

SUMMARY

The diploma project contains: pages - 65, figures - 19, tables - 6, specifications - 1 and a graphic part on 3 sheets of A1.

In the diploma project the electromechanical system of the chassis of the regional plane on the basis of the collectorless engine of a direct current is developed.

In the work on the basis of the tachogram of traffic at the airport, the power of the drive engine of the aircraft chassis was calculated and a rechargeable battery was selected, which ensures the movement of the aircraft at a distance of 9 km. A traction inverter with a nominal power of 110 kW was also selected and a functional diagram of the electromechanical system was drawn up.

Synthesis and research of the algorithm of vector control of the moment of the synchronous engine for the chassis of the plane is carried out. The algorithm of vector control of the synchronous motor torque is investigated by the method of mathematical modeling. The investigated algorithm provides asymptotic testing of a given trajectory of the moment, which corresponds to the trajectory of the vehicle at the airport.

SYNCHRONOUS ENGINE, AIRCRAFT, AIRCRAFT CHASSIS,
VECTOR MOMENT CONTROL, SYNTHESIS OF CONTROL ALGORITHM,
DYNAMIC CHARACTERISTICS

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Devel.	V. Hanzha				<i>Electric wheel drive of the chassis of a regional aircraft based on a synchronous motor</i> <i>Summary</i>	L.	Page	Pages
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N. Contr.	B. Pryimak					<i>NTUU "KPI"</i> <i>Caf. AEMS-EP</i> <i>EP Group -61</i>		
Approved.	S Peresada							