EXPERIMENTAL SETUP FOR THE RESEARCH POWER AUTONOMOUS SYSTEM WITH COMPENSATED ASYNCHRONOUS GENERATORS AND INDUCTION MOTORS COMPARABLE POWER

V. Kozurskiy, Chuenko R., Makarevych

Experimental studies of the off-line system of power supply are about the compensated asynchronous generator and asynchronous electric motor of commensurable power.

Off-line system of power supply, an autonomous asynchronous generator, asynchronous engine, experimental setting, is compensated.

Aim of researches – by means of the created laboratory setting to conduct the study of quality picture of action of physical processes of the compensated asynchronous machines, receipt of actual quantitative indexes on the real physical model, verification earlier the got results of calculable experiments and confirmation of positive features before base machines.

Materials and methodology of researches. The laboratory was creted for experimental research of the compensated asynchronous machines.

In autonomous system with compensated asynchronous generators and induction motors as a drive engine for the compensated asynchronous generator the engine of direct-current of independent excitation with possibility of the wide and smooth adjusting of speed. In experience the autonomous asynchronous generator of any modification is compensated on the method of indemnification of reactive-power and to providing by it generator created on the basis of base asynchronous

electric motor with a shortcircuited rotor 4A71B2 by nominal power 1,1 kW. The electromechanics loading is used serial asynchronous engine 4A71A2 by nominal power 0,75 kW. Loading of working engine is a loading generator with a link machine for control and registration of moment of loading of engine in a withstand mode.

Results of researches. Researches of electric machines envisage the removal of descriptions of idling, short circuit, working, starting, thermal and ат acoustic vibration [2].

For control of speed of drive engine a digital tachometer is used. Control and registration of processes that flow during work of АСЕЖ come true by means of oscillograph (removal of curves of voltage and currents of generator, construction of external descriptions).

Conclusions

The worked out specialized stand for experimental researches allowed to conduct test of the compensated asynchronous generator and asynchronous engine of autonomous electromechanics complex with the set sizes of external and internal capacity indemnification.

As a drive was the used engine of direct-current of independent excitation. Loading of asynchronous engine is a loading generator with a link machine.