



## INVESTIGATION OF THE CUTTING OF ENGINEERING POLYMERS

**Róbert Kovács, Péter Korzenszky, Róbert Keresztes**

Department of Farm and Food Machinery, Institute of Technology, Hungarian University of  
Agriculture and Life Sciences, H-2100 Gödöllő, Hungary  
*e-mail: kov.robert93@gmail.com*

### ABSTRACT

During the turning process, we have investigated the problems that can arise, such as avoiding the formation of flow chips, which are eliminated by sawing the workpiece longitudinally. Furthermore, we measured the main cutting forces acting on the blade and the cutting forces in the feed direction at different feed rates, depths of grip and cutting speeds, and investigated possible correlations between these.

Chips produced at different cutting parameters and with different materials were investigated. All turning operations are carried out without emulsion and all other coolants for environmental and other reasons.

The specific cutting resistances have been determined, which are essential for determining good tool utilisation and also for planning the economics of machining

The aim of this research is to define machining parameters that can be used in practice for the engineering plastics under investigation, so that the machining of these materials by turning can be made more economical.

*Keywords: Turning, cutting, polymers*

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