

Engineering Parameters and Classification of Marly Soils of Tabriz

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Abstract : Enlargement of Tabriz metropolis to the east and north-east caused urban construction to be built on Marl layers and because of increase in excavations depth, further information of this layer is inescapable. Looking at geotechnical investigation shows there is not enough information about Tabriz Marl and this soil has been classified only by color. Tabriz Marl is lacustrine carbonate sediment outcrops, surrounds eastern, northern and southern region of city in the East Azerbaijan Province of Iran and is known as bed rock of city under alluvium sediments. This investigation aims to characterize geotechnical parameters of this soil to identify and set it in classification system of carbonated soils. For this purpose, specimens obtained from 80 locations over the city and subjected to physical and mechanical tests, such as Atterberg limits, density, moisture content, unconfined compression, direct shear and consolidation. CaCO₃ content, organic content, PH, XRD, XRF, TGA and geophysical downhole tests also have been done on some of them.

Keywords : carbonated soils, classification of soils, mineralogy, physical and mechanical tests for Marls, Tabriz Marl

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