What is claimed is:

~~1. A system for vertical centering and positioning of steel plunge column in~~ top-down construction method being applied to piling operation in a round foundation pile hole, comprising a plurality of hydraulic adjustment units being spaced around a steel plunge column positioned in the round foundation pile hole and having an earth-retaining function, a two-way electronic inclinometer, and a computerized digital positioning monitoring system; wherein each of the hydraulic adjustment units includes:

a base in the form of a long plate having an outer side for pressing against a wall surface of the foundation pile hole and an inner side facing toward the steel plunge column;

at least one push plate for closely contacting with an outer surface of the steel plunge column;

at least one hydraulic-actuated extendable supporting arm having an end pivotally connected to a lateral side of the base and an opposite extendable end pivotally connected to an end of one corresponding push plate; and

at least one set of parallelly spaced pivoted arms respectively having a proximal end pivotally connected to a lateral side of the base and a distal end pivotally connected to a lateral side of one corresponding push plate; and

wherein the computerized digital positioning monitoring system functions to ~~observe and measure a vertical accuracy and a displacement of the steel plunge~~

column in the foundation pile hole, and to enable precise correction and adjustment of the vertical accuracy and the displacement of the steel plunge column at four different phases of the top-down construction;

whereby, with the hydraulic adjustment units that assist in the vertical positioning of the steel plunge column and provide widened vertical earth retaining surfaces, the steel plunge column can receive sufficient supporting force from the hydraulic adjustment units; and with the computerized digital positioning monitoring system, the vertical accuracy and the displacement of the steel plunge column can be precisely corrected to achieve perfect vertical positioning in the foundation pile hole.

2. The system for vertical centering and positioning of steel plunge column in top-down construction method as claimed in claim 1, wherein, in each of the hydraulic adjustment units, the at least one set of pivoted arms includes two pivoted arms, of which the distal ends are pivotally connected to a lateral upper and a lateral lower end of the push plate, respectively; and wherein each hydraulic-actuated extendable supporting arm is pivotally connected at a lower end to a lateral lower end of the base and at an extendable upper end to a lower end of the push plate.

3. The system for vertical centering and positioning of steel plunge column in top-down construction method as claimed in claim 1, wherein the hydraulic adjustment units are made of a steel material selected from the group consisting of U-shaped steel, channel steel, H-shaped steel, square steel, half-round steel bar and round steel.

14. A system for vertical centering and positioning of steel plunge column in top-down construction method being applied to piling operation in a rectangular foundation pile hole, comprising a plurality of hydraulic adjustment units, a plurality of pile hole wall supporting and retaining pipes, a two-way electronic inclinometer, and a computerized digital positioning monitoring system;

the hydraulic adjustment units being spaced from one another in a space between the rectangular foundation pile hole and a steel plunge column positioned in the rectangular foundation pile hole, and having an earth-retaining function; wherein each of the hydraulic adjustment units includes:

a base in the form of a long plate being connected on an outer side to at least one of the pile hole wall supporting and retaining pipes;

at least one push plate for closely contacting with an outer surface of the steel plunge column;

at least one hydraulic-actuated extendable supporting arm having an end pivotally connected to a lateral side of the base and an opposite extendable end pivotally connected to an end of one corresponding push plate; and

at least one set of parallelly spaced pivoted arms respectively having a proximal end pivotally connected to a lateral side of the base and a distal end pivotally connected to a lateral side of one corresponding push plate;

whereby when the hydraulic-actuated extendable supporting arm is actuated to extend the extendable end thereof, the push plate is moved to push against the

outer surface of the steel plunge column while the pivoted arms are moved into an extended position between the base and the push plate, and on the other hand, when the hydraulic-actuated extendable supporting arm is actuated to draw back the extendable end thereof, the push plate is moved away from the outer surface of the steel plunge column while the pivoted arms are moved into a folded position between the base and the push plate, so that the steel plunge column can be adjusted or corrected in position to align with a column centerline in the foundation pile hole and an effective vertical positioning of the steel plunge column in the foundation pile hole during column hoisting and positioning process in the top-down construction can be achieved with the hydraulic adjustment units.

25. The system for vertical centering and positioning of steel plunge column in top-down construction method as claimed in claim 14, wherein the hydraulic adjustment units and the pile hole wall supporting and retaining pipes are made of a steel material selected from the group consisting of U-shaped steel, channel steel, H-shaped steel, square steel, half-round steel bar and round steel.

36. The system for vertical centering and positioning of steel plunge column in top-down construction method as claimed in claim 1 ~~or 4~~, wherein the two-way electronic inclinometer is mounted to a fixed point near an upper end of the steel plunge column and is electrically connected to the computerized digital positioning monitoring system; whereby data and image reflecting any change in the vertical accuracy and the displacement of the steel plunge column in the foundation pile hole as observed and measured via the two-way electronic inclinometer during column hoisting and positioning process and concrete pouring process in the top-down construction at different phases thereof can be shown on