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Emprical SPT-CPT correlation for soils from Lahore, Pakistan

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Standard Penetration Test (SPT) and static cone penetration test (CPT) are the most widely used in situ tests to depict the soil stratigraphy and determine the geotechnical properties of the subsurface soils. The CPT leaps out because of its capability to trace the resistance continuously and due to its accuracy, it is still considered to be reliable than the SPT. The outcome of these tests is very important for the design procedures to be implemented for various geotechnical purposes. To effectively utilize all the available data, there is a need of updating a correlation between these two widely used in situ tests. This study implements the statistical linear regression model using a 107 SPT and 47 CPT measurements across the city of Lahore, Pakistan to develop SPT-CPT correlations between the cone resistance (qc) and the uncorrected SPT blow counts (N) for various soils. The developed correlation is compared in terms of qc/N ratios with the previous published studies.

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