tuong

In order to do so, EVN NPT will collect and provide all necessary information including transformer types, their technical features and time in service.

During the talks, Dr. Dang Phan Tuong confirmed intention to take practical steps towards a closer cooperation with the Federal Grid Company of Russia and Izolyator

in regard to experience sharing on 220 kV substations operation. The sides set up an action plan in this connection, which assigned functions to all meeting participants.

We would like to thank EVN National Power Transmission Corporation for their invitation and interest to further cooperation!



Meeting participants at EVN NPT



National Power Transmission Corporation (EVN NPT) was founded on 1 July 2008 with the reorganization of four companies' activity: Power Transmission Company No. 1, 2, 3, 4 and three Project management offices: Northern, Central and Southern.

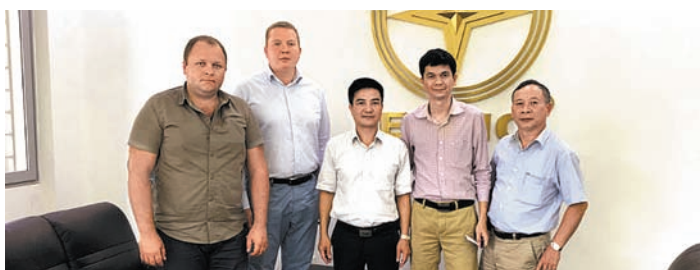
Dong Anh Electrical Equipment Corporation

The visit was arranged with the kind facilitation of Industrial Equipment and Material Joint-Stock Company representatives, Izolyator's partner in Vietnam.

On EEMC side the visitors were received by:

- Le Van Diem, Deputy General Director
- Nguyen Hai Quan, Chief of Technology Department

The sides shared experience of operation of high-voltage bushings with various types of internal insulation dis-



Participants of talks at EEMC

cussing the advantages and prospects of RIP bushings application on EEMC power equipment.

In the end of the talks, the part-

ners agreed to develop cooperation. Izolyator is supposed to provide additional information on the technical features of the products and opera-

tional aspects of bushings with RIP insulation.

We would like to thank Dong Anh Electrical Equipment Corporation for their invitation and an open dialogue!



Today EEMC is a leading power equipment manufacturer in Vietnam and Asia-Pacific in general and the only to make 220-500 kV transformers in Vietnam — making way for the country to enter a prestigious pool of 10 nations in the world who can design and make 500 kV transformers.

Vietnam Oil and Gas Group

The visit was arranged with the kind facilitation of Industrial Equipment and Material Joint-Stock Company representatives, Izolyator's partner in Vietnam.

On PVN side the visitors were received by:

- Tran Toan Thang, Deputy General Manager / Power Division
- Bui Minh Tuan, Manager of Thermal Power Project Department / Power Division

Izolyator made a corporate presentation and showcased advantages of RIP technology with positive operation references of the largest



Meeting at PVN

power companies. The sides discussed possible cooperation directions, for instance, forms of Izolyator

involvement in such PVN projects as thermal power plant Long Phu — 1 erection.

PVN representatives provided requirements to purchased power equipment that Izolyator innovative products fully correspond.

We would like to thank Petrovietnam for their invitation and a productive dialogue!



Vietnam Oil and Gas Group is a state-owned company with international transaction name is Petrovietnam (PVN). Petrovietnam — a strong economic group in Vietnam is known worldwide.

Industrial Equipment and Material Joint-Stock Company

On the receiving side, the visitors were welcomed by Tran Van Son, Chairman of the Management Board;

Pham Phuc Nguyen, Executive Director and Nguyen Viet Hung, Deputy MD.

In the result of the talks Vatco received the status of Izolyator Partner on the power engineering products market of Vietnam.

In the frame of the partnership agreement, Vatco will provide market information on the trends and indicators of the power equipment market in Vietnam with the primary focus on the market of HV bushings.

Also, with the approval of Izolyator, Vatco will be prepared to set up direct business contacts with consumers of high-voltage bushings — power and industrial enterprises of Vietnam —



Meeting with Vatco management

and promote long term cooperation with them.

In turn, Izolyator assumes obligations to deliver all required information

about RIP bushings design and technical features and 15 year operational record in various geographic and climate conditions. The company will also organize Vatco representatives' training at Izolyator plant and promote business contacts set up, direct exchanges and cooperation with leading power companies of Russia and Vietnam.



Industrial Equipment and Material Joint-Stock Company (Vatco) is the leading supplier of materials, equipment, spare parts for Vietnam hydro and thermal power plants built with help from former USSR, as well as strong and reliable provider of power plant equipments originated from developed countries

Hoa Binh Hydropower Plant

The visit was arranged with the kind facilitation of Industrial Equipment and Material Joint-Stock Company representatives, Izolyator's partner in Vietnam.

On Hoa Binh HPP side the visitors were received by:

- Nguyen Van Minh, Director
- Tran Van Hoa, Manager, Technical Dept
- Doan Nam, Electrical Shop Manager.

Izolyator representatives held a practical seminar for the HPP's technical staff members, which detailed installation, testing and operation aspects of high-voltage RIP bushings.

Izolyator representatives also examined the high-voltage equipment



Visiting Hoa Binh HPP

with 110 and 220 kV bushings. In most cases those were OIP bushings made and supplied by Izolyator plant in the past having spent over 30 years in service.

In connection with the above mentioned, Izolyator suggested to run

an objective evaluation of each operating bushing's technical condition by checking electrical and physicochemical parameters obtained from Hoa Binh HPP. Depending on the results of this evaluation, the Russian side would prepare an official report with the HV

bushings' technical condition status and recommendations on further operation of the equipment.

Besides, practical aspects of transportation, storage, acceptance tests and operation of HV RIP bushings were discussed during the visit.

We would like to thank Hoa Binh HPP for their invitation, cooperation and interest to develop with application of advance technical solutions!



The Hoa Binh Hydropower Plant — the Hoa Binh Hydropower Company (Hoa Binh HPC) — is the largest in Vietnam and entire South Eastern Asia comparable with Son La HPP



ANDREY SHORNIKOV
*International Business
 Development Manager*

The most important event of Q3 2016 was the successful completion of the acceptance tests of the 420 kV RIP bushing designed and made by our company for the state company Power Grid Corporation of India Limited. That was preceded by electric tests of the bushing under rain at the All-Russian Electrical Engineering Institute named after V.I. Lenin (VEI) in Moscow and the seismic tests at CESI S. p. A. laboratory in Italy.

Besides, Power Grid representatives inspected 72.5 and 232 kV Izolyator bushings test also intended for power facilities of India. It should be noted that all tests of our HV bushings went successfully.

Our company continues to support our partners on the technical side beginning with participation in equipment installation and ending with training of technical staff.

We view our cooperation with the Indian partners as a strategic pathway for our company development.

NEW JOINT PLANS WITH THE COMPANIES OF INDIA

The Tests Are Passed



Tests inspection at Izolyator plant, L-R: Pavel Kiryukhin, Richik Manas Das and Andrey Shornikov

The state Indian Power Grid Corporation of India Limited inspected Izolyator 72.5 kV, 232 kV and 420 kV bushings tests.

Izolyator plant ran the final stage of acceptance tests — electric tests of the 420 kV RIP bushing for 1250 A current (type TCSIV-90-420/1250, drawing IVUE.686354.603).

They were preceded by the successful electric tests under rain in the All-Russian electrical engineering Institute named after V.I.Lenin (VEI) in Moscow and the seismic tests in CESI S. p. A. laboratory in Italy.

The bushings were designed and made by Izolyator for installation in three-phase 500 MVA autotransformers made by Crompton Greaves T1 Division for operation in 400 kV Bamnauli substation owned by Delhi Transco Limited in Delhi, part of PowerGrid.

VEI carried out the final stage of type tests — electric tests under rain — of 72.5 kV / 800 A (type TCSIV-90-72.5/800, drawing

IVUE.686351.611) and 252 kV / 1250 A (type TCSIV-90-252/1250, drawing IVUE.686353.612) bushings.

The bushings have been designed and made by Izolyator for installation in Toshiba Transmission & Distribution Systems (India) Pvt. Ltd. transformers designated for operation in power facilities of the state of Kashmir in India at 3500 meters above the sea level.

Richik Manas Das, Inspection engineer at PowerGrid arrived in Moscow to supervise the tests.

Dmitry Ivanov, Head of Test

Center managed the tests procedures at Izolyator plant. Other Izolyator team members took part in the tests: Vladimir Ustinov, Deputy Quality Director, Pavel Kiryukhin, Deputy Chief Designer, Andrey Shornikov, International Business Development Manager.

PowerGrid confirmed the successful results of the HV bushings tests with official letters.

We would like to thank Power Grid Corporation of India Limited for cooperation and a high appreciation of the Izolyator products!



Power Grid Corporation of India Limited (PowerGrid) is an India-based company engaged in construction, operation and maintenance of inter-state transmission system (ISTS). The company's core business is transmission of bulk power across different States of India. The company also renders telecom and consultancy services. The telecom business is part of PowerGrid's transmission infrastructure across the country. As regards consultancy services business unit, it includes all projects in engineering, procurement and construction within and outside India: electrical power transmission and distribution by state-owned and private utilities, energy efficiency, smart grid and training.

Cooperation With Grid and Industrial Companies

On 20 July 2016, a group of Izolyator representatives headed by Ivan Panfilov, Commercial Director visited the state Indian company Power Grid Corporation of India Limited and power industry enterprises in India.

The following colleagues joined the group: Andrey Shornikov, International Business Development Manager and Ashok Singh, Izolyator Partner in India.

POWER GRID CORPORATION OF INDIA LIMITED.

The partners discussed the successful results of the seismic tests of Izolyator 420 kV bushings at the independent center of expertise CESI S. p. A. in Italy as well as the plan of the final stage — acceptance tests at Izolyator plant.

Besides, new types of Izolyator HV bushings and volumes of supply for the needs of PowerGrid in the near years were discussed.

TOSHIBA TRANSMISSION & DISTRIBUTION SYSTEMS (INDIA) PVT. LTD.

Dr. Shunji Chigusa, General Manager / Transformer Division welcomed the guests.

The sides held talks about potential supplies of Izolyator HV bushings.

TOSHIBA

Toshiba Transmission & Distribution Systems (India) Pvt. Ltd. (TTDI) produces transformers. The company was incorporated in 2013 and is based in Medak, India.

TRANSFORMERS & RECTIFIERS (INDIA) LTD

The sides discussed T & R's demands in high-voltage bushings with RIP insulation for participation in the projects of Power Grid Corporation of India Limited.

In the result of talks, T & R, one of the leading transformer plants in India, ordered a large shipment of HV RIP bushings of Izolyator brand including 420 kV bushings.



Transformers & Rectifiers (India) Ltd (T & R), founded in 1994, makes power equipment including a wide range of transformers for both domestic and global markets.



Izolyator bushings in a transformer at Bamnauli substation



Facility of TTDI. Photo from Toshiba website



Transformer production. Photo from T&R website

We would like to thank the Indian companies for their invitation, productive dialog and interest in cooperation development!

MODERN TRENDS IN POWER DISTRIBUTION EXHIBITION AND FORUM

Review of the Newest Achievements in Technology for Power Industry



On the photo, L-R: Alexander Savinov, Director on Strategic Sales at Izolyator, Roman Berdnikov, 1st Deputy General Director at Rosseti JSC, Oleg Bakulin, Director on Partner Relations at Izolyator, Maxim Artemiev, Chief Engineer at Lenenergo KSC and Niyaz Magdeev, Deputy Chief Engineer at Lenenergo JSC

Izolyator took part in the work of the interregional Modern Trends in Power Distribution Exhibition and Forum.

The event was organized in the framework of the interregional professional contest among substation and cable lines maintenance and repair personnel of Rosseti JSC and the open corporate championship in the World-skills methodology and the all-Russian Best-in-Profession contest that are held in the training center of Lenenergo JSC, Leningrad Region.

The exhibition and forum demonstrate achievements of Russian and foreign manufacturers of power equipment and special machines for power industry.

During the three days of the exhibition, Izolyator representatives held a number of meetings with partners and customers and also presented innovative designs of high-voltage bushings.



Ivan Panfilov, Commercial Director at Izolyator (L) and Boris Misirov, 1st Deputy General Director, Chief Engineer at MRSK North Caucasus



Sergey Taradanov, Dpty Chief Engineer at TRC JSC receiving Thank you letter from Izolyator



Izolyator stand was actively visited by representatives of partner companies



Giving Thank you letter of Izolyator to a representative of MOESK JSC



Exhibition meetings, L-R: Victor Kiyukhin, Chief Designer Bureau, Alexander Rafikov, Chief Designer at Electroschit Samara, Alexander Savinov, Strategic Sales Director and Natalia Kiryukhina, Lead Design Specialist at Izolyator

In the Spotlight - Creation of Association of Test Centers of Russia



Round table about creation of the National Test Centers Association of Russia

Round tables and panel discussions on power grid network operation and development with Rosseti JSC and its subsidiaries as well as FIC JSC, System operator of the unified power system,

academia, researchers and OEMs were held.

One of the round tables was dedicated to creation of the National Association of Test Centers (NATC) in Russia. Vladimir Ustinov,

RNC CIGRE SC D1 Coordinator and Deputy Quality Director and Dmitry Ivanov, Head of Test Center represented Izolyator.

The experts discussed concept of NATC and its potential interac-

tion with the Ministry of Energy of Russia, Coordination Center of the smart grid, the National Engineering Center of Power Industry and the National Technological Initiative EnergyNet.



Experts gathered in the auditorium



Miniature of a future facility



Handing over Thank you letter of Lenenergo JSC

In the result of its work at the Modern Trends in Power Distribution Exhibition and Forum work, Izolyator received a Thank-you letter from Lenenergo JSC for input in the

reliable operation and sustainable innovative development of the power distribution network of the Russian Federation.



Izolyator representatives are participants of Exhibition and Forum





**DMITRY
ABBAKUMOV**

Deputy Commercial Director

Constant development of supplier relations is an important part of our work as there is no other way to ensure timely and high-quality supplies. We aim at mutually beneficial cooperation with the companies that have gained reputation of reliable partners and have a high interest to meet them.

Thus, in April, Izolyator was visited by our old partners from the Czech Republic — delegation from the manufacturer of electric porcelain Elektroporcelan Louny a.s. that has united plants with almost a hundred year history and from the early days of its existence was export oriented. Today, it is a significant European maker of ceramic insulators and technical ceramics. During the visit we showed our plant to the guests and discussed issues of present interest, mastering production of new item being among them.

Izolyator plant tours have already become a good tradition with our partners. Seeing is believing: it is indeed better to see once what you were told about many times. In August, representatives of Wieland Group, one of the global leaders in blanks and special items production from copper and its alloys, visited our plant. The guests were introduced to the modern production technologies of high-voltage bushings with RIP insulation and discussed cooperation options with Izolyator. It should be highlighted that we are always open to dialog with our partners and will be glad to seek the most attractive paths of development together.

SUPPLIER RELATIONS DEVELOPMENT IS AN IMPORTANT PART OF OUR WORK

Jubilee Of The Strategic Partner



Celebration of the 75th Anniversary of Uralizolyator plant, L-R: Vladimir Romanov, Alexey Tumakov and Dmitry Abbakumov

Izolyator took part in celebration of the 75th Anniversary of the Kamyshlov plant Uralizolyator. It went in a friendly atmosphere.

Uralizolyator plant was founded in 1941 on the basis of the Leningrad plant Proletary evacuated to the premises of the Kamyshlov diatomite industrial complex.

The Kamyshlov plant Uralizolyator is a strategic partner to Izolyator.

It supplies porcelain sheds — 110 and 220 kV HV bushings external insulation.

Izolyator's Dmitry Abbakumov, Deputy Commercial Director and Vladimir Romanov, Head of Procurement took part in the jubilee celebration.

Alexey Tumakov, General Director, Alexey Churkin, Chief Engineer, Irina Kuvaeva, Head of Technical Dpt and

other colleagues received the guests to share the festive atmosphere of the celebration. The heroes of the day received compliments from Izolyator's entire staff and Alexander Slavinsky, Chairman.

We wish to thank the Kamyshlov plant Uralizolyator Ltd for the honor and a warm welcome!



Jubilee attendants, L-R: Dmitry Abbakumov, Vladimir Romanov, Irina Kuvaeva and Alexey Churkin



Kamyshlov Plant Uralizolyator Ltd enters the financial and industrial holding Yava and is one of the largest Russian manufacturers of electric porcelain supplying completing parts to the leading HV equipment OEMs whose products ensure transmission and distribution of the electric power in the power grids of Russia and the CIS countries. The key product of Kamyshlov Plant Uralizolyator is electric porcelain: cemented and non-cemented, high and low voltage, as well as heat resistant insulators for various applications. Cordierite insulation of Uralizolyator production is supplied for the needs of the nuclear power industry.

Visit Of Elektroporcelan Louny a. s. Representatives

A group of Elektroporcelan Louny a. s. representatives from the Czech Republic visited Izolyator plant:

- Josef Popelka, Technical Director,
- Anna Trubetskaya, Deputy Commercial Director, Eastern Europe;
- Daniel Capek, Head of Technical Control.

Dmitry Abbakumov, Deputy Commercial Director and Vladimir Romanov, Head of Procurement re-

ceived the guests. The visitors saw the production facility and took part in a meeting.

In the result of the visit, the partners formulated additional requirements to the quality of supplied

products and outlined time required for mastering mass production of new items and their delivery.



The Louny plant was built up in 1950. Presently plant produce first of all the reinforced and non-reinforced insulators of medium assortment for both low- and high-voltage lines. The Merklín plant was founded as early as in 1870. Presently the shell-type insulators for E.H.T. are the main products of the Merklín plant. The Merklín plant is ready to make the insulators up to the construction length of 5,000 mm and for voltage up to 500 kV.



Visit of Izolyator plant by representatives of Elektroporcelan louny a.s.

Developing Cooperation With Wieland Group

A meeting with representatives of the companies entering Wieland Group took place at Izolyator plant in August. The holding,

a global leader in production of blanks and special items from copper and its alloys, was represented by:

- Michaela Rupp, Sales Manager at Wieland-Werke AG;
- Roman Jakobi, Process Engineer at Wieland-Werke AG;

Georgy Kaunov, General Director at Wieland Metals Rus Ltd.

The plant representatives who welcomed the guests:

- Alexander Slavinsky, Chairman of the Board of Directors;
- Dmitry Abbakumov, Deputy Commercial Director;
- Vladimir Romanov, Head of Procurement.

The hosts arranged for a plant tour introducing the guests to the modern technologies of high-voltage RIP bushings production. The sides held talks on further cooperation.



Visit of Izolyator plant by representatives of Elektroporcelan louny a.s.

Wieland

The Wieland Group is today one of the world's leading specialists for copper and copper alloys. Wieland Group is in demand around the globe and is highly regarded for both its expertise and its products. The company and its subsidiaries are represented with numerous sites on various continents.

THE NEW LOOK OF THE PLANT

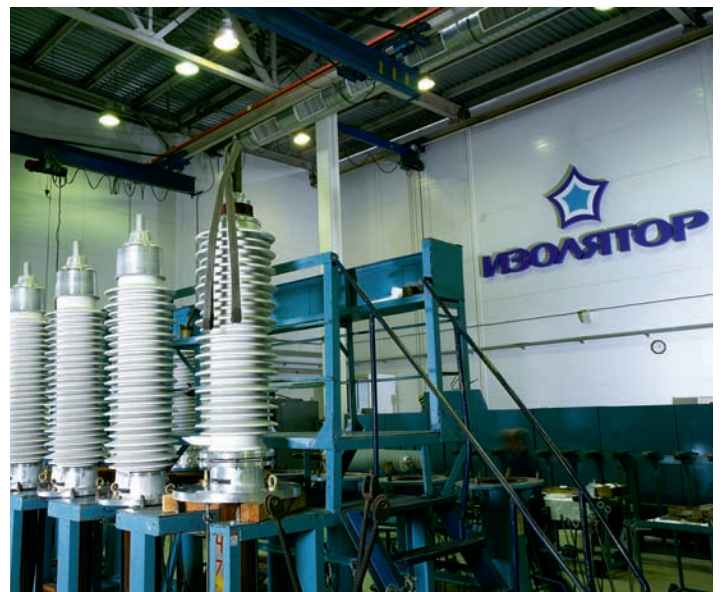
In the third quarter of 2016, we finished to fit out the manufacturing facility and the administrative wing with information signs and advertising boards. The modern and easy to use navigation around the plant, news and technical bulletin boards, Izolyator 3D logo-types in the shops and photo panels narrating the plant history in breathe new life in the everyday routines — manufacturing and corporate — of the enterprise.



Navigation stele on the plant territory



Block of history in the administrative wing of the plant



Assembly shop



Navigation boards at the production facility



Test Center

Personnel training is the most important part of human resources and social policy of Izolyator

In September 2016, Izolyator completed a training program for employees in company management.

The trainees studied the Russian Federation legislation, accounting principles and the processes of design and life cycle management of high-voltage bushings. The testing was organized into several stages. Alexander Slavinsky, Chairman of the Board of Directors, headed the examination board.

All company employees successfully finished training and significantly raised their professional level receiving certificates in the field of company management in the end.

Social responsibility:

/ IZOLYATOR COMPANY FORMS A SOCIAL POLICY ON THE BASIS OF HARMONIZED INTERESTS OF THE COMPANY OWNERS & PERSONNEL, LOCAL POPULATION AND SOCIETY IN WHOLE IN TERMS OF THE STRICT OBSERVANCE OF THE LAWS OF RUSSIAN FEDERATION. /



Sole bushings
manufacturer
in range
in Russia and CIS

120 years of experience
in production
of insulating
equipment

12-1200 kV

TOTALLY made bushings

620 000

550 000
OIP

70 000
RIP

bushings made –
an equivalent of **90 000**
transformers
with **80 MVA** capacity

250 000
bushings
are successfully operating
in the facilities of Rosseti JSC

50 000 of them
RIP insulation

Exports
to more
than

30

countries worldwide