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Process Modeling of Electric Discharge Machining of Inconel 825 Using Artificial Neural Network

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Abstract : Electrical discharge machining (EDM), a non-conventional machining process, finds wide applications for shaping difficult-to-cut alloys. Process modeling of EDM is required to exploit the process to the fullest. Process modeling of EDM is a challenging task owing to involvement of so many electrical and non-electrical parameters. This work is an attempt to model the EDM process using artificial neural network (ANN). Experiments were carried out on die-sinking EDM taking Inconel 825 as work material. ANN modeling has been performed using experimental data. The prediction ability of trained network has been verified experimentally. Results indicate that ANN can predict the values of performance measures of EDM satisfactorily.

Keywords : artificial neural network, EDM, metal removal rate, modeling, surface roughness
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