

INDUCTION MOTOR AS A BASIC ELEMENT LOAD POWER AUTONOMOUS SYSTEM

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The effect of the asynchronous motor asynchronous generator power commensurate autonomous power supply system.

Keywords: autonomous power supply system, a stand-alone induction generator, induction motor of comparable capacity.

Stand-alone power systems are designed to provide any consumers both symmetrical and asymmetrical, with linear and nonlinear characteristics under static and dynamic loads.

The purpose of research – the research of the effect an asynchronous motor as the main electrical load autonomous power supply system.

Materials and methods of research. The method adopted by the process of starting the engine generator used in autonomous power system supply with compensated for the various options and basic serial asynchronous motors and generators was established.

The results of research. As an example, the calculation was adopted of compensated on asynchronous generator in the basic serial motor 4A71B2 nominal power of 1.1 kW and compensated asynchronous motor on the base of 4A71A2 nominal power 0.75 kW. The choice to compare for autonomous power system supply was justified for classical system.

To calculate the characteristics of the generator at work it on a static load resistance change accounted magnetization circuit by changing its parameters and load generator and applied basic magnetization curve typical asynchronous machine.

Joint work compensated asynchronous motor and compensated asynchronous autonomous generator in electromechanical complex going offline with improved performance induction generator (increased voltage level and degree of rigidity external characteristics) and engine starting characteristics,

reducing consumption of reactive power machines due to the effect of internal capacitive compensation.

Conclusions

The asynchronous generator as for the induction motor in autonomous power system supply can use different ways capacitive compensation.