

## Influence of Thermodynamic Phenomena at the Optimum Cutting Parameters when Grinding

Karel Kocman

Institute of Production Engineering, Faculty of Technology Tomas Bata University in Zlin, E-mail: profkocman@seznam.cz

In particular, the quantitative and qualitative results of the technological process are in most cases determined by the level of finishing operations, which include in particular grinding. It is characterized by high precision, the accuracy of geometric shape and generally very good quality surface. One of the factors to achieve the desired quality of finished surfaces, in particular, knowledge of the effect of temperature of the contact surface of the grinding wheel and the ground. In the article is the methodology of the quantification of the impact of cutting parameters on the temperature of the grinding. Another requirement is the right choice of other cutting parameters, to guarantee the achievement of the required accuracy dimensions and shape, increase performance and decrease the temperature of the contact of the cut surface with a grinding wheel.

The result is the desired surface integrity and the exclusion of undesirable residual stress in the lustre of the surface. In the case of the quantification of the individual characteristics of the grinding on the optimization of the grinding process, it is possible to achieve this objective

**Keywords:** energy characteristics of the grinding, cutting, grinding the surface integrity parameters, residual voltage, quantification of heat and temperature

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