

## **Annotation**

In this work, an ultrasonic monitor for composite materials products was designed.

At the first distribution, there is a complete analysis of the types of composite materials with ultrasound control, the physical and mechanical characteristics of composite materials are examined, and the brown-and-white method of ultrasonic monitoring is wound up. In the second section, the acoustic path of the device was calculated and the geometric dimensions of the piezoelectric plate were determined.

In the third section the amplitude of the phase method for determining time intervals using phase-manipulated signals is modeled and the structure of the device is developed.

In the fourth section the selection and calculation of components for the electrical schematic is performed.

The conclusion presents the general results obtained during the implementation of the diploma project.

The pages of the main text 67, the sources used 32, the graphic part consists of five drawings. Schematic electrical diagram – A1, block diagram – A1, assembly drawing – A1, detailing: Cover – A3, Housing – A3.