

## **Abstract**

Master's thesis entitled "Automated control of the chemical reactor in white soot production process" contains an explanatory note in volume 139 pages.

Explanatory Note contains 41 figures, 6 tables, 2 additions and 62 references.

Sections explanatory note the analysis of the literature related to the modeling of chemical reactors and approaches to the synthesis of chemical reactor control systems, the mathematical model constructed static and dynamic characteristics of the control object built chemical reactor control system using PID controller respectively the technological requirements of driving the process and strict management system built chemical reactor was done comparing the two systems, calculation of basic requirements for safety.

*Keywords:* production of white soot, automation, chemical reactor, technological process, control and regulation, object control, transfer function, transfer characteristic, the synthesis of the regulator, safety.