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INCREASE ACCURACY OF PHASE DIFFERENCE MEASUREMENT AT INDUSTRIAL FREQUENCY

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Abstract

The necessity of creating metrological support for measuring the loss tangent angle of high-voltage insulation under the action of operating voltage is noted. Requirements for hardware tools are defined. The expediency of using the method of measuring the phase difference of quasi-harmonic signals to create the specified metrological support is shown. A number of improvements to the method have been proposed with the aim of improving the accuracy and speed of measuring devices based on it. The mathematical modeling showed that the modernized method surpasses the one known for speed and accuracy of measurements and can be used to solve the set task. References 10, figure 1, tables 2.

Key words: electric parameters, high voltage insulation, measurement under operating voltage, wireless measuring system.

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