

عنوان مقاله:

Hysteretic response of the CBR of an unsaturated deformable subgrade along drying and wetting paths

محل انتشار:

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خلاصه مقاله:

The California bearing ratio (CBR) test is the basis for determining the strength of a subgrade layer. Nonetheless, the influence of unsaturated condition and in particular the different hydraulic responses during drying and wetting cycles have been rarely considered in the determination of the CBR of a pavement material. The goal of this paper is to examine the strength of a subgrade soil layer compacted at three different initial dry densities along drying and wetting paths. To achieve this, a series of California bearing ratio (CBR) test were performed on a sand-kaolin mixture. Wetting CBR tests were measured on the soil samples mechanically wetted to target void ratio and saturation condition, while drying CBR values were determined on the compacted saturated soil samples that were air dried to desired degrees of saturation. The experimental results showed a hysteretic pattern for the variation of CBR in examined pavement material.

کلمات کلیدی:

Unsaturated soils, CBR, Initial compaction, Degree of saturation, Hysteresis

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