

ABSTRACT

Master's graduate work consists of 133 pages, 26 figures, 18 tables, 3 appendices, 36 sources.

Actuality of theme. Relevance of the thesis is to develop new technologies flue gas desulphurization based on minimal consumption of raw materials.

The **purpose** of the dissertation is to carry out computer simulation of the processes of aerodynamics in a centrifugal filter to determine the optimal design of the reactor and the time of the process of semi-dry flue gas desulphurization of coal-fired thermal power plants.

Object of study: computer-integrated technology for flue gas desulphurisation process analysis in a closed loop duct system.

Research methods: computer modeling, object-oriented programming, data mining.

The startup project was developed. Calculated basic technical and economic parameters of the process. Analysis of internal and external startup environment. A business process map is compiled and key factors for the success of the project are calculated. Also, an assessment of risks and insurance from them.

Testing results. The main provisions of the master's thesis were covered at the 7th international scientific-practical conference "Computer Modeling in Chemistry and Technology and Systems of Sustainable Development" May 6 - 8, 2019 and the XXII All-Russian Conference of Young Chemists. Nizhny Novgorod April 23-25, 2019.

Publications. Source master's thesis published two scientific articles in collections of conferences.

COMPUTER MODELING, SULFUR DIOXIDE, DESULFURIZATION, AERODYNAMIC RESISTANCE, CLOSED LOOP DUCT SYSTEM, EFFECTIVENESS OF ENJOYMENT, MEDIUM DIAMETER, ASH