

SUMMERY

Master's diploma work contains: 116 pages; 44 figures; 22 tables; 39 references.

In this master's thesis, an autonomous generation system based on an induction generator with an indirect vector control algorithm has been studied. In this generation system, the effect of the magnetization curve on the operation of the control system was investigated. The algorithm is implemented with the maximization of the torque-current ratio which provides the formation of the oscillation of the generator. The influence of the flow control algorithm on the operation of the system and its efficiency are investigated.

The mathematical modeling of the generation system based on the asynchronous generator was performed taking into account the magnetization curve of the system in the generator model and the algorithm. The system with the flow-forming algorithm was simulated. Also a generator system when working from a diesel engine was simulated.

Proved by simulation, the expedience of taking into account the magnetization curve and the algorithm for forming the flow coupling for the generation system, having obtained satisfactory results.

INDUTION GENERATOR, INDIRECT FIELD-ORIENTED VECTOR CONTROL, SYNTHES OF ALGORITHM CONTROL, STUDY, CURVE OF MAGNETICS, MMC, FLUX FORMATION, DIESEL ENGINE.

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