

Modeling of wedm parameters while machining mg-sic metal matrix composite

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Abstrak

In this paper an attempt has been made to study the effects of the process parameters of wire cut electrical discharge machining (WEDM) on Magnesium-Silicon Carbide MMC with 5% SiC in particulate form. For the analysis, six factors, namely pulse on time, pulse off time, spark gap voltage, peak current, dielectric flushing pressure and servo feed have been taken and a Taguchi L16 orthogonal array for two levels was used. Response surface methodology was also used to develop second-order models for material removal rate (MRR) and surface roughness (SR). From the analysis of variances, it has been observed that pulse on time and pulse off time were the most significant parameters among all those observed in predicting the MRR and SR, respectively.