

## Abstract

The content of analytical part of this thesis is the study of airborne dust samples collected in places with its higher concentration: by the Prague Ring (D0 motorway) and near the Ostrava's iron-mills. In both places, automobile transportation or industrial production are the primary sources of particulate matter emissions in the air.

Received samples of PM1, PM2, PM10 a TSP filters were obtained by a standard air pollution monitoring procedure.

This study examines the relationship between the magnetic parameters of the samples, their level of concentration of metals frequently present in emissions from these sources, the total mass of the dust fraction in the samples and the meteorological parameters (for Ostrava samples).

The magnetic properties of the filters were investigated by magnetometric analyzes using a vibration sampling magnetometer. The concentrations of the metals were monitored by X-ray fluorescence spectrometer, the weight of parts of dust filters was measured on laboratory scales.