ISSN 1213–2489
ISBN 978–80–7414–415–8

# The impact of the cast-iron semi-finished product hardness on the surface quality after the machining process

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**This paper deals with the assessment of the impact of the semi-finished product hardness and the cutting conditions of machining process on the surface roughness of the workpiece after machining. The paper shows that the hardness of the material machined layer and also its inhomogeneity have an impact on the resultant quality of the machined surface. The appreciable impact on the surface quality has also the cutting conditions size affecting at the same time the machining temperature. The machining process took place in the company WIKOV MGI J.S.B. in Hronov on the machine Hedelius BC 100 with the face-milling cutter that was attached with the replaceable cutting tips made from the sintered carbide by the company KENNAMETAL. The machining material was a cast-iron.**

**Keywords:** surface roughness, hardness, machining

## Acknowledgement
***This paper is connected with the project resolution MSM 4674788501, supported by MŠMT ČR.***

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Paper number: M201113

Manuscript of the paper recieved in 2010-09-10. Final paper including reviews reminders respect recieved to editors in 2011-12-21. The reviewers of this paper: *Prof. Karel Kocman, MSc., Sc.D. and Prof. Jan Madl, MSc., Ph.D.*