ELECTRICAL DISCHARGE MACHINING - A HIGH FUTURE NONCONVENTIONAL PROCESSING PROCESS

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Rezumat. *Eroziunea electrică se numără printre cele mai răspândite procedee de prelucrare a materialelor metalice. Acest procedeu se caracterizează prin lipsa presiunii mecanice asupra obiectului care asigură localizarea macroscopică a agentului eroziv. Această lucrare științifică evidențiază un studiu bazat pe prelucrarea experimentală a datelor precum și modelarea celor mai importanți parametri tehnologici la prelucrarea dimensională prin eroziune electrică cu și fără activare magnetică. În acest context este abordată modelarea și optimizarea parametrilor procesului ceea ce poate conduce la creșterea calității suprafeței prelucrate, la o creștere a productivității prelucrării și la o reducere a uzurii volumice a obiectului de transfer utilizat.*

Abstract. *Electrical discharge machining is one of the most common processes for processing metallic materials. This process is characterized by the lack of mechanical pressure on the object that ensures the macroscopic location of the erosive agent. This scientific paper highlights a study based on experimental data processing as well as modeling the most important technological parameters for dimensional processing by electrical discharge machining with and without magnetic activation. In this context, the modeling and optimization of process parameters is approached, which can lead to the quality increasing of the processed surface, to an increase of the processing productivity and to a reduction of the volume wear of the transfer object used.*

Keywords: *Electrical Discharge Machining, Magnetic Field, Experimental Modeling, Factorial Experiment, Quality*

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1. Introduction

A systemic approach is usually a general way of thinking that applies to all sciences, but at the same time has a particularly effective effect on the technological sciences. The essential nature of the systems approach lies in the fact that, on the one hand,

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