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A PARAMETRIC EXPERIMENTAL DESIGN STUDY OF ABRASIVE

WATER JET MACHINING

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ABSTRACT

In this research work, Grey Relational Analysis was selected to determine the optimal combination of various input parameters of Abrasive Water Jet. A L9 orthogonal array was employed to study the performance characteristics of cutting operation on Al-6061. With the help of Grey Relational Analysis we were able to obtain optimal combination of process parameters for maximum Material Removal Rate (MRR) and minimum Surface Roughness (R_a).

KEYWORDS: Abrasive Water Jet, Grey Relational Analysis, MRR, Orthogonal Array, Surface Roughness