



CAPACITY ESTIMATION OF PILES USING DYNAMIC METHODS

M.S. ROHAN JAYAWEERA

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Abstract

The foundation is the most important part of any type of structure. Pile foundations are used to transfer very high loads from super structure to the ground. Therefore, design and construction of piles must be carried out with a high confidence. Engineers are using various methods and equations for testing pile foundations and those methods are improving when new technologies come.

Most reliable way of testing of pile is to have a full scale maintain load test on that pile. But this is become critical when large piles encountered. Therefore, application of High Strain Dynamic Test (HSDT) is getting popular.

The use of pile foundations is increased and new driving techniques, as well as new sophisticated stress wave measurement equipments have led researchers to look for better understanding of dynamic and static behavior of the hammer-pile-soil system and to develop more reliable methods of pile analysis. The reliability of pile dynamic test is mainly dependent on the accuracy of the dynamic soil parameters used in the data analysis.

The scope of this study is to find reliable driving equations for different situations by comparing the capacities taken from driving equations and HSDT measurements. Some piles were subject to both HSDT and Static load test to increase the reliability of readings.

DECLARATION

The work included in this thesis in part or whole has not been submitted to any other academic qualification at any institute.

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Signature of the Candidate

22/10/2009
.....
Date

Certified by,

UOM Verified Signature

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Signature of the Supervisor

22/10/2009
.....
Date

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Contents**Page No**

Chapter	1.0	Introduction	
	1.1	General	2
	1.2	Objective of the study	7
Chapter	2.0	Literature Survey	
	2.2	Evaluation of ultimate load capacity of piles	11
	2.2.1	Evaluation of ultimate pile capacity from static equations	12
	2.2.2	Evaluation of ultimate pile capacity from dynamic methods	
	2.2.2.1	Ultimate capacity from Practical pile dynamic formulas	
	2.2.2.1.1	Introduction	14
	2.2.2.1.2	Practical dynamic formulas	17
	2.2.2.1.3	Reliability of dynamic formulas	20
	2.2.2.1.4	Shortcomings of pile dynamic formulas	23
	2.2.2.2	Evaluation of ultimate pile load from High Strain Dynamic Test[HSDT]	
	2.2.2.2.1	Introduction	24
	2.2.2.2.2	Smith's idealization	26
	2.2.2.2.3	Dynamic soil parameters	33
	2.2.2.2.3.1	Quack	34
	2.2.2.2.3.2	Damping factor	34
	2.2.2.2.4	Analysis of HSDT results using the Case Method	
	2.2.2.2.4.1	Introduction	35
	2.2.2.2.4.2	Wave propagation through elastic rods	35
	2.2.2.2.4.3	Reflection of the stress wave traveling through the pile	39
	2.2.2.2.5	Analysis of HSDT results using signal matching	46
	2.2.3	Reliability of static capacity predicted by CAPWAP	49
	2.2.4.	Evaluation of ultimate pile load from static load test	50
Chapter	3.0	Methodology	
	3.1	Scope of work	57
	3.2	General Information	
	3.2.1	Ground Investigations	58
	3.2.2	Pile Installation	

	3.2.2.1	Bored cast in-situ concrete piles	58
	3.2.2.2	Pre cast concrete piles	62
	3.3	Data Analysis	62
	3.3.1	The methodology of investigation	63
	3.3.2	Capacity estimation using soil investigation data	64
	3.3.3	Comparison study of CAPWAP and Static test results for the investigation of the accuracy of CAPWAP	66
	3.3.4	Capacity estimation using pile dynamic equations	75
	3.3.4.1	Hiley method	76
	3.3.4.2	Engineering News method	77
	3.3.4.3	Janbu method	77
	3.3.4.4	Danish method	78
	3.3.4.5	Gates method	78
	3.4	Presentation of the results of the analysis	78
	3.4.1	Assessment of the accuracy of the pile dynamic equations and distribution of data	79
	3.5	Use of normal distribution to evaluate the damping factor	79
Chapter	4.0	Discussion of results	
	4.1	Introduction	82
	4.2	Accuracy of pile dynamic equations	
	4.2.1	Investigation of accuracy of the total capacity from different Pile dynamic equations	83
	4.2.1.1	Accuracy of capacities from Hiley method	83
	4.2.1.2	Accuracy of capacities from ENR method	84
	4.2.1.3	Accuracy of capacities from Janbu method	84
	4.2.1.4	Accuracy of capacities from Danish method	85
	4.2.1.5	Accuracy of capacities from Gates method	86
	4.2.1.6	Accuracy of capacities from average of Hiley & ENR methods	86
	4.2.2	Factors affecting the accuracy of different pile dynamic equations	
	4.2.2.1	Introduction	89

	4.2.2.2	The effect of 'set' on formula capacity	
	4.2.2.2.1	Hiley method	90
	4.2.2.2.2	ENR method	91
	4.2.2.2.3	Janbu method	91
	4.2.2.2.4	Danish method	92
	4.2.2.2.5	Gates method	93
	4.2.2.3	The effect of 'area/ length' on formula capacity	
	4.2.2.3.1	Hiley method	94
	4.2.2.3.2	ENR method	96
	4.2.2.3.3	Janbu method	97
	4.2.2.3.4	Danish method	98
	4.2.2.3.5	Gates method	100
	4.2.3	Estimation of the safety factor for different pile dynamic equations	
	4.2.3.1	Introduction	101
	4.2.3.2	Hiley method	102
	4.2.3.3	ENR method	106
	4.2.3.4	Janbu method	109
	4.2.3.5	Danish method	112
	4.2.3.6	Gates method	115
	4.3	Discussion about skin friction and end bearing	
	4.3.1	The skin friction variation	118
	4.3.2	The end bearing variation	119
	4.4	Accuracy of the capacity estimated using the case method	
	4.4.1	Introduction	120
	4.4.2	The RSP J_c factor for CAPWAP analysis	121
	4.4.3	The RMX J_c factor for CAPWAP analysis	122
	4.5	Observed variation of smith damping and quake value	124

Contents**Page No**

	4.5.1	The Skin damping factor for CAPWAP analysis	125
	4.5.2	The Toe damping factor for CAPWAP analysis	125
	4.5.3	The Quake value of skin for CAPWAP analysis	128
	4.5.4	The Quake value of toe for CAPWAP analysis	128
Chapter	5.0	Conclusion	132
		References	135
		Appendix	138



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LIST OF FIGURES

Figure number	Description	Page No.
2.1	Load-settlement relationships for a single pile in a uniform soil when subjected to a vertical loading to the point of failure	9
2.2	Load-settlement relationships for large-diameter bored and cast-in-place piles.	10
2.3	Allowable bearing pressure for igneous and metamorphic rocks (Ref. BS. 8004 (1986))	13
2.4	Schematic diagram of pile driving	14
2.5	Assumed load-settlement curve for pile.	14
2.6	Transfer of energy and penetration of pile during one blow of the Pile driving hammer	15
2.7	Statistical distribution of load test results (Sorensen and Hansen, 1957)	21
2.8	Normal arrangement of equipment of HSDT	26
2.9	Smith pile soil model	28
2.10	(a) Static skin friction	29
	(b) Static end bearing.	29
2.11	Wave propagation through a long elastic rod	36
2.12	Stress pulse traveling through an elastic rod	37
2.13	Upward and downward traveling wave through a pile section	38
2.14	Stress wave at a free end of a pile	40
2.15	Particle velocity at the fixed end of a pile	41
2.16	Wave reflection due to skin friction	42
2.17	Arrival of the reflected waves at the top of the pile	43
2.18	Typical force and velocity measurement at the pile top	43
2.19	Strain gauges attach to pile	46
2.20	Pile top, force and velocity waves	46
2.21	Measured force and velocity near pile top	48
2.22	Measures and Computed force after signal matching process.	48
2.23	An example of load Settlement Curve predicted by CAPWAP for the discussed pile.	49
2.24	A built-up pile for load test	51
2.25	Loading arrangement for maintain load test	51
2.26	Failure criteria as described in davission method	55
3.1	Casting of test cubes	59
3.2	Slump test with slump cone	59

LIST OF FIGURES

Figure number	Description	Page No.
3.3	Pile Top Settlement under static and dynamic loads-1	66
3.4	Pile Top Settlement under static and dynamic loads-2	67
3.5	(a) Pile top settlement under static and dynamic loads-3	68
	(b) Pile top settlement under static and dynamic loads with Davission failure criteria.	69
3.6	Pile Top Settlement under static and dynamic loads-4	70
3.7	Pile Top Settlement under static and dynamic loads-5	71
3.8	Static capacity vs. CAPWAP capacity for above five piles.	71
3.9	Pile Top Settlement under static and dynamic loads for 1 st pre cast 12 inch pile	73
3.10	The variation of static capacity vs. CAPWAP capacity	73
3.11	(a) Variation of static capacity vs. CAPWAP capacity(for all data)	74
	(b) Variation of static capacity vs. CAPWAP capacity (for low Ru)	74
4.1	Graph of Hiley formula capacities vs. PDA capacity for bored piles.	83
4.2	Graph of Hiley formula capacities vs. PDA capacity for precast piles	83
4.3	Graph of ENR formula capacities vs. PDA capacity for bored piles.	84
4.4	Graph of ENR formula capacities vs. PDA capacity for precast piles.	84
4.5	Graph of Janbu formula capacities vs. PDA capacity for bored piles.	84
4.6	Graph of Janbu formula capacities vs. PDA capacity for precast piles.	85
4.7	Graph of Danish formula capacities vs. PDA capacity for bored piles.	85
4.8	Graph of Danish formula capacities vs. PDA capacity for precast piles.	85
4.9	Graph of Gates formula capacities vs. PDA capacity for bored piles.	86
4.10	Graph of Gates formula capacities vs. PDA capacity for precast piles.	86
4.11	Graph of average of ENR and Hiley capacities vs. PDA capacity for bored piles.	86
4.12	Graph of average of ENR and Hiley capacities vs. PDA capacity for precast piles.	86
4.13	$((PDA - Hiley) / (PDA) \times 100)$ vs. pile Set for bored cast piles	90
4.14	$((PDA - Hiley) / (PDA) \times 100)$ vs. pile Set for precast piles	90
4.15	$((PDA-ENR) / (PDA) \times 100)$ vs. Set for bored cast piles.	91
4.16	$((PDA-ENR) / (PDA) \times 100)$ vs. Set for precast piles.	91
4.17	$((PDA-Janbu) / (PDA) \times 100)$ vs. Set for bored cast piles	91

LIST OF FIGURES

Figure number	Description	Page No.
4.18	((PDA-Janbu) / (PDA) x 100) vs. Set for precast piles	92
4.19	((PDA-Danish) / (PDA) x 100) vs. Set for bored piles.	92
4.20	((PDA-Danish) / (PDA) x 100) vs. Set for precast piles.	92
4.21	((PDA-Gates) / (PDA) x 100) vs. Set for bored cast piles.	93
4.22	((PDA-Gates) / (PDA) x 100) vs. Set for precast piles.	93
4.23	((PDA-Hiley)/ (PDA) x100) vs. Area/Length for board piles.	95
4.24	4.23, when set > 4 mm.	95
4.25	((PDA-Hiley)/ (PDA) x100) vs. Area/Length for precast piles.	95
4.26	4.25, when set > 4 mm.	95
4.27	((PDA-ENR)/ (PDA) x100) vs. Area / length for bored piles.	96
4.28	4.27, when set > 4 mm.	96
4.29	((PDA-ENR)/ (PDA) x100) vs. Area / length for precast piles.	96
4.30	4.29, when set > 4 mm.	97
4.31	((PDA-Janbu)/ (PDA) x100) vs. Area/Length for board piles.	97
4.32	4.31, when set > 4 mm.	97
4.33	((PDA-Janbu)/ (PDA) x100) vs. Area/Length for precast piles.	98
4.34	4.33, when set > 4 mm.	98
4.35	((PDA-Danish)/ (PDA) x100) vs. Area / Length for bored piles	98
4.36	4.35, when set > 4 mm.	99
4.37	((PDA-Danish)/(PDA) x 100) vs. Area/Length for precast piles	99
4.38	4.37, when set > 4 mm.	99
4.39	((PDA-Gates)/(PDA) x 100) vs. Area/Length for bored piles.	100
4.40	4.39, when set > 4 mm.	100
4.41	((PDA-Gates)/(PDA) x 100) vs. Area/Length for precast piles	100
4.42	4.41, when set > 4 mm.	101
4.43	Hiley method /PDA capacities vs. Hiley method for board piles.	102
4.44	Hiley method /PDA capacities vs. Hiley method for precast piles.	102
4.45	ENR method /PDA capacities vs. ENR capacity for bored piles.	106
4.46	ENR method /PDA capacities vs. ENR capacity for precast piles.	106
4.47	Janbu method /PDA capacities vs. Janbu capacity for bored piles.	109
4.48	Janbu method /PDA capacities vs. Janbu capacity for precast piles.	109
4.49	Danish method /PDA capacities vs. Danish capacity for board piles.	112
4.50	Danish method /PDA capacities vs. Danish capacity for precast piles.	112

LIST OF FIGURES

Figure number	Description	Page No.
4.51	Gates method /PDA capacities vs. Gates capacity for board piles	115
4.52	Gates method /PDA capacities vs. Gates capacity for precast piles	115
4.53	Skin friction from CAPWAP vs.calculated skin friction for bored piles.	118
4.54	Skin friction from CAPWAP vs. Set for bored piles.	118
4.55	Skin friction / end bearing vs. set for bored piles.	119
4.56	Skin friction / end bearing vs. set for precast piles.	119
4.57	Variation of CAPWAP capacity with the J_c factor for RSP method.	122
4.58	Variation of CAPWAP capacity with the J_c factor for RMX method.	122
4.59	Variation of CAPWAP capacity with the skin damping factor	125
4.60	Variation of CAPWAP capacity with the Toe damping factor.	125
4.61	The variation of CAPWAP capacity with the skin Quake value.	128
4.62	The variation of CAPWAP capacity with the toe Quake value.	128



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LIST OF TABLES

Table number	Description	Page No.
2.1	Summary of practical driving formulas	17
2.2	Values of hammer efficiency, ef	18
2.3	Values of C_1, C_2, C_3 for Hiley formula	19
2.4	Values of coefficient of restitution, n^a	20
2.5	Summary of safety factor range for equations used in the michigan pile-test program	22
2.6	Empirical values of Soil Quakes (Q), Dāmping Factor (J) and side adhesion, (Forehand & Reese 1964)	34
2.7	Sign of force and particle velocities of waves	39
2.8	Inputs and Outputs for different wave equation program.	50
2.9	The loading and unloading percentages for a maintain load test.	54
3.1	The requirements for mixing and testing of bentonite.	60
3.2	Standards for workability of concrete.	60
3.3	The daily pile record sheet for board piles.	61
3.4	Usually accepted maximum lengths for various square section piles.	62
3.5	Variation of estimated skin friction, using various soil layers thicknesses and related average N values.	65
3.6	Ultimate capacities from static load tests and CAPWAP simulations from load tests carried out under this study.	72
3.7	Ultimate capacities from static load tests and CAPWAP simulations	72
4.1	The variation of R^2 and m values for different formulas.	88
4.2	The ratios of capacities from CAPWAP / Hiley method.	104
4.3	The ratios of capacities from CAPWAP / ENR method.	107
4.4	The ratios of capacities from CAPWAP / Janbu method.	110
4.5	The ratios of capacities from CAPWAP / Danish method.	113
4.6	The ratios of capacities from CAPWAP / Gates method.	116
4.7	RSP J_c factor for CAPWAP analysis.	121
4.8	RMX J_c factors for CAPWAP analysis.	123
4.9	Skin damping factors for CAPWAP analysis.	126

LIST OF TABLES

Table number	Description	Page No.
4.10	Toe damping factors for CAPWAP analysis.	127
4.11	Quake value of skin for CAPWAP analysis.	129
4.12	Quake value of toe for CAPWAP analysis.	130
5.1	The Gradient (m) and R^2 value of the regression line for the graphs of formula capacity vs. PDA capacity.	132
5.2	The calculated G values (Goodness of prediction) for different formulas	132
5.3	The estimated factors of safeties for different formulas	134



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