

Compressibility behaviour of remoulded, fine-grained soils and correlation with index properties: Reply¹

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Cherubini et al. have discussed in great detail the merits and demerits of various statistical procedures which can be used to analyze the experimental data and may help to relatively place the various correlation of compression index with the various index properties available in the geotechnical literature. The Authors do agree that the statistical method used by them need not be the best one, but they made use of it for a relative comparison. However, a qualitative look at the plot between compression index C_c and the index property to which it is correlated itself can show which index property is better.

In their paper the Authors wanted to emphasize that liquid limit alone cannot be used to correlate with compression index. This is because other index properties like plastic limit – plasticity index and shrinkage limit – shrinkage index can also significantly influence the compression index (this has been shown clearly in the paper). Hence, they should be

taken into consideration in the correlation exercise. Based on their studies reported in the paper, the Authors feel that shrinkage index correlates better with compression index. However, plasticity index also correlates well with C_c . The Authors hope that others working in this area will also examine the usefulness of the correlation between shrinkage index – plasticity index and C_c . The Authors also conclude that liquid limit alone cannot correlate with compression index. However, soils whose liquid limit and plasticity index are correlated can exhibit a good correlation between C_c and liquid limit, which means that there is also a correlation between C_c and plasticity index.

The results given by the Discussers for two blue clays are such that they may not help in examining the superiority of one correlation equation over another. For better results one should select soils of similar liquid limits with varying plasticity index – shrinkage index.

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