

Numerical simulation of the unsteady ECM process

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Abstract

The process of EM machining of a two-dimensional surface of a machine part is the focus of this investigation. The linear approximation for electrostatic field is assumed. Electrolyte in machining gap is simulated as two-phase continuum-mixture of an incompressible fluid and gas. The system of unsteady conservation equations, averaged across the gap is written for a two-dimensional domain. It is solved by finite difference method. Influence of unsteady technological factors on the accuracy of machining process is examined.

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