ABSTRACT

The diploma project contains: 57 pages, 18 figures, 18 tables, 32 used sources, 3 appendices.

The object of automation is a steam boiler.

The aim of the work is to develop an automated system for controlling the technological process of a steam boiler using a software logic controller (PLC) and a selected human-machine interface.

In the course of the diploma project, the following will be developed: a functional automation scheme, a control algorithm, a list of equipment, a list of input/output signals.

Thanks to the developed automated system, it is planned to reduce the number of accidents, increase capacity, and increase the accuracy and reliability of measurements of the parameters of the crude oil heating furnace.

The effectiveness of the developed automated system for controlling the technological process of a steam boiler consists in reducing possible erroneous actions of service personnel and obtaining a reliable system.

The diploma project was done using the text editor Microsoft Word, Microsoft Visio, CAD AutoCad 2013, mathematical package MathCad.

Keywords: automated control system, steam boiler, steam boiler drum tank, software logic controller, sensors, scada, screen forms.