

Abstract

In this master work the acoustic stethoscope with telemetric communication system conducted experimental studies to determine the errors that have easy adaptability to new control objects and different classes of problems. This work consists of seven chapters and contains 87 figures, 7 tables, drawing 1, 2 and 8 schemes graphic material.

In the section "Overview of BPD technology" are the main physical properties of radio frequency, reduced analysis types types of telemetry communication, conclusions and justification of choice wireless technology Bluetooth.

In the section "Development of the functional schemes" developed and described in the functional diagram. Described timing diagrams and sequence of flaw. The calculation Piezoelectric transducer. The results of these calculations is to determine the basic geometric parameters of the sensor resolution antireflection layer thickness.

Developed schematic diagram of the device, the parameters of basic knots. The system meets all the requirements. Modeled parts of the electrical circuit and comparative analysis of the data and conclusions.

The section "Research flaw" Experimental investigation of error flaw for different thickness of the test sample and at different depths and different defects occurrence.

Bluetooth In the study it was found that this wireless technology fully meets the requirements

Thus Ultrasonic Flaw developed with telemetric communication system and the research and benchmarks flaw

.KLYUCHOVI WORDS: ARM, automation control, ultrasound system is wireless control, wireless technologies flaw.