STUDY ON DRILLING PARAMETERS USING HIGH SPEED STEEL (HSS) AND COBALT TOOLS CUTTER

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I declare that this thesis is the result of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any bachelor and is not concurrently submitted in candidature of any bachelor.

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ABSTRACT

This study presents experimental observations of the influence of the machining parameter on the surface roughness obtained from drilling operation. A plan of experiment, based on the Taguchi approach, had been applied to optimize three machining parameters for two types of cutting tool which are High Speed Steel (HSS) and Cobalt tool. Through this method, the use of orthogonal array, the signal to noise (S/N) ratio and the analysis of variance (ANOVA) were utilized to identify optimal machining parameters of mild steel. The machining parameters involved are cutting speed, feed rate and depth of cut which were designed in a L-9 orthogonal array.

Keywords : cutting speed; feed rate; depth of cut; surface roughness

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