

ABSTRACT

Master's dissertation of " Development of the strategies of ammonia absorption process control with the reliability assessment in bound nitrogen production" presented an explanatory note containing 152 pages., 26 Figures., 19 tables., 3 applications, 27 sources.

MANAGEMENT STRATEGY, ABSORPTION AMMONIA WATER, TREATMENT TREE, RELIABILITY, COMPUTER CALCULATION, INTEGRATED ENVIRONMENT, CONTROL AND MANAGEMENT, TECHNICAL AND ECONOMIC INDICATORS

In this master's dissertation, a system was developed to automatically control the process of ammonia absorption in the production of fixed nitrogen, the washout technology of which allows to remove ammonia from the purge gases and increase the yield of marketable products (ammonia water) and ensure high environmental friendliness of production.

The design of the control system is carried out by the sequential definition of the principles, parameters and technical means of automation. The process control strategy was developed on the basis of the Honeywell C200 microprocessor operation using the Experion PKS software package. Using computer simulation, results were obtained that show the response of the system to changes in input parameters; a circuit for emergency shutdown and system cut-off from input parameters was developed.

The management strategy for the process of absorption of ammonia from waste gases with the production of ammonia water in the system has been evaluated. The process control strategy was developed on the basis of the Honeywell C200 microprocessor operation using the Experion PKS software package.

A start-up project was developed, economic calculations of the cost of developing and implementing an automation system.