

Abstract

The bachelor's graduation project executed on theme «Automation of obtaining ethanal of the hydration of ethyne », contains 57 pages of explanatory notes, 19 illustrations, 2 tables, 1 app, 3 drawings and 10 bibliographic items.

The system of the process automation of obtaining ethanal using the mechanism of the hydration of ethyne was developed in this project. The particular development includes the study of heat exchange process, development of functional automation circuit and other project documentation.

The analogue system of the process automation of extracting ethanal using the mechanism of the hydration of ethyne was worked out in the research. Considerable attention is paid to the heat exchanger control system, especially to the control circuit of temperature regime on the output settings. The mathematical model of the control object for the calculation of the system and development of the control circuit was worked out; it was, furthermore, built the static and transition characteristics of the object. Based on the mentioned above, the control system of the circuit was properly synthesized and investigated.

The study determined most qualitative mode of control circuit operation to ensure stable operation of the heat exchanger. In addition, the basic requirements for safety were executed.

Key terms: ETANAL, ETHYNE, TYPE HEART EXCHANGER " TUBE IN TUBE ", HEART EXCHANGE, AUTOMATION, CONTROL, MODELING, OPTIMIZATION, CONTROLLER.