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RATIONALIZATION OF DIMENSIONS FOR RING-SHAPED ROTOR OF WIND-ELECTRIC SWITCHED RELUCTANCE GENERATOR

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Abstract

The effect of geometric dimensions of the ferromagnetic elements of ring-shaped rotor of the

switched reluctance generator on the multiplicity of the variation of magnetic circuit conductivity caused by rotor motion is studied by numerical simulation using finite-element method and experimental prototype. The quantitative relations of dimensions of the elements with square cross-section are determined to provide the maximum change in magnetic system conductivity at rotor motion and to improve the electromagnetic characteristics of the generator. References 7, figures 5.

Key words: switched reluctance generator, ring-shaped rotor, magnetic conductivity, rational geometric parameters, electromagnetic system.

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