



D1 RNC CIGRE Subcommittee

Materials and Emerging Test Techniques



SC D1 RNC CIGRE Activities Continued

SC D1 RNC CIGRE Materials and Emerging Test Techniques was created on the basis of Izolyator plant as a regular collegial body reporting to the Technical Committee of the RNC CIGRE. Izolyator plant received a status of the Leading scientific and engineering partner to RNC CIGRE. The agreement was concluded for the period of five years from 11 February 2016 till 10 February 2021. Dr. Alexander Slavinsky, Chairman of the Board of Directors at Izolyator headed the SC D1. The D1 study committee deals with theoretic research in electric insulating materials application in high-voltage equipment.

The 2016th will be remembered by a number of important events in the SC D1 acitivities.

First, the composition of the committee was finalized with 6 member societies, 21 individual members (6 individual RNC CIGRE members and 15 Russian power indutry specialists).

Several groups of expertise were formed and group leaders appointed to specialize in research directions:

EG1 Insulating liquids in dielectric systems. Group leader — M.Lukyanov;

EG2 Solid dielectrics. Group leader — T.Shadrin;

EG3 Insulation systems diagnostics. Group leader — A.Monastyrsky;

EG4 Insulators and high-voltage bushings. Group leader — V. Ustinov.

EG5 Measurements at insulation testing. Group leader — T.Dubrovskaya.

During the year, the study committee had 4 meetings. The study committee's section in the official RNC CIGRE webpage was created in accordance with the international website of CIGRE with detail information on the committee's activities. The main SC D1 news are also updated on Izolyator corporate webpage and its information partner Energoexpert Magazine.

Let us recollect other events of 2016.

OUTGOING EXCURSION CLASSES AT IZOLYATOR PLANT

During the year Izolyator hosted several seminars on the study committee's topics for representatives of power grid and utility companies and OEMs.

Under the auspices of the study committee Izolyator held an excursion for listeners of the President's training program for engineers "Energy efficiency and power saving in power facilities design" dedicated to the topic of "Modern energy efficient equipment for power grid facilities and its application in design and operation processes".

 $Representatives \ of \ MRSK \ Center \ JSC, \ MRSK \ South \ JSC \ and \ Kubanenergo \ JSC \ attended \ the \ event.$



Attendees of the excursion for listeners of the Presidential professional training program of engineers

With the purposes of talent pool formation from students and young specialists, magister students of technical universities and the Power faculty of MPEI, the study committee gave a seminar «Production and testing of high-voltage bushings at the manufacturing facility and their operational features».



MPEI Power faculty students on a plant tour

TAKING PART IN RUSSIAN EXHIBITIONS AND CONFERENCES

In 2016, the specialists of the study committee actively engaged in exhibitions ad conferences organized in Russia, such as:

 Acoustic and vibrational methods in power equipment diagnostics Conference (April 2016, Kyshtym, Chelyabinsk region).



Participants of the Acoustic and vibrational methods in power equipment diagnostics Conference

• Scientific and practical conference 'Pertoleum oils in power industry and issues of application and quality control. May 2016 NIU MPEI, Moscow.



Petroleum oils in power industry: issues of application and quality control 2016 Conference

• Participation in Diagnostics of technical condition of power equipment installed in HPPs seminar given to the electrical equipment, branches and monitoring services workers.



Bureyskaya HPP (photo curtesy press service of RusHydro PJSC)

 Participation in the round table dedicated to the topic of the National Association of Test Centers (NATC) creation in Russia, which was held as part of Modern trends in power distribution Exhibition and Forum agend was held in the training center of Lenenergo PJSC. FIC PJSC (enters Rosseti) organized the event on 26 July 2016.



The round table dedicated to the topic of creation of the National Association of Test Centers of Russia

- Izolyator's participation the Rugrids-Electro 2016 International Forum, which was held on18-19 October 2016 at the World Trade Center in Moscow. Izolyator as a leading patner of RNC CIGRE invited SC D1 RNC CIGRE
- members, editoral office of Energoexpert Magazine, Forum participants and its partners to attend a corporate event «Izolyator plant: the 120 year of innovation and high-voltage bushings production for the power industry».
- In the frame of the event Izolyator organized SC D1 RNC CIGRE working meeting. Vladimir Ustinov, coordinator of the committee and Deputy Quality Director at Izolyator made a short report on the outcomes of the 46th CIGRE session in Paris and RSEEC Conference in Buchaerest. He offered topics for dicussion on the expert's choice, which were connected with SC D1 research fields.



Participants of the SC D1 RNC CIGRE meeting held at Izolyator plant

On 23 November 2016, representatives of SC D1 RNC CIGRE provided expertise in evaluation of the students' works submitted for the Power industry Olympic games named after A.F. Dyakov on the basis of the State Power University in Ivanovo.



Work of commission to evaluate the students' works submitted for the International student contest in power engineering named after A. Dyakov.

• Izolyator took part in the XXIV TRAVEK Conference: "Prospects of power industry and high-voltage equipment development. Commutation technique, converter equipment, microprocessor control and protection systems." TRAVEK International Association that was held on 8 - 9 November 2016.



XXIV Conference of TRAVEK international association

On 6 - 9 December, Izolyator took part in the work of the XIX international exhibition Electric Networks of Russia 2016. During the exhibition, the organizers made a round table «Innovative tecnologies in power gid of the country». The D1 committee offered a report «Summarizing global trends in development and application of insulating materials. The commitee representatives also spoke during the III scientific and practical conference «Control over technical condition of equipment at power facilities».



Round table "Innovative technologies in power system of the country"

INTERNATIONAL COOPERATION

SC D1 representatives took part in the 46th CIGRE Session in August 2016.
 Alexander Slavinsky, SC D1 RNC CIGRE chairman joined FGC UES PJSC delegation, led by Andrey Murov,
 Chairman of the Board during the tour of the technical section of CIGRE exhibition. He also facilitated buiness meetings to discuss experience sharing with the energy companies Terna (Italy) and Elia / CG Power system Belgium NV (Belgium) taking an active part in them.



Alexander Slavinsky and Vladimir Ustinov are participants of tth CIGRE Session.

South East European conference (REEC 2016) held on 10-12 October in Bucharest, Romania became
a bright event. Vladimir Ustinov, study committee coordinator joined the discussions of the reports on
criteria of oils selection as a means of insulation in high-voltage measuring transformers; cross-flows of
electric energy between Romania, Ukraine-Moldova-Hungary. He spoke about the experience of the
Russian scientists with oils selection and application of the experience of Russia's unified power system
with cross flows integration.



Participants of the RSEEC 2016 Conference

SUMMARY SITTING AT FGC UES

In December 2016, there was a sitting of leading science and technology partners of study committees of the Russian National Committee of CIGRE held at the Federal Grid Company. The meeting was chaired by the Head of FGC UES, Chairman of the Russian National Committee at CIGRE Andrey Murov. The organization summarized results of acitivities in 2016 and considered development plans of the Association in connection with the international arrangements reached at the 46th CIGRE Session in Paris. Alexander Slavinsky, SC Chair made a report on the Study Committee's activities during 2016.



Final meeting at FGC UES of the leading scientific and engineering partners of study committees of RNC CIGRE