

The invention relates to the field of electrical and electronic measurements and may be used for high-accuracy measurement of impedance components.

Summary of the invention consists in the formation of a series single-tuned metering circuit from the measured object, the output contacts of an impedance converter and a signal generator; control of the nonequilibrium signal formed by the total voltage drop onto the measured object and the output circuit of the converter; equilibration of the metering circuit by controlling the impedance reproduced by the converter and determination of the measured impedance components. The control of the nonequilibrium signal is carried out by comparing its phase with the phase of a reference signal produced by the converter, the phase of which coincides with the phase of the reactive component of the impedance reproduced by the converter, the control of which is carried out by means of independent regulation of the active and reactive components. The equilibration of the metering circuit is carried out in two stages: in the first stage it is regulated the active component of the impedance reproduced by the converter up to the attainment of a phase shift equal to  $180^\circ$  between the nonequilibrium signal and the reference signal, and in the second stage it is regulated the reactive component of the impedance reproduced by the converter up to the transition of said phase shift from the value  $180^\circ$  to the value  $0^\circ$ .

The result of the invention consists in the elaboration of a method for measuring the impedance components permitting the equilibration of the metering circuit in two stages which leads to the simplification of the measurement algorithm and to the enlargement of the application field.

Claims: 1

Fig.: 2