

Analysis and Modeling of Stresses and Creeps Resulting from Soil Mechanics in Southern Plains of Kerman Province

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Abstract : Many of the engineering materials, such as behavioral metals, have at least a certain level of linear behavior. It means that if the stresses are doubled, the deformations would be also doubled. In fact, these materials have linear elastic properties. Soils do not follow this law, for example, when compressed, soils become gradually tighter. On the surface of the ground, the sand can be easily deformed with a finger, but in high compressive stresses, they gain considerable hardness and strength. This is mainly due to the increase in the forces among the separate particles. Creeps also deform the soils under a constant load over time. Clay and peat soils have creep behavior. As a result of this phenomenon, structures constructed on such soils will continue their collapse over time. In this paper, the researchers analyzed and modeled the stresses and creeps in the southern plains of Kerman province in Iran through library-documentary, quantitative and software techniques, and field survey. The results of the modeling showed that these plains experienced severe stresses and had a collapse of about 26 cm in the last 15 years and also creep evidence was discovered in an area with a gradient of 3-6 degrees.

Keywords : Stress, creep, faryab, surface runoff

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