Pengaruh parameter pemesinan terhadap kualitas permukaan baja DF-3 (AISI 01) yang dikeraskan

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Abstrak

Surface roughness plays an important role in product quality. In this study effects of cutting speed workpiece hardness, feed rate and depth of cut on surface roughness in the finish hard turning of DF-3 hardened steel were experimentally investigated Cubic boron nitrite inserts and ceramics with through - hardened DF-3 steel bars were used Four factor-two level fractional experiments were conducted and statistical analysis of variance was performed During hard turning experiments, roughness of the machined surface was measured. This study shows that the effects of workpiece hardness, depth of cut, feed rate and cutting speed on surface roughness are statistically significant. The ejects of two factor interactions of the cutting speed and the workpiece hardness, the cutting speed and the feed rate, and the cutting speed and depth of cut are also appeared to be important. Especially, CBN suitable for high or tow cutting speed because on the 55.4 to 59.6 HRC hardness range resulted in better surface roughness.