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## Set-up Prediction of the Set-up Effect of Driven Piles

, Chun-Whan Cho,

(), , Director, Piletech Consulting Engineers

SYNOPSIS : Set-up effect of driven piles should be accounted in order to obtain a reliable bearing capacity of piles. In particular, the prediction of bearing capacity of pile after driving is very useful for design of pile foundation. This paper reviews the current state of research on the prediction of increase in pile bearing capacity with time after driving. Some ideas to apply set-up effect for piling practice are suggested in this paper

Key words : driven pile, set-up, aging, bearing capacity, WEAP

1. Set-up



2. Set-up

set-up aging 가 set-up , aging . set-up 가 (Mitchell, 1960). 가 (silica acid Mitchell(1986) aging gel film) , . Schmertmann(1991) aging (particle 가 reorientation) aging 가 Mitchell aging Mitchell(1984) Schmertmann . Acar(1987) Schmertmann(1987) (1998a) aging set-up 가 (SEM), , X (XRD), • aging , , . set-up 가 가 set-up set-up set-up set-up 가 3. Set-up 가 . 가 Svinkin (1994), Paikowsky Skov (1988) (1996),  $Q/Q_0 - 1 = A \log_{10}(t/t_0)$ Svinkin(1994), Paikowsky(1996) Skov 가 Skov . 가  $\log t$ (long-term capacity) Skov . t = 0( ) , t<sub>0</sub> . Skov (1988)Preim , (1989), Svinkin (1994), (1997)

|   |   | 가 | 가                 |
|---|---|---|-------------------|
| 가 |   |   | 가 (set-up factor) |
| 가 |   |   | (1998)            |
| 가 |   |   |                   |
|   |   |   | 가                 |
| 가 |   |   | 가                 |
| 가 | 가 |   | (1998)            |

## 4. Set-up

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가 7 7 . (Wave Equation Analysis of Pile Driving, WEAP) 가 .

## WEAP (Restrike) WEAP WEAP WEAP York (1994) PDA WEAP WEAP Rausche (1996)

(set value) · WEAP 가 · WEAP , ,

Svinkin(1998) WEAP (damping coefficient) Svinkin quake

5.

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가

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•

.WEAP

quake,

5.

set-up

relaxation

(1998), " 1. ", '98 pp.45 50. 2. (1997), " ( ) pp.149 289. (1998a), " 3. ", '98 가 4. (1998b), ' , 8 pp.

(1998), "

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