

## **Abstract**

A bachelor's degree project the analysis of the technological scheme of styrene.

The system automation, basic electrical circuits: remote control and emergency protection of electric pumps, switching circuit connections.

The main technological apparatus is reboiler.

In the thesis project deals with the peculiarities of reboiler as a control object.

As a thesis project for reboiler mathematical model statychmode and dynamic mode model. Using this model performed calculations of static characteristics of the perturbation and control channels. Constructed transient and frequency characteristics of channels. Made synthesis of a closed control system with PI-regulator. Tested its stability.

Also in the thesis project considered the safety of the production process of styrene by dehydration of ethylbenzene.

The degree project contains an explanatory note in volume 61 page specification equipment and devices in volume 8 pages, and add volume of 3 pages.

Explanatory Note contains 16 figures, 3 tables, 2 applications (1 of them - spec equipment and equipment) and 8 references.

Keywords: dehydration, styrene, ethyl benzene, reboiler, contour control, object control, automation scheme, the mathematical model, static characteristics, dynamic characteristics, frequency response, channel disturbance, channel management, safety, equipment specification.