

Serial report (Part 1)

Terminologies in press-in engineering

IPA Editorial Committee

The “**Press-in retaining structures: a handbook (First edition, 2016)**” has been issued in December 2016 and the first seminar to utilize this handbook was held on 2nd March 2017 in Singapore. The Editorial Committee has sort out over 500 of terminologies and picked up 64 of key terminologies in conjunction with the handbook. IPA Editorial Committee introduce those as the Serial reports for your reference.

The first report introduces basic terms of “the Press-in Method” and related 12 terminologies as follows:

Terminologies	Definitions
jacking	generic term for pile installation techniques by means of static load, where the reaction force can be ensured either by heavy weight or extraction resistance of adjacent piles Note; “pressing” can be used as an equivalent term
pressing	generic term for pile installation techniques by means of static load, where the reaction force can be ensured either by heavy weight or extraction resistance of adjacent piles Note; “jacking” can be used as an equivalent term
jacking/pressing machine	general term of jacking/pressing machine that presses piles/sheet piles into the ground by a static load such as hydraulic pressure
the Press-in Method (pressing method by Silent Piler)	piling method to install piles/sheet piles with static load by Silent Piler, using extraction resistance of the previously installed piles/sheet piles as reaction force
Silent Piler	the jacking/pressing machine to install piles/sheet piles into the ground with a static load (hydraulic pressure), and also with a feature to use extraction resistance of previously installed piles/sheet piles by clamping them. This is a collective term for a variety of pressing machines such as Tubular Piler, Clear Piler and Zero Piler etc.
standard Press-in	pile installation by Silent Piler without driving assistance such as water jetting or augering
driving assistance	techniques to reduce the penetration resistance during pile installation by Press-in Method, such as water jetting, augering, augering, and rotary cutting for difficult ground conditions
water jetting	the driving assistance for the Press-in Method by in injecting high pressure water into the ground from the nozzle attached to the lower part of the pile/sheet pile to reduce pile toe resistance and shaft friction
augering	the driving assistance for the Press-in method by augering, used in hard ground
air system	system to inject air at the pile toe, used with a water lubrication system to reduce rotational resistance when the Gyro Piler is used
non-staging system	a press-in system that enables all the piling machineries necessary for the press-in operation to moves by itself (self-walking) on the previously installed piles/sheet piles
basic configuration of Press-in machines	basic configuration of the machine that is comprised of a power unit, a reaction stand, a radio controller and a pile laser for Silent Piler to carry out pile(s)/sheet pile(s) installation

(To be continued on the next issue)