

Abstract

The electrical resistivity tomography (ERT) method is widely used to detect underground cavities because their air, water or clay infill often has a significant geoelectrical contrast to the surrounding rock. The review part of this study summarizes properties of the method and presents examples of investigation of underground cavities in various geological settings, mainly the crevice-type and karst caves and old mining objects. The case study from the Amatérská cave in the Moravian Karst proved the ability of the technique to detect air and clay filled underground cavities above the depth of 40 m. The resolution of the method is lower at greater depths but some indication of deeply situated Pustožlebská Zazděná and Amatérská caves was captured.

Keywords: ERT, underground cavities, caves, Moravian Karst