

## ABSTRACT

This master's dissertation consists of an introduction, 4 chapters, conclusions, list of references and appendices. The total volume of the work was 97 pages, contains 24 illustrations and 24 tables. 19 sources of literature were processed.

As a result of the master's dissertation it was proposed to use the amplitude-phase method of two-parameter eddy current control, in which the amplitude method is used at high frequency to determine the diameter of the rod, and the phase method at low frequency to determine the specific conductivity of the material.

Also, a structural and electrical-schematic diagram of the eddy current flaw detector was developed, which implements the proposed method of two-parameter control. Recommendations for the implementation of the developed project in production are formed.

Keywords: eddy current control, multiparameter eddy current control, non-destructive testing, phase discrimination, amplitude method, phase method, hodographs, vortex converter