

Thesis Title	Relationship Between Dynamic Cone Penetration and Unsoaked California Bearing Ratio of Soils
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Abstract

This thesis focused to the relationship between Dynamic Cone Penetration and Unsoaked California Bearing Ratio of soil in other that Unsoaked CBR of the soils and be determined non-destructively in the field. Determination of Unsoaked CBR needs a lot of soil sample and required some time. So the test method called Dynamic Cone Penetrometer (DCP) was developed to determine the Unsoaked CBR of soil in the field.

According to advantages of the Dynamic Cone Penetrometer relationship between the Unsoaked CBR value and the DCP value was therefore studied in order to allow immediate determination of soil Unsoaked CBR value in the field. Experiments carried out on the same field employing both laboratory soil testing and the Dynamic Cone Penetrometer revealed relationship between the two values as showed in the following equation.

$$\text{Unsoaked CBR (\%)} = 397.65 * \text{DCP}^{-1.1564} \quad (\text{mm./blow})$$

Moreover, the DCP value obtained from low Unsoaked CBR value soil and fine soil using the dynamic cone penetrometer was found different. Also, Unsoaked CBR value derived from the DCP value was lower than that from laboratory determination.

Keywords : Dynamic Cone Penetration / Unsoaked California Bearing Ratio