

## عنوان مقاله:

Evaluation of Collapse Deformation Behavior of a Rockfill Material Using Large Scale Triaxial Tests

## محل انتشار:

چهارمین کنفرانس بین‌المللی رفتار بلندمدت و فن‌آوری‌های نوسازی سازگار با محیط زیست سدها (سال: 1396)

تعداد صفحات اصل مقاله: 12

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## خلاصه مقاله:

An experimental program including dry-saturated large-scale triaxial tests was conducted in order to investigate the effects of gradation curve and dry density on the saturation-induced collapse deformation behavior of a rockfill material. Two large scale triaxial equipments with three different sample diameters of 20, 30 and 80cm were employed and a set of dry-saturated tests were conducted. Specimens with different gradation curves and various initial dry densities were tested. The results indicate that in all of the dry-saturated tests, sudden reductions in the shear strengths and volumes of the specimens were observed during the submerging process. The effects of material maximum particle size, fines content and initial dry density on the value of sudden shear strength reduction, internal friction angle reduction caused by saturation ( $\phi'$ ), the change in elasticity modulus of the material due to submerging, i.e., ( $E_{we}/E_{d,y}$ ), and also the saturation-induced sudden volumetric strain ( $\epsilon_{v,s}$ ) were evaluated and discussed. Based on the results of dry-saturated tests, the intensity of collapse deformation behavior of the rockfill material increases as the material maximum particle size and fines content increases. However, increasing the initial dry density of the material decreases the intensity of collapse deformation phenomenon.

## کلمات کلیدی:

Rockfill, Collapse Deformation, Large Scale Triaxial Test

## لینک ثابت مقاله در پایگاه سیویلیکا:

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