

عنوان مقاله:

(Effect of Ultrasonic Vibration of Tool on Electrical Discharge Machining of Tungsten Carbide (WC-Co)

محل انتشار:

اولین کنفرانس بین المللی و هفتمین کنفرانس ملی مهندسی ساخت و تولید (سال: 1384)

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خلاصه مقاله:

This paper deals with the effect of copper tool vibration with ultrasonic (US) frequency on the electrical discharge machining (EDM) characteristics of tungsten carbide (WC-Co). It is found that ultrasonic vibration of the tool (USVT) is more effective in attaining a high material removal rate (MRR) in low current and low pulse time (finishing regimes), and in general the surface roughness and tool wear ratio (TWR) increase. It is observed that ultrasonic vibration of the tool significantly reduces arcing and open circuit pulses, and the stability of the process is increased. This study shows that, there are optimum conditions for ultrasonic assisted machining of tungsten carbide, although the conditions may vary by giving other input parameters for those which have been set constant in the present work.

کلمات کلیدی:

Electrical Discharge Machining, Ultrasonic assisted EDM, Ultrasonic Vibration of the Tool, Tungsten Carbide (WC-Co), Material Removal Rate, Surface Roughness, Tool Wear Ratio

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