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DETERMINATION OF THE POWER OF TRANSFORMING ELEMENTS IN THE RECONFIGURATION OF THE TRANSFORMER-AND-SWITCHES EXECUTIVE STRUCTURES OF AC VOLTAGE STABILIZERS. ANALYSIS OF INFLUENCE FACTORS

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Abstract

The installed power of the transformer element of the transformer-and-switches executive structure (TSES) of the AC voltage stabilizer is determined not only by the power of the load, but also by the specified range of the input voltage variation, within which the output voltage remains unchanged (with an allowable error) and by the selected configuration of the TSES. Analytical dependencies connecting these parameters are proposed for an array of possible configurations of TSES with 6, 7, 8 switch elements and expedient configurations are

determined. Specific examples of calculations are presented. However, the paper has a generalizing character, since it outlines an algorithm for creating a TSES with a large number of switch elements. References 9, figures 9, tables 3.

Key words: transformer-and-switches executive, tap changing transformer, discrete smart transformer, AC voltage stabilizers, converting field, range of voltage stabilization, reconfiguration, installed power of the transformer.

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