

Improvement of Sandy Clay Soils with the Addition of Rice Husk Ash and Expanded Polystyrene Beads

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Abstract : This article presents a study on the lightening and improvement of properties of soil extracted in the province of Talara in the department of Piura -Peru, to be used in filling in the construction of embankments for roads. This soft soil has a high percentage of elastic settlement and consolidation settlement. Currently, there are different methods that seek to mitigate the impact of this problem, which have achieved favorable results. As a contribution to these investigations, we propose the use of two lightening materials to be used in the filling of embankments; these materials are expanded polystyrene beads (EPS) and rice husk ash (RHA). Favorable results were obtained, such as a reduction of 14.34% of the volumetric weight, so the settlement will be reduced. In addition, it is observed that as the RHA dosage increases, the shear resistance increases. In this article, soil mechanics tests were performed to determine the effectiveness of this method in lightening and improving properties for the soil under study.

Keywords : sandy clay soils, rice husk ash, expanded polystyrene, soft soils

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