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## Influence of specimen-reconstituting method on the undrained response of loose granular soil under static loading

N. Della, A. Arab, M. Belkhatir

Laboratory of Material Sciences and Environment, Civil Engineering Department, University of Chlef, Sendjas Street PO Box 151 Chlef 02000, Algeria

Abstract

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**Abstract** This paper describes the results of an experimental study on the undrained shear behaviour of loose sand collected from the location close to the epicenter of the recent Chlef (Algeria) Earthquake (October 10, 1980). The study focuses on the effects of the mode of the soil deposition on the liquefaction resistance of the Chlef sand. For this purpose, the results of undrained monotonic triaxial compression tests performed on samples with initial density of 0.29 under initial confining pressures ranged from 50kPa to 200kPa are presented. The specimens were prepared by two depositional methods namely dry funnel pluviation and wet deposition. It was found that there was a marked difference in the undrained behaviour of sand in terms of maximal deviatoric stress, peak strength, residual strength and excess pore water pressure, even though the density and stress conditions were identical. The conclusion was that the soil fabric was responsible for this result. The results indicated also that at low confining pressures, the specimens reconstituted by the wet deposition method exhibited complete static liquefaction (zero effective confining pressure and zero stress difference).

**Keywords:**

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**Corresponding Authors:** N. Della **Email:** [nour\\_della@yahoo.fr](mailto:nour_della@yahoo.fr)**Cite this article:**

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