Effect of Hydraulic Oil Entering the Cutting Fluid on the Tool Life and Roughness in Milling of Stainless Steel

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The use of cutting fluid increases the tool life and reduces the roughness of the machined surface. However, during the machining the oil from the hydraulic system of the machine often gets into the cutting fluid, which can alter the properties of the cutting fluid. In scientific literature there is no information on the effect of the hydraulic oil entering the cutting fluid on the tool life and roughness. In this regard, at the laboratory of the Department of Machining and Assembly of the Technical University of Liberec, there has been conducted a study to ascertain the effects of hydraulic oil getting into different types of cutting fluids during the milling of stainless steel.

Keywords: Machining, Cutting fluid, Wear

Acknowledgments

This article is related to the investigation on the Specific University Research Projects which are supported by the Ministry of Education (MSMT) of the Czech Republic.

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Paper number: M201766