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Optimization of Process Parameters for AISI 304 Using Micro-EDM Drilling Process: A Review

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Abstract

Today, a variety of microparts are needed to fabricate high-tech items including MEMS applications and micro-electronic parts. The advancement of micromachining technology becomes ever more important in order to produce these micro parts. The creation of accurate holes and pins is one of the multiple processes in the micromachining process that is necessary for many small components. In order to create deeper, more straight holes, micro-hole drilling is utilized in a number of precision industries, including the manufacture of watch and camera parts, fuel injection nozzles for automobiles, etc. High aspect ratio holes can be produced using electrical discharge machining (EDM) drill, a noncontact machining technique for electrically conductive materials that is very helpful in the tool manufacturing sector. The objective of the study on micro-EDM drilling process parameters is to analyse the effect of drilling parameters i.e. peak current(I_p), Pulse on time(T_{on}) and Pulse off time(T_{off}) etc.on machining AISI 304.

Keywords

EDM drill, AISI 304, MEMS

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