

## Dust Concentration in Air during the Aluminium Alloy AlCu4Mg Milling Operations

Pavel Kic, Miroslav Müller

Faculty of Engineering, Czech University of Life Sciences Prague, Czech Republic. E-mail: kic@tf.czu.cz, mul-  
ler@tf.czu.cz

During the metal machining amount of dust is generated which can influence significantly surroundings, but mainly workers are exposed to dust pollution. The aim of this paper is to present results of microclimatic research focused on dust pollution in workshop during the milling of aluminium alloy workpieces. The concentration of air dust was measured by the DustTRAK II Model 8530 aerosol monitor. Using the special impactors the PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>4</sub>, PM<sub>10</sub> size fractions were also measured. Obtained results of measurements and concentrations of different size of dust particles were analysed. Results of measurements under different milling conditions are generalized. The conclusion of the research is that it is necessary to watch the optimization of the milling process as well as secondary effects of the technological operations and inner environment of workshops which can be contaminated by chemical substances as well as dust particles.

**Keywords:** dust fractions, manipulation, natural ventilation, waste, workshop

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