

Abstract

The diploma project is devoted to the development and research of the eddy current method of wire quality control. In the work, calculations of the output voltage of the eddy current converter were carried out, which were performed taking into account various influencing factors and system parameters. The main problem solved by the diploma project is to increase the efficiency of wire quality control by using the non-contact eddy current method, which ensures high accuracy of detecting defects such as dents and other violations of the wire diameter. The graphic part of the diploma project includes a structural diagram of the developed system, an assembly drawing of the eddy current converter and its detailing, an electrical schematic diagram and a poster "Physical principles of operation of the eddy current system for controlling the diameter of the wire" diagram.

The purpose of the work: improvement of the process of controlling the diameter of the wire in the technological process of its manufacture by using the non-contact eddy current method, which provides high accuracy of detecting defects and the possibility of control in dynamic mode.