Abstract

Master's thesis entitled "Automated process controll of a glass furnace in the glassmaking industry" contains an explanatory note in volume 130 pages.

Explanatory Note contains 51 figures, 5 tables and 53 references.

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

Keywords: glass, automation, glass furnace, technological process, control and regulation, object control, transfer function, transfer characteristic, the synthesis of the regulator, expert system, safety.