

Permanent Magnet Synchronous Generator: Unsymmetrical Point Operation

Authors : P. Pistelok

Abstract : The article presents the concept of an electromagnetic circuit generator with permanent magnets mounted on the surface rotor core designed for single phase work. Computation field-circuit model was shown. The spectrum of time course of voltages in the idle work was presented. The cross section with graphically presentation of magnetic induction in particular parts of electromagnetic circuits was presented. Distribution of magnetic induction at the rated load point for each phase were shown. The time course of voltages and currents for each phases for rated power were displayed. An analysis of laboratory results and measurement of load characteristics of the generator was discussed. The work deals with three electromagnetic circuits of generators with permanent magnet where output voltage characteristics versus rated power were expressed.

Keywords : permanent magnet generator, permanent magnets, vibration, course of torque, single phase work, asymmetrical three phase work

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