

## Clay Develop Plasticity With Water

**Authors :** Boualla Nabila

**Abstract :** The problems created by the water in Civil Engineering are sometimes neglected or often badly posed when they are not completely ignored, and yet they are fundamental as regards both the conditions of execution of the worksites and the stability. Several damages were caused by the infiltration of water in the soils, in particular in clay regions which can swell under the effect of an increase in their water content as in the case of the Oued Tlelat clay which is made up of yellow-colored marly clays and red-colored El Maleh area. This study was carried out on soil from a site, located near the city of Oran and the city of Ain Tmouchent (northern Algeria) where we encounter many problems of cracking of buildings and bottom uplift of excavations. The study consists first of all in determining the mechanical and physical characteristics of the clay, namely the parameters of shear, simple compression, and that of the odometer. Then the study focused on a comparison of the influence of water type on the mechanical and physical properties of swelling clay soil.

**Keywords :** clay, water, liquidity limit, plastic limit

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