

Effect of Process Variables of Wire Electrical Discharge Machining on Surface Roughness for AA-6063 by Response Surface Methodology

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Abstract : WEDM is an amazingly potential electro-wire process for machining of hard metal compounds and metal grid composites without making contact. Wire electrical machining is a developing noncustomary machining process for machining hard to machine materials that are electrically conductive. It is an exceptionally exact, precise, and one of the most famous machining forms in nontraditional machining. WEDM has turned into the fundamental piece of many assembling process ventures, which require precision, variety, and accuracy. In the present examination, AA-6063 is utilized as a workpiece, and execution investigation is done to discover the critical control factors. Impact of different parameters like a pulse on time, pulse off time, servo voltage, peak current, water pressure, wire tension, wire feed upon surface hardness has been researched while machining on AA-6063. RSM has been utilized to advance the yield variable. A variety of execution measures with input factors was demonstrated by utilizing the response surface methodology.

Keywords : AA-6063, response surface methodology, WEDM, surface roughness

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