

Effect of palygorskite and soluble salts on engineering characteristics of arid region soils

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Abstract: In Iran, a large extent of the soils and water are facing with salinity; so the geotechnical properties of arid and saline soils are important for engineering design. In this study, the effects of salinity on geotechnical properties of fine-grained and coarse-grained soils containing fibrous clay minerals have been studied. The results showed that salinity was mostly a flocculated agent in fine-grained soils while in coarse-grained soils, it is usually a dispersing factor. In general, salinity increased dry strength parameters and decreased the optimum moisture content. But changes according to the type of clay mineral and particle size, distribution were different.

Keywords: *arid region soils; salinity; fibrous minerals; geotechnical properties.*

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