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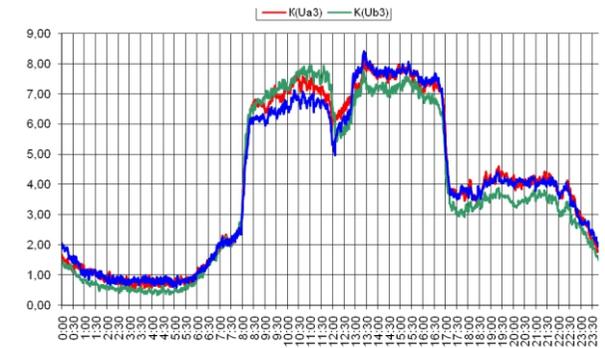
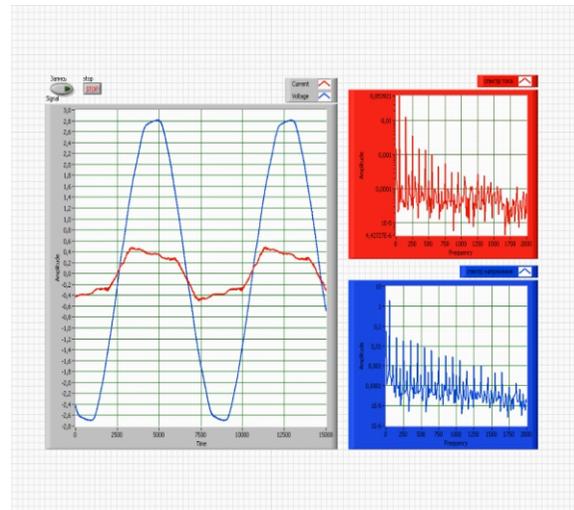
At present the losses caused by the low quality electrical energy on a national scale are evaluated in the dozens of billions of dollars. Preventive measures of electric energy quality management in the existing amount are evidently insufficient. At the same time the value of conductive losses are increased every year, which is connected among the other things with the character of the used load alteration, growth of the established capacity of the nonlinear nonsymmetrical and abruptly variable load, equipment depreciation of generating and network organizations, liberalization of power engineering sector of economy in many countries of the world.

Electrical energy quality provision is impossible without information regarding the level of conductive electro-magnetic disturbance in the distribution nets of electric supply systems, quality indexes control at joining of electric receivers, determination of disturbances sources and receptors.

The means of measurement offered at the market, and added into the state register of means of measurement, which allow to carry out not only control but also analysis of electrical energy

They provide high precision, which is necessary for the control of compliance with the electrical energy quality norms, but not always required for technological measurements, scientific research work, electrical energy quality monitoring in the definite points of the network control and electrical devices.

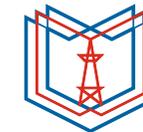
During the research process the authors have participated in the improvement of the existing meters manufactured industrially for the electrical energy quality control, low cost devices development, including virtual laboratory installations for scientific research and the influence of different loads on the conductive disturbances value analysis.



It is planned to carry out future Research and Development activity on the basis of the fulfilled research work. It will lead to the development of products samples meeting the current requirements of safety, designers' workup of the quality meters structure, optimized components selection.

These devices do not require certification; they may be used in the systems of electrical energy quality monitoring.

The merit of the developed meters is the possibility of their successful application in the training process of students and retraining courses participants.



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**Development,
creation and
application of
electrical energy
quality meters**