

# Diamond Cup Wheel Grinding of Titanium Alloy

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## Abstract

Titanium alloys are generally used in both military and civil aircraft engines and airframes. They are one of strategy materials in national defence industry. There is normally a requirement to produce a work piece with a certain surface roughness, with a particular dimensional accuracy, and with a minimum of surface damage. The objective of this study is to look at the parameters which influence the surface finish that can be achieved when grinding with a diamond cup-wheel, with the emphasis on machining conditions such as wheel speed, table speed and depth of cut. The results show that the surface roughness obtained is more dependent on table speed and depth of cut than wheel speed. Surface morphology is also coincident with the measurements. The surface finish can be achieved to a general engineering requirement in the selected grinding conditions.

Keyword : Grinding, Titanium alloy