Abstract

The aim of the project is to develop and implement an automated meter capable of effectively measuring the residual magnetic field in ferromagnetic products. During the project development, the task of designing the meter was successfully addressed, including calculations for the number of turns in the measurement winding and the total active and reactive power required for fluxgate excitation. The graphic part of the project presents the structural diagram of the device, functional diagram, assembly drawing of the meter, and electrical schematic.

Key aspects of the project include the development of a fluxgate transducer, which is the main component of the meter, and the study of methods and means for accurate measurement of the residual magnetic field in ferromagnetic materials.

The conclusions of the project will contribute to the field of magnetic field measurement in ferromagnetic products by providing important insights into the design and implementation of an automated meter for precise and efficient assessment of the residual magnetic field. The research findings can be applied in industrial sectors where quality control of magnetic parameters in products is required.

Key words: meter, residual magnetic field, ferromagnetic products, automation.