

GICS for grinding process optimization

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The article deals with the automation of the grinding machine duty cycle. There are both described, the problems of the automation of the duty cycle and the present state summarised in this paper. The control systems of grinding cycle run from the experiences and process knowledge. Real GICS (Grinding Intelligent Control System) must be founded on the process monitoring and to create own control system with principal parameters of grinding. Cutting speed, workpiece motion speed, depth of cut, volume of coolant, course of cutting forces and other process parameters can form single control components at the adequate process knowledge. At some control systems description the authors assume the future possible direction of development, considering possibilities in the use of the expert and intelligent systems.

Keywords: grinding, grinding wheel, adaptive system, expert system, intelligent system

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