

Abstract

This bachelor thesis focuses on granitic rocks, which are often used as a building material. Granite are generally rocks with very low porosity, which can be modified (augmented) due to e.g. weathering processes. Increase of porosity is accompanied with deterioration of other physical parameters and decrease of durability. The thesis focuses, after introducing basic petrographical and petrogenetic characteristics of granitic rocks, on the definition of porosity as a physical property, and on various methods used for its determination. Next part of the thesis discusses some case studies which underpin the significance of porosity of granitic rocks by either using combination of several methods, or by using unconventional ones. According to available data, study of porosity and its relationship to rock fabric should be performed by combining several methods of study, encompassing simple petrophysical determination of open and bulk porosities, and microscopic methods allowing for visualisation of pore space – mineral grains relationships. These can be accompanied with less common method of multidirectional ultrasonic sounding allowing for determination of spatial distribution of microcracks present in granitic rocks.