

Abstract

The master's dissertation on the topic "Definition of traction parameters of air screws of quadcopters" includes the introduction, four sections, conclusions and a list of literature. The project contains 90 pages, 29 drawings, list of used sources for 14 titles.

The chosen theme is very relevant, since quadcopter machines are beginning to occupy an important place in human activity. Therefore, the research of screws of small-sized aircraft is an important issue, since the field research is almost non-existent in Ukraine. Obviously, zvalezhnosti and concepts used for full-size propellers are not suitable for propellers used on kvadrokopterah litalnyh and similar devices, so you need to study and gain new zalezhnoti and formulas for calculating the parameters of screws.

The chosen theme corresponds to the plans of the research works of the department.

The purpose of the master's thesis is to study the traction capabilities of the air-propellers of quadcopters in order to determine the characterization that most influence the propulsion cravings. The objective is to develop a stand for testing kvadrokopteriv towing capacity, towing capacity analysis propellers kvadrokopteriv designed to stand, to determine analytical thrust propeller depending on the speed of rotation of the rotor, build graphs of the thrust of the speed of the propeller and make their comparisons.

The object of the study is the stand for determining the traction of air screws of small-sized aircraft.

The subject of the study is the traction power of air-propellers of quadcopters.

It was obtained the equation of the traction dependence on the speed of rotation for eight air screws. Conclusions have been made as to which characteristics of propellers are most influenced by their traction capabilities.

Some research results are published at the XI All-Ukrainian Scientific and Practical Conference of Students and Postgraduates "A View to the Future of Instrumentation"

The results of the thesis published in two articles, "Review and analysis of work on experimental determination thrust propellers" and "Experimental determination parammetriv thrust propellers for small aircraft" in the XI All-Ukrainian scientific conference of students and graduate students "Looking to the future instrument"

Keywords: *propeller, propeller thrust, quadcopter, aircraft performance motor, parallelogram measure force sensor.*