

Intelligent Production Machine

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Abstract : This study in production machines, it is aimed that machine will automatically perceive cutting data and alter cutting parameters. The two most important parameters have to be checked in machine control unit are progress feed rate and speeds. These parameters are aimed to be controlled by sounds of machine. Optimum sound's features introduced to computer. During process, real time data is received and converted by Matlab software. Data is converted into numerical values. According to them progress and speeds decreases/increases at a certain rate and thus optimum sound is acquired. Cutting process is made in respect of optimum cutting parameters. During chip remove progress, features of cutting tools, kind of cut material, cutting parameters and used machine; affects on various parameters. Instead of required parameters need to be measured such as temperature, vibration, and tool wear that emerged during cutting process; detailed analysis of the sound emerged during cutting process will provide detection of various data that included in the cutting process by the much more easy and economic way. The relation between cutting parameters and sound is being identified.

Keywords : cutting process, sound processing, intelligent late, sound analysis

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