

Abstract

This diploma thesis is focused on the porosity of the North-Bohemian coal clayey landfills. It was analyzed by laboratory measurement of the permeability with constant hydraulic gradient in the triaxial apparatus, and in the oedometer. The soil for the laboratory tests was taken from Pokrok landfill. The soil was air dried and crushed and sieved to represent the grading of the in situ landfill. The resulting granulated clay was then consolidated in a centrifuge. The specimens for measurements of permeability were prepared from the consolidated clay. The development of hydraulic conductivity and coefficient of consolidation with vertical effective stress was used to look at changes in landfill porosity. Despite the scatter in the measurements it is concluded that macrovoids close at the prototype depths of 12,5 to 25 metres.