

# **STUDY ON APPLICATION OF CONE PENETRATION TEST (CPT) METHOD FOR GEOTECHNICAL ENGINEERING**

**BY**

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## DECLARATION BY THE CANDIDATE

I Ed Syaifur Bin Enre, 2004335442 confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.



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## ABSTRACT

Many geotechnical design parameters of the soil are associated with the Standard Penetration Test (SPT) and the SPT is widely used around the world. On the other hand, Cone Penetration Test (CPT) is becoming more popular for site investigation and geotechnical design. Without disturbing the ground, CPT provides information about soil type, geotechnical parameters like shear strength, relative density, sensitivity, etc. Further on, as it can be seen as a scale model of pile. This study will focus on to study the relationship between the parameters of soil which obtained from CPT result and their effect towards the pile bearing capacity. Through the study, CPT parameters such as tip resistance ( $q_c$ ), skin friction ( $f_s$ ), friction ratio ( $F_R$ ) and pore water pressure ratio ( $B_q$ ) are investigated. Their relationships in aspect of soil classification and pile capacity are presented. Most of the estimated pile capacity in this study is overestimate while the rest considered as underestimate and acceptable capacity.

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