

The System of Measurement of Symmetrical and Asymmetric Short Circuit Current with Multi Range Current Transformers in Conditions of Short-Circuit Testing Laboratory

Keywords

short-circuit tests, short-circuit current measurements, current transformer

Abstract

The article contains an overview of various requirements for the parameters of the Short-Circuit Testing Laboratory: symmetrical and asymmetrical short-circuit currents, time constant for the disappearance of the constant short-circuit component, asymmetrical peak factor and various types of short-circuit tests performed on various devices operating in power systems, contained in different subject standards. The equipment of the Short-Circuit Testing Laboratory of the Electrotechnical Institute and the modernized test chamber No. 6 is described, equipped with new multi range current transformers and a modern measuring system for short-circuit current. The method of checking the accuracy of current transformers for measuring

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short-circuit currents is described and example oscillograms are given. The values of the adopted parameters of the transformers and the way of designing the test track are highlighted, enabling the simplification of preparatory works to carry out short-circuit tests and research organization. The article contains electrical diagrams of measurement systems, diagrams of transformer windings and photograph of modernized test chamber No. 6.

