Pile Capacity Behavior of Very Long Bored Piles in Bangkok Soil

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Abstract

1. Introduction

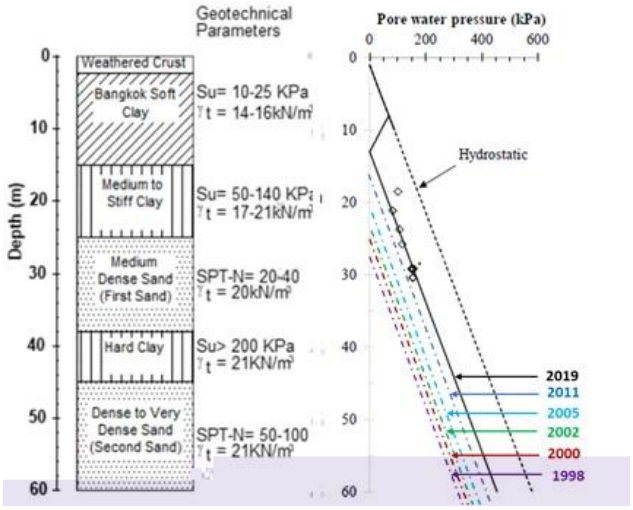
β

2. Geotechnical information

2.1 Subsoil and existing piezometric profile

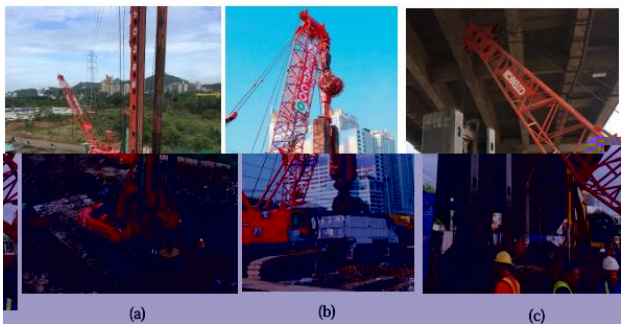
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β

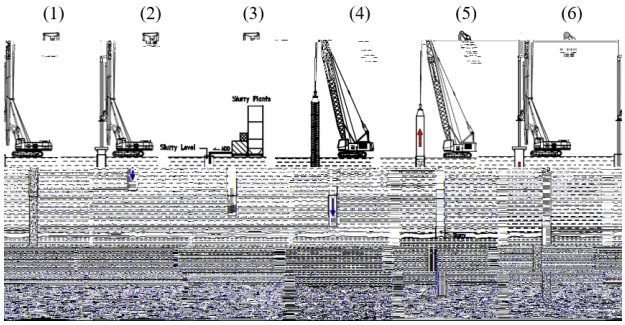


3. Overview of Bored pile construction sequences and quality control

3.1 Type of deep foundation



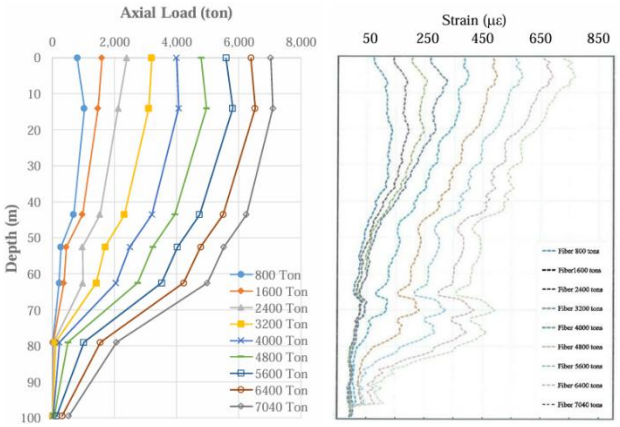
3.2 Construction sequences of bored pile



3.3 Quality control in bored pile construction

4. Overview on design concept and parameters

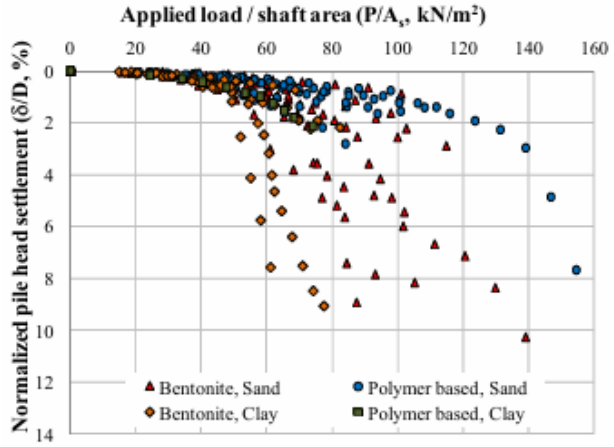
4.1 Load Transfer Characteristics of Bored pile

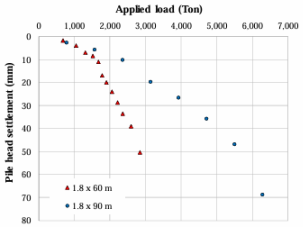


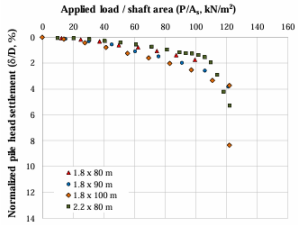
4.2 Static pile load test

Table 1.

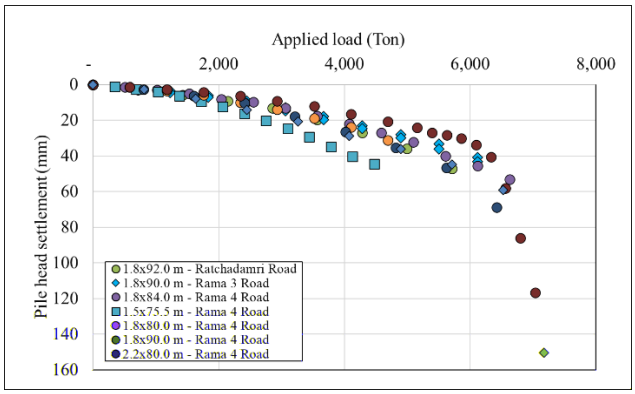
4.3 Load versus settlement

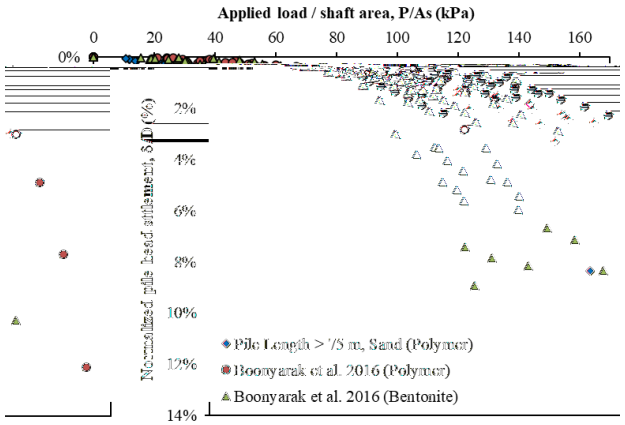

Applied load / shaft area (P/A$_s$, kN/m^2)
Normalized pile head settlement (δ/D, %)
Bentonite, Sand
Polymer based, Sand
Bentonite, Clay
Polymer based, Clay

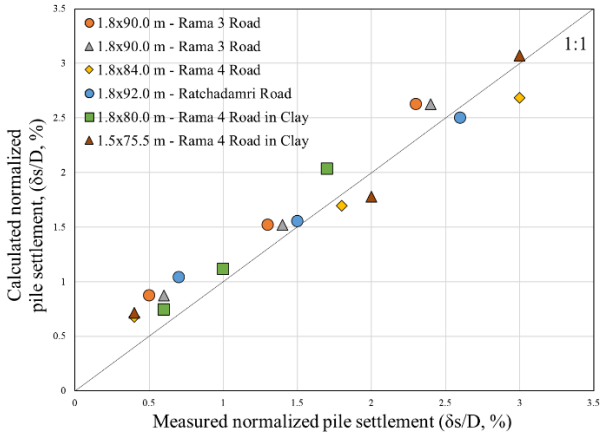

Applied load (Ton)
Pile head settlement (mm)
1.8 x 60 m
1.8 x 90 m

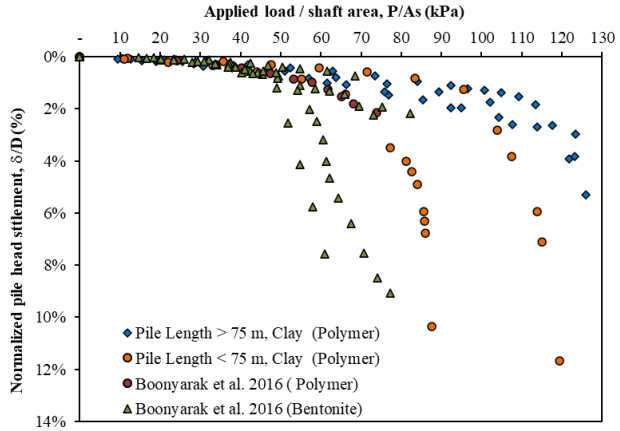

Applied load / shaft area (P/A$_s$, kN/m^2)
Normalized pile head settlement (δ/D, %)
1.8 x 80 m
1.8 x 90 m
1.8 x 100 m
2.2 x 80 m

δ


Applied load (Ton)
Pile head settlement (mm)
1.8x92.0 m - Ratchadamri Road
1.8x90.0 m - Rama 3 Road
1.8x84.0 m - Rama 4 Road
1.5x75.5 m - Rama 4 Road
1.8x80.0 m - Rama 4 Road
1.8x90.0 m - Rama 4 Road
2.2x80.0 m - Rama 4 Road





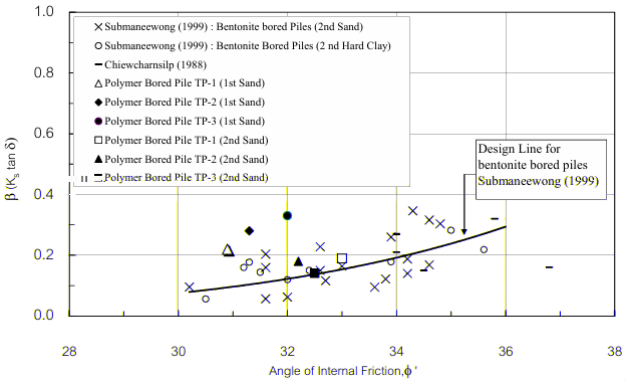


4.5 *Back-calculated β values*

β

β

4.4 *Estimation of settlement*



δ

δ

β

$$\delta = \frac{(W_s+2W_b)L}{2A_sE_p} + \frac{\pi W_b B(1-\nu^2)I_p}{4A_bE_s}$$

β

β

4.6 Carbon Reduction Initiatives

Acknowledgement

References

5. Recommendations and Conclusions