

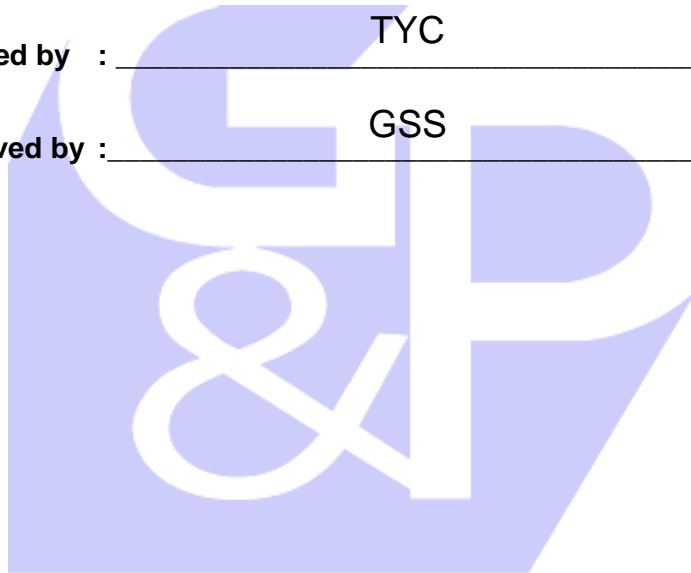


WORK INSTRUCTIONS FOR ENGINEERS

Compiled by : _____ FCC

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OP-3-65. CHECKLIST FOR JACK-IN-PILE SUPERVISION

CHECKLIST FOR JACK-IN-PILE SUPERVISION

53.0 CHECKLIST FOR JACK-IN-PILE

	CHECKLIST ITEMS	Checked By Engineer	Remarks
	Project Name : Client: Piling Contractor :		
1.0	MATERIALS 1.1 Pile Supply <ul style="list-style-type: none"> • Pile Diameter: (Spun Pile/Square Pile) _____ mm <input type="checkbox"/> • Thickness : (Not Applicable for Square Pile) _____ mm <input type="checkbox"/> • Pile Class (A, B etc to specification) _____ <input type="checkbox"/> • Concrete Grade : _____ MPa <input type="checkbox"/> • Pile Serial Number : _____ <input type="checkbox"/> • Pile Working Load: _____ kN <input type="checkbox"/> • Cube Strength Records (Strength > design concrete grade) _____ <input type="checkbox"/> • Pile manufacturing Factory _____ <input type="checkbox"/> 		
	1.2 Pile Shoe (for Starter Pile) <ul style="list-style-type: none"> • Type: Flat Plate (16mm thk) / Cross-Fin (12mm thk) <input type="checkbox"/> • Diameter (measure at site): _____ <input type="checkbox"/> • Plate Thickness: _____ <input type="checkbox"/> • Oslo Point: (Breakdown of Oslo Point Details, eg: Oslo Diameter, Yield Strength, Brinell Hardness, etc.) _____ <input type="checkbox"/> 		
	1.3 Rejection of Piles on Site (To be clearly painted with "X" for all sides of the piles) <ul style="list-style-type: none"> • Piles with horizontal and/or vertical cracks. <input type="checkbox"/> • Non-straight piles beyond tolerance allowed as per specification. <input type="checkbox"/> • End plates of piles which are tilted/uneven/eccentric. <input type="checkbox"/> • Low quality of concrete (honeycomb on pile shaft, spalling of concrete...etc) <input type="checkbox"/> • Presence of aggregates / loss of cement at moulding seam. <input type="checkbox"/> • Piles do not have casting date and pile reference no. <input type="checkbox"/> Piles delivered to site are fully cured (minimum 28 days for normal curing and 3 days for autoclaved cured piles). <input type="checkbox"/>		

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2.0	PILING EQUIPMENT AND ACCESSORIES 2.1 Jack-In Rig <ul style="list-style-type: none"> • Self weight of the rig: _____ <input type="checkbox"/> • Total Numbers. of Kentledge Blocks: steel block or concrete block? _____ <input type="checkbox"/> • Total weight of Kentledge Blocks: total of front section and total of rear section? _____ <input type="checkbox"/> • No. of Jacking Cylinders: _____ <input type="checkbox"/> • Diameter of each Jacking Cylinder: _____ <input type="checkbox"/> • Maximum Pressure of each Cylinder: _____ <input type="checkbox"/> • Maximum Jack-In Capacity: for machine capacity or testing capacity? _____ <input type="checkbox"/> 		
	2.2 Pressure Gauge(s) <ul style="list-style-type: none"> • Calibration Certificate of each Pressure Gauge(s) must be less than six (6) months old : _____ <input type="checkbox"/> • Reading scale must be more than maximum applied pressure: _____ <input type="checkbox"/> • Using 1 or 2 pressure gauge? _____ <input type="checkbox"/> 		
3.0	PILE PREPARATION <ul style="list-style-type: none"> • Setting out of pile centre offset (minimum two points perpendicular). <input type="checkbox"/> • Pile marking at every 0.5m on pile body. <input type="checkbox"/> • Lifting of piles should be in accordance to recommended lifting point by the pile manufacturer. <input type="checkbox"/> • Check Verticality of Jack-In Rig <input type="checkbox"/> • Check Verticality of Pile Body using bubble level (on pile body only) <u>every time the clamp/grip is released and re-grip/clamp.</u> <input type="checkbox"/> 		
4.0	TERMINATION CRITERIA <ul style="list-style-type: none"> • Pile Working Load (PWL) : _____ kN <input type="checkbox"/> Minimum Jacking Force (min 2.2 x PWL or as per specifications): _____ kN <input type="checkbox"/> ○ Equivalent Jacking Pressure : _____ psi <input type="checkbox"/> ○ for no. of cylinders : _____ Cyl. Nos. <input type="checkbox"/> and/or 1. Maximum Pile Length : _____ m <input type="checkbox"/> and/or 2. Holding Duration _____ Minimum 30 seconds <input type="checkbox"/> ○ Nos. of Repeats : _____ 2 times <input type="checkbox"/> • Final Pile Penetration _____ m <input type="checkbox"/> • Use of <u>Dolly</u>: _____ <input type="checkbox"/> ▪ Not permitted for end bearing piles or pile-to-set piles. <input type="checkbox"/> 		

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	<ul style="list-style-type: none"> ▪ Dolly may be allowed for piles piled to length and with explicit approval from Consultant/SO. 	Approved / Not Approved	
	<ul style="list-style-type: none"> • Set shall be taken on the pile body only (on pile extension that has been welded, not on dolly pile) and no where else. 	<input type="checkbox"/>	
5.0	PILING RECORD		
	<ul style="list-style-type: none"> • Pile Penetration : kN 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Termination Jacking Pressure : psi 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • for corresponding no. of cylinders : Cyl. Nos. 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Set Record: mm 	<input type="checkbox"/>	
6.0	WELDING (Full All Round Welding)		
	<ul style="list-style-type: none"> • Welding Type : <u> </u> Fillet / Butt 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Welding Thickness (min. 6mm or as per drawings) : <u> </u> mm 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Cooling Time (min. 5 minutes): <u> </u> min 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Application of anti-rust protection paint: Yes / No 	<input type="checkbox"/>	
7.0	POST-INSTALLATION		
	<ul style="list-style-type: none"> • Check pile verticality (for pile protruding above ground) 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Check pile penetration using plumb test (for hollow piles without soil plug only) against pile penetration marking on pile body. Record results on piling record form. 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Plumb Length <u> </u> m 		
	<ul style="list-style-type: none"> • Check pile head for any installation damage (eg. spalling) 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Cut-off of pile only at ground level (except for pile points selected for HSDLT or SLT). For HSDLT/SLT piles, the cut-off shall be 1m above ground level. 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Measure water level after pile has been cut-off (for hollow piles only) 	<input type="checkbox"/>	
	<ul style="list-style-type: none"> • Measured ground water level (if any) <u> </u> m 		
	Signature by Supervisor/Engineer/S.O.		

HSDLT: High Strain Dynamic Load Test

SLT: Static Load Test