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RECOMMENDATIONS REGARDING THE USE OF TITANIUM NITRIDE COATED RESPECTIVELY UNCOATED HIGH SPEED STEEL HELICAL CUTTING TOOLS, ON THE MACHINING OF THE 32Cr10 STEEL

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Abstract

In this article, starting from the results obtained after some researches regarding the durability of the titanium nitride coated respectively uncoated high speed steel helical cutting tools, on the machining of the 32Cr10 steel, there are presented the recommendations for using these cutting tools. These recommendations are presented as a guide at hand for the designers of technologies for choosing the working parameters so the uncoated respectively coated helical cutting tools are being used most efficient. The efficient use of the cutting tool is obtained in the conditions when in the machining process are obtained a uniform wear on all of the cutting tool's cogs. The uniform wear is obtained if the cutting tool has an intermittent axial motion with a certain step for teething with all of its cogs. This way it can be mentioned the durability of a single cog, respectively the durability of the entire cutting tool, the last one being important in the exploit process because it determines the time for switching the cutting tool after its wear.

Keywords

Coated cutting tool, cog machining, titanium nitride, teething, recommendations.