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Comparative analysis of regime parameters of longitudinal-transverse booster transformers

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Abstract

The design and development of modern unified power systems based on the Smart Grid concept requires high level of electrical networks controllability that can be done using equipment controlled by power electronics. Thus, the development and study of the such devices characteristics are relevant. The research objects are transformer devices that provide voltage and power flows regulation in networks. The work purpose is to determine the energy characteristics of the devices under consideration and conduct a comparative analysis to identify their advantages and disadvantages. The goal was achieved during processing the results of computational experiments performed on the basis of structural simulation models. The paper novelty consists in the comparative analysis of the energy characteristics of the research objects, the results of which made it possible to determine a device with the best characteristics for implementation in the form of laboratory sample.

Keywords: *active power, reactive power, controlled interconnection, longitudinal-Transverse voltage boost, voltage regulation*

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