The Effect of Thermal Shocks on Wear of Exchangeable Sintered Carbide Inserts during the Cutting Process

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The article deals with testing of exchangeable cutting inserts from sintered carbide and determining of suitable chemical composition for their production. The experimental part was based on evaluation of cutting edge insert resistance against heat waves and thermal shocks during the milling process of commonly used stainless steel 1.4301 (X5CrNi18-10). It was determined amount, types and measured lengths each cracks occurred because of heat waves during the milling process for evaluation of proper chemical composition, grain size and content of cobalt for their production.

Keywords: sintered carbide insert, cutting, stainless steels, thermal shocks, heat cracks

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