



Application of response surface methodology

By Bhargav Patel

LAP Lambert Academic Publishing Nov 2012, 2012. Taschenbuch. Condition: Neu. Neuware - Whereas the efficiency of traditional cutting processes is limited by the mechanical properties of the processed material and the complexity of the workpiece geometry, electrical discharge machining (EDM) being a thermal erosion process, is subject to no such constraints. The base material used for this study was an AISI D2 tool steel with copper electrode. The lack of correlations between the cutting rate, the surface finish and the physical material parameters of this process made it difficult to use. This study highlights the development of a comprehensive mathematical model of Tool wear ratio (TWR), Radial overcut (G) and Surface roughness (Ra) for correlating the interactive and higher order influences of various parameters like Peak current (IP), Spark on time (Ton), Spark off time (Toff) and Gap voltage (V) through response surface methodology (RSM), utilizing relevant experimental data as obtained through experimentation. The machining experiments were conducted based on sequential approach using central composite design (CCD). The adequacy of the above the proposed models have been tested through the analysis of variance (ANOVA). 92 pp. Englisch.



READ ONLINE
[7.07 MB]

Reviews

Without doubt, this is actually the greatest operate by any writer. It is really basic but surprises within the 50 percent of the ebook. I discovered this ebook from my i and dad recommended this ebook to understand.

-- **Mrs. Chelsea Hintz**

The ebook is easy in read through preferable to understand. It is actually writter in straightforward words and never hard to understand. I realized this publication from my dad and i encouraged this ebook to understand.

-- **Dr. Fausto Jenkins Sr.**