Development of micro EDM with directly mounted APA 400MML actuator as tool feed mechanism

Samykano Mahendran; Ismail Fazli; Sawalingam Thinesh Chander Faculty of Mechanical Engineering, Universiti Malaysia Pahang, Pekan, Pahang, Malaysia

ABSTRACT

The development of new, advanced engineering materials and the need for precise flexible prototypes and low volume production have made Micro-EDM and important manufacturing process to meet such demands. The most important parameters in Micro-EDM are the material removal rate (MRR), the tool wear rate (TWR), accuracy and surface texture. The influence of peak current, gap voltage, pulse duration and process parameters plays important role in determining the material removal rate and tool wear rate on Micro EDM. Thus, this paper describes the development of the Micro-EDM based on the tool wear rate and material removal rate of the system using directly mounted APA 400MML actuator as the tool feed control system.

KEYWORDS:

Advanced Machining Process; Electro Discharge Machining (EDM); Micro Machining; Micro-EDM; Non-Conventional Machining

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