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Bearing Capacity of Sulphuric Acid Content Soil

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Abstract : Tests were conducted to determine the property of soil with variation of H2SO4 content for soils under different stage. The soils had varying amounts of plasticity's ranging from low to high plasticity. The unsaturated soil behavior was investigated for different conditions, covering a range of compactive efforts and water contents. The soil characteristic curves were more sensitive to changes in compaction effort than changes in compaction water content. In this research paper two types of water (Ground water Ph =7.9, Turbidity= 13 ppm; Cl =2.1mg/l and surface water Ph =8.65; Turbidity=18.5; Cl=1mg/l) were selected of Bhilai Nagar, State-Chhattisgarh, India which is mixed with a certain type of soil. Results shows that by the presence of ground water day by day the particles are becoming coarser in 7 days thereafter its size reduces; on the other hand by the presence of surface water the courser particles are disintegrating, finer particles are accumulating and also the dry density is reduces. Plasticity soils retained the smallest water content and the highest plasticity soils retained the highest water content at a specified suction. In addition, soil characteristic for soils to be compacted in the laboratory and in the field are still under process for analyzing the bearing capacity. The bearing capacity was reduced 2 to 3 times in the presence of H2SO4.

Keywords : soil compaction, H2SO4, soil water, water conditions
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