

Comparison of Economic Factors and Machining Effects Using Conventional Boring Bar and Tool with a Mechanical Vibration Damper*

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Abstract

The article presents the topic of boring using a tool with a mechanical vibration damper. These types of tools are particularly useful when boring holes that exceed five diameters in length. A comparative analysis of the machining effects was made from the example of sleeves made of C55 steel, machined with a conventional boring bar and equipped with a vibration damper. The comparative factor was the roughness parameter Ra . Machining was performed with a CNC lathe for three cutting speeds and two tool feed values. Using the program to calculate the profitability of selecting individual cutting tools, the production costs and operating times of these two boring bars were compared and conclusions were drawn.

Keywords: manufacturing costs, economic factors, cutting tools, cutting process