



**ACADEMICIA**  
**An International**  
**Multidisciplinary**  
**Research Journal**  
**(Double Blind Refereed & Peer Reviewed Journal)**



**DOI: 10.5958/2249-7137.2021.00879.X**

**ON OPTIMAL CONTROL OF THE CRUSHING PROCESS**

**Artikov A\* ; Akabirova L.Kh\*\* ; Gafurov K. Kh\*\*\***

<sup>1</sup>Tashkent of Chemical-Technological Institute,  
UZBEKISTAN

<sup>2</sup>Bukhara Engineering Technological Institute,  
UZBEKISTAN

**ABSTRACT**

*In industry, in most cases, high grinding steppes are required. The automatic control of solid particulate material crushing is a prerequisite for maximizing equipment productivity. A more voluminous task, which must be solved in the automation of crushers, is related to the optimization of the entire process of multi-stage crushing, the effect of using separate units taking into account the requirements of automatic control, rather than by increasing the number of controlled parameters, allowing, as is often the case in practice, not only receive comprehensive information about the process, but also insure against possible malfunctions in the operation of unreliable devices. An automatic crusher performance control system control circuit has been developed. The following tasks are solved: construction and description of functional diagram of automatic crusher performance control system; defined mathematical and computer models of the automatic control system; optimal control scheme is defined.*

**KEYWORDS:** *Crushing; Performance; A control circuit; Automatic control system; Process; electric motor power consumption.*

**REFERENCE**

1. Bauman V.A.-Mechanical equipment of construction materials enterprises. M., Engineering-1975. in Russian.
2. Catalogue of industrial instruments and automation tools of Endress + Hauser.
3. Poronko V.V. Technological measurements and instrumentation of the food industry. - M: Agropromizdat, 1990, -290s. in Russian.

4. Industrial instruments and automation means:
5. Rubanov V.G., Vyrkov D.F.-Development of automation equipment. B.-1993. in Russian .
6. Artikov A., Computer methods of analysis of synthesis of chemical and technological systems. Textbook. Tashkent – 2012. in Russian
7. Polotsky L.M., Lapshenkov G.M., Automation of chemical production, a textbook for universities. - M: Chemistry, 1982. 295 p. in Russian.
8. Larchenko A.A.-Automatization of production processes in the construction materials industry. L., Stroyizdat-1975. in Russian.