

ABSTRACT

Master's diploma work contains: 132 pages; 59 figures; 24 tables; 49 references.

In this master's thesis, two algorithms for vector control of an autonomous generation system based on an asynchronous generator are investigated. Two vector control algorithms are investigated to improve the efficiency of power generation at speeds below nominal value. Working out the task when the load is loaded with dynamic and static current control.

This system was modeled with different algorithms at speeds that are lower than the nominal value at different values of load and clutch. The influence of the first and second order filters in the formation of the trajectory of the coupling is investigated.

After conducting the study, it was found that the use of dynamically variable current control algorithms is appropriate, as well as the use of first and second order filters, as satisfactory results were obtained.

INDUCTION GENERATOR, FIELD-ORIENTED VECTOR CONTROL,
RESEARCH OF ALGORITHM CONTROL, MTA, OPTIMAL FLUX
FORMATION, FIRST AND SECOND MATHEMATIC FILTER, WIND
GENERATOR.

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