

EVALUATION AND OPTIMIZATION OF CUTTING PARAMETERS, FOR TURNING OF EN-8 STEEL: A TAGUCHI APPROACH

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ABSTRACT

The surface finish is one of the prime necessities of clients, for machine parts. This investigation concentrates on improving turning parameters in view of Taguchi technique, to limit surface harshness. Tests have been directed utilizing the L27 orthogonal array in a lathe machine, hard turning of EN-8 steel, utilizing carbide tool in dry condition. The statistical methods of S/N ratio- 'smaller is better'- and the analysis of variance (ANOVA) were applied, to investigate the effects on spindle speed, feed rate and depth of cut on surface roughness. The depth of cut was recognized as the most influential process parameter for minimum surface roughness.

KEYWORDS: ANOVA, EN-8, Surface Roughness, Taguchi Methods, Turning Machining