

DEVELOPMENT OF DYNAMIC STRATEGY OF ESTIMATING COST OF JOBS ON LATHE WITH VARYING COMPLEXITY

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ABSTRACT

This paper parametrically examined the strategy of estimating cost of jobs produced on lathe machine with consideration for varying the complexity of jobs. Holistic assessment of the associated cost of production of jobs on a lathe was adopted taking into considerations the lathe, the workshop-environment and the machinist remuneration. The cost estimation approach utilizes machine hour rate assessment together with a multiple linear regression model for predicting the release time of jobs. The product of machine hour rate and the estimated release time gives cost of jobs produced on lathe. This method gives adequate room for evaluation of a piece and as well as mass produced jobs on the lathe. It further captures some of the salient cost elements such as overhead cost, repair and maintenance on lathe, cost of working space on the lathe, repair and maintenance of lathe floor space and insurance cost on lathe machine that are usually not included among the production factors on lathe machines.

KEYWORDS: Lathe, Cost of Job, Production, Machine Hour Rate, Release Time, Complexity of Job, Overhead, Repair, Maintenance