

Abstract:

Title:

A methodology for continuous determination of drying-path soil water retention curve (SWRC) of fine grained soils

The present invention proposes a methodology for continuous determination of drying-path soil water retention curve (SWRC) of fine grained soils. An AquaSorp® Isotherm Generator (manufactured by Decagon Devices Inc., USA) has been found to be quite useful for this purpose. Extensive studies were conducted on commercially available soils (Kaolinite and Bentonite) by employing this device. In order to understand the influence of specimen specific parameters on the obtained SWRCs, molding water content and thickness of specimens were varied and results have been evaluated critically. Based on a critical comparison of the results obtained from this device with those obtained from the dew point potentiometer, WP4®, the utility of this device for continuous determination of drying-path SWRC of the soils has been demonstrated.