Abstract of the Article
“Evaluation of Cost-Effectiveness of Part Processing”
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The article dwells on defining the terms of the minimum possible cost of part processing. Analytical dependence has been obtained for determining the cost of part processing, which includes two major variable heads of expenditures related to employee wages and costs of cutting tools during processing. In relation to the scheme of turning cut, this dependence has the following characteristics: processing time, cutting parameters (cutting speed, cutting depth, length feed) and economic parameters (worker's wage rate that takes into account all sorts of charges on worker's ааде rate and the price of tool).

It has been found out that the cost of processing is an extremum (minimum) on the cutting speed. Taking into account these data, the optimal values of processing efficiency and tool life, corresponding to the minimum cost, have been determined.

It has been proved that the minimum possible cost of processing is quite clearly determined by the processing efficiency and there exists proportional feedback. The basic conditions for cost reduction and improvement in processing efficiency have been determined on this basis. They consist in increasing the cutting depth, length feed and tool price cutting. Under these conditions the cutting depth should be increased to the stock removal rate i.e., processing should be performed in one разя and the cutting speed should be set depending on the cutting depth, length feed and economic parameters. This provides for the necessity of solving technical problems of determining the optimal parameters of part processing, using cost-effective methods.

Thus it has been determined that the cost reduction of part processing can be achieved by the choice of both cutting parameters and economic parameters of processing. It enabled to determine economically sound cutting mode and to establish a substantial decrease in the cost of processing by reducing the cost for tool purchase.