

### **Stabilization of an arid, saline sabkha soil using additives**

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**Abstract:** This paper describes the results of an investigation on the effect of five stabilizing agents, namely limestone dust, marl, emulsified asphalt, cement and lime, on the properties of an arid, saline sabkha soil from eastern Saudi Arabia. Results indicated that the density of sabkha mixtures could not be used as a primary criterion in any stabilization programme and the maximum strength of sabkha mixtures was attained at moisture contents much lower than the optimum. Despite the sabkha's coarse-grained nature, neither addition of marl nor of emulsified asphalt gave any significant improvement in the properties of sabkha and the effect of adding limestone dust was marginal. However, the addition of either lime or cement in the range of 2.5 to 10% by weight of soil increased the strength between 2 1/2 and 22 times. -from Authors