Influence of natural deposition plane orientation on oedometric consolidation behavior of three typical clays from southeast coast of China

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Main goal of this paper

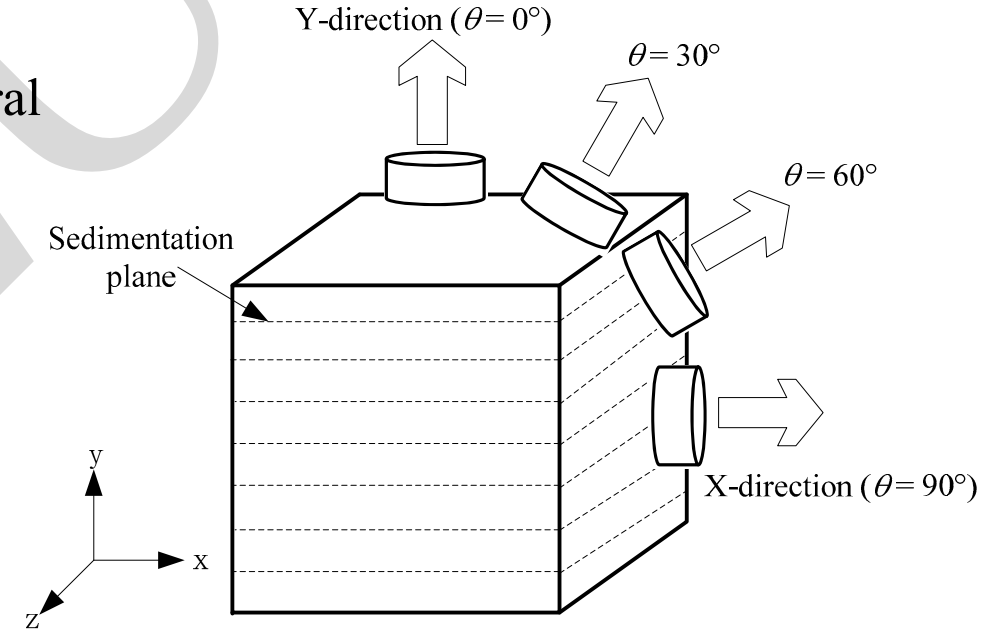
The influences of anisotropy on oedometric consolidation behavior of soil were investigated to develop constitutive model and for engineering practice.

Experimental materials and program

Oedometer tests were conducted on anisotropic samples of natural Shanghai, Zhoushan and Wenzhou clay

Realization of anisotropic samples

The samples were cut in various directions on a big block of natural clays, as shown in the Figure.



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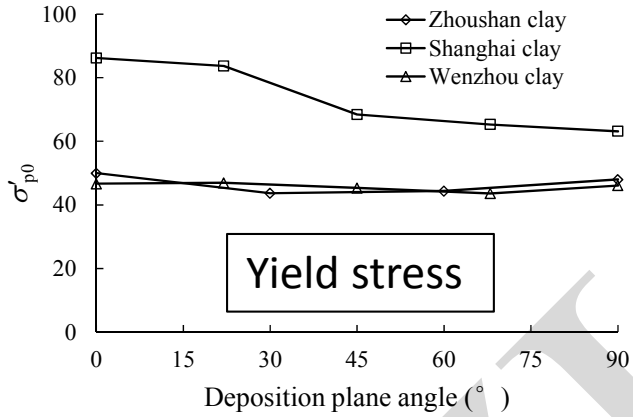
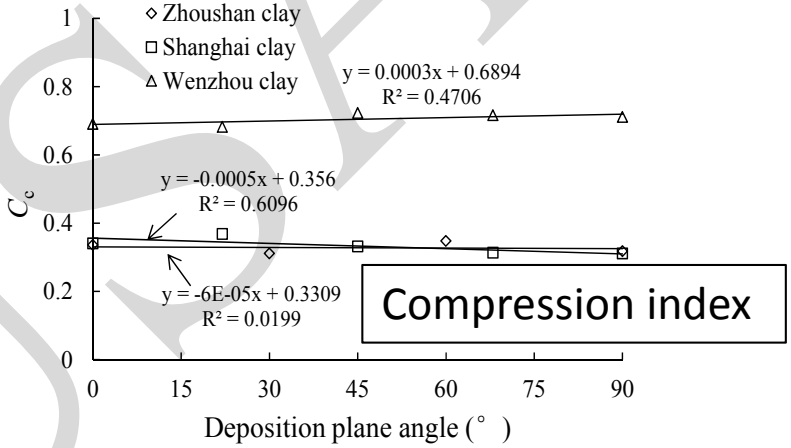
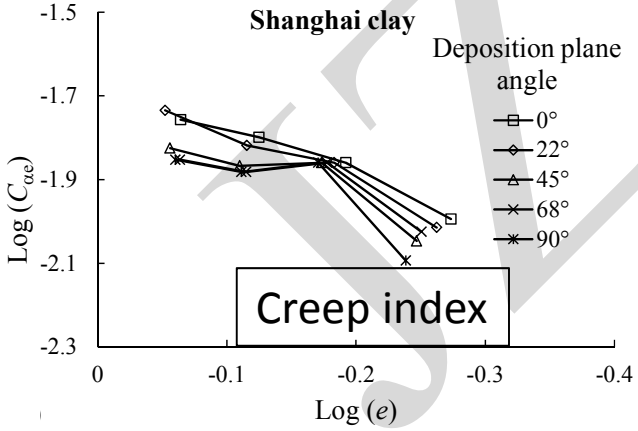
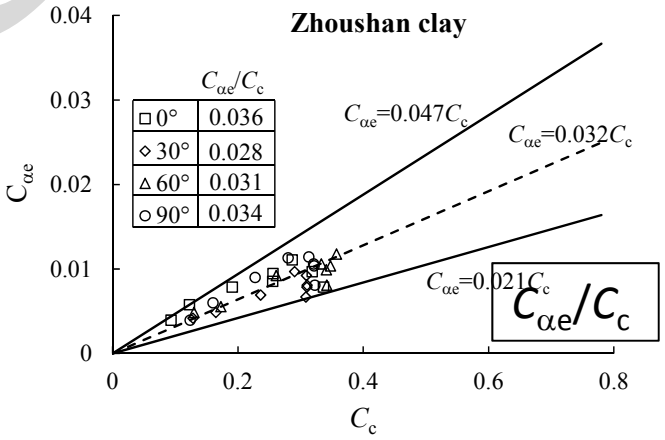
Experimental results

The yield stress, compression index, swelling index, creep index, $C_{\alpha e}/C_c$ and permeability coefficient of clays were all dependent to some extent on the sampling angle. For example:









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