The Affect of Input Factors on the Optimisation of Cutting Conditions and Production Costs in Turning with Cutting Inserts

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In this paper the effect of factors entering into the optimisation of cutting conditions and affecting production costs in turning is analysed. Optimisation of cutting conditions affects every manufacturing company in the field of machining, and represents an important area of the economy these enterprises. The aim of the research was to determine the size of the influence of input factors on the results of the calculation of the optimisation of cutting conditions using inserts in turning. Each constant is moving at a definite recommended range of values depending on various conditions. If we find out what the most important input factors most affecting the calculation of the optimisation of cutting conditions, we are able to focus primarily on the following factors. Influences of selected factors on costs are presented in graphs showing their interdependence. The influences of the input factors received from overall analysis were categorized by importance and created a list containing three groups significance of individual factors. According to the created groups a company can more easily focus on the parameters that most affecting the cost of turning, thereby improving the selection of specific technical, economic or time values in the company.

Keywords: optimisation, cutting conditions, production costs, inserts, turning

References


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