

## MegionEnergoNeft, LLC

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ATTN: O.N. Ekaterinina, Deputy Director General

Re: Reference on MIKO-8 instrument

In May 2018, MegionEnergoNeft LLC received a pilot operation of the MIKO-8 device for measuring the direct current resistance of windings of oil and dry transformers from 0.4 to 110 kV of various types and designs. The device was operated both during the repair of electrical equipment during the repair of power transformers, and at transformer substations in the course of acceptance tests of electrical equipment serviced by MegionEnergoNeft LLC.

During exploitation, the advantages of the instrument were revealed, for example: small dimensions, a convenient housing for transportation and operation, an intuitive menu, a built-in measurement archive that allows you to speed up the measurement, simplify the processing of the results and automatically recalculate the data. Measurements are carried out in a short time, which in comparison with other devices significantly reduces the time of measurements. A positive feature of MIKO-8 is the ability to measure the resistance of the windings of power transformers with on-load tap-changers without disconnecting the device from the network and the equipment being measured, which significantly reduces the time it takes to take measurements.

Information is displayed on a large contrast screen that allows readings without voltage. During operation, no shortcomings were detected, the device works flawlessly.

As wishes for additional equipment, there is not enough portable compact battery pack with a built-in charger and a plug for connecting in the field

According to the results of trial operation, it was found that this instrument meets the declared characteristics and significantly superior to instrument of a similar purpose.

First Deputy General Director - Chief Engineer

A.N. Marchenko