عنوان مقاله:

Experimental study of grain shape and size influence on rate of particle breakage

محل انتشار:

دهمین کنگره بین المللی مهندسی عمران (سال: 1394)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Particle breakage and crushing of granular materials influence the parameters such as permeability, shear strength, grading curve and porosity. As particle breakage continues, stability of structures such as rockfill dams, earth dams, also railway path and road embankments are decreased. Shape, size and property of grains, stress path and amount of stress, water content and initial porosity are factors that affect the particle breakage. In this research, shape effect and grain size influence on amount of breakage has been studied and different breakage factors have been compared with concentration on grading curve before and after compressive loading in confinement condition. Results show that in general, angular and large-size materials compared to rounded and small-size materials, have high amount of breakages and using Liu breakage factor leads to higher values of breakage than Marshal's and Hardin's.

کلمات کلیدی:

crushing, breakage factor, grading curve, granular materials

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