

Effect of Organic and Carbonate Content on Liquid and Plastic Limits of Seabed Soils in the Northern Persian Gulf

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Abstract

Type and rate of clay minerals are responsible for soil plasticity, but there are other parameters like carbonate and organic contents which can affect plasticity of soils. In this study, for assessing the effect of carbonate and organic contents on liquid and plastic limits in seabed sediments of northern Persian Gulf, laboratory tests were done and the results were compared to each other. Based on the test results, zoning maps of liquid limit, plastic limit, carbonate content and organic content for the study area were presented. The results showed that by increasing the carbonate content, the liquid and plastic limits and plastic index were decreased. Also, it was shown that the organic content had positive correlation with Atterberg limits and index.

Keywords: Carbonate, Organic content, Atterberg limits, Persian Gulf.
