

Study of Different Types of Tool Failures to Improve Cutting Tool Life

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Abstract: *In the Metal removal process, as tool wear increase causes Tool failure and contributes to increased Machining cost. To reduce the machining cost, improve production rate and achieve world class efficiency it is essential to study the Tool failure modes and optimize every possibility. The ultimate failure is understood to have taken place when the tool has worn out and can machine no more and could break under the cutting forces enhanced due to the blunt cutting edge. The Gradual wear that leads to this ultimate failure is unavoidable but controllable. On the other hand a tool could fail due to many avoidable causes which we would call as premature failure. In this paper, we are discussing the most common tool failure, causes of failure and failure minimizing techniques.*

Keywords: Tool wear, Tool Failure, Modes of Tool Failure, Tool Failure Prediction, Cutting Tools

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