

Summary

On the diploma project of the student of the fourth year, groups of PC-51 of the Faculty of Adjacent Andrii Salakov with those: “Eddy current two frequencies stethoscope for controlling products from non-ferromagnetic materials”

In this thesis two-parameter stethoscope was developed for controlling rods of non-ferromagnetic materials with a diameter of 34-35 mm. For example, samples from bronze and duralumin were used.

In the first section were presented theoretical information of eddy current control, two-parameter control, as a kind of multi-parameter control. The theoretical data on types and species of eddy current converters are described. Also, such methods of signal processing as amplitude, phase and amplitude-phase are described.

In the calculation part of the work presented calculations of the eddy current converter itself, as well as its work in two modes: the first - at high frequency to control the diameter of the OK, the second - at low frequency, to control the electrical conductivity OK. The chosen method is substantiated, and graphs are given that prove that the chosen method is the most correct one.

The third part - design and technological describes the technical characteristics, and the principle of this device. The block diagram of the device is given, and the functional scheme is developed. This appliance meets all the delivered tasks.