

SOME APPLICATIONS OF MICROMORPHOLOGY OF SOIL IN GEOTECHNICAL ENGINEERING

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This work investigates how information can be obtained from micromorphology to aid geotechnical engineering in determination of soil parameters. Micromorphology of soil should be mainly response of cohesion, shearing strength, compressibility, and so on, but in practice, most of these parameters are defined by tests that commonly are inaccurate, expensive or present restrictions. This work tries to prove as much as possible, that micromorphology of soil can be a practical and efficient way to investigate the soil in regard to geotechnical engineering. For this purpose, three samples at 3, 6 and 8.7 meters of depth were collected, two at each depth. Non deformed samples were impregnated for thin sections, and others were tested for grain size, plasticity index and compressive strength. Some results anticipate a strong correlation. Higher depths correspond to a decrease in bulk porosity, and an increase of peds (soil microaggregates) This result has correlation with grain size and void ratio data. Obviously, to prove the importance of micromorphology of soil to geotechnical engineering more samples and different tests are needed but based on this preliminary effort, success seems possible.