Comparison of the Effect of Process Fluid Using the Test by Drilling a Constant Feed Force

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New types of process fluids is very broad. Drilling with constant feed force represents the experiment that follows different properties and effects in machining. The main aim of this scientific paper is to assess the speed of drilling holes by the drilling technology-constant feed force- with the drilling cutting tools made of uncoated high speed steel. Eleven different process fluids were compared used the during the experiment. There were compared eleven different process fluids. In the context of the thesis more process fluids from global suppliers have been tested. In the process of experiments there were used twist drills of high speed steel type HSS, ČSN 221121, ø 8 mm, without coating. Steel samples were 16MnCr5, according to EN 10084-94. During the experiment there was used drilling of holes by hand feed drill machine V 20 that was modified with the mechanical switch and there was also stopwatch. Testing of process fluids in chip machining has been going on at the Department of machining and assembly of the Technical University of Liberec for many years.

Keywords: Machining, drilling, process fluids, time of drilling, chips

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