

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JGJ 94-2008

Replacing JGJ 94-1994

Technical Code for Building Pile Foundations

建筑桩基技术规范

(English Translation)

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1.0.1

The code is established to enable pile foundation engineering and construction to comply with national technical economy politics, and to be of safety and usability, state-of-art technology, economic feasibility, quality guaranteeing and environment protection.

1.0.2

The code is applicable to design, construction and acceptance for pile foundations of all sorts of buildings (including structures).

1.0.3

For engineering and construction of pile foundation, engineering geological and hydrogeological conditions, topside structure type, functions of use, load characteristics, and construction load condition and envelopment shall be considered comprehensively; and local experiences and conceptual design shall be highly valued, the design shall adapt to local conditions, and pile type, pile-making process and cushion cap type shall be adopted reasonably to optimize the pile arrangement and save the resources; construction quality control and management shall be reinforced.

1.0.4

Besides this code, the engineering and construction of pile foundation shall comply with provisions of relative current standards.

2.1.1 Pile Foundation

It is referred to a foundation composed of pile arranged in rock-soil and cushion cap braced with pile top, or an individual pile foundation formed through the direct connection of column and pile.

2.1.2 Composite Piled Foundation

It is referred to the pile foundation loaded by the foundation pile and foundation soil under the cushion cap.

2.1.3 Foundation Pile

It is referred to an individual pile in the pile foundation.

2.1.4 Composite Foundation Pile

It is referred to the composite bearing foundation pile composed by an individual pile and foundation soil under the cushion cap of the area the individual pile corresponds to.

2.1.5 Composite Foundation with Settlement-reducing Piles

It is referred to the composite piled foundation composed of reducing friction-type pile to decrease settlement in the case of basic satisfied requirement of soft soil natural foundation bearing capacity.

2.1.6 Ultimate Vertical Bearing Capacity of a Single Pile

It is referred to the peak load that an individual pile is close to the collapse condition or appears the deformation that is not suitable to keep bearing under the vertical load or, and this value depends on the supporting resistance of soil on the pile and the bearing capacity of the pile foundation.

2.1.7 Ultimate Shaft Resistance

It is referred to the rock-soil resistance generated by the lateral surface of the pile foundation under the critical load of pile top acting.

2.1.8 Ultimate Tip Resistance

It is referred to the rock-soil resistance generated by the pile tip under the critical load of pile top acting.

2.1.9 Characteristic Value of the Vertical Bearing Capacity of a Single Pile

It is referred to the bearing capacity value that the ultimate vertical bearing capacity of a single pile is divided by the safety factor.

2.1.10 Optimized Design of Pile Foundation Stiffness to Reduce Differential Settlement

It is referred to the design method that, according to the topside structure type, load and stratigraphic distribution, the bearing rigidity distribution of the foundation pile is changed through the adjustments of pile diameter, pile length and pile spacing to make building settlement uniform and reduce the cushion cap internal force.

2.1.11 Pile Cap Coefficient

It is referred to the exertion rate of the bearing capacity of the foundation soil below the cushion cap under the vertical load.

2.1.12 Negative Skin Friction, or Negative Shaft Resistance

It is referred to the downward frictional resistance on pile surface caused by that the pile-periphery soil appears the settlement larger than the foundation pile because of the pile-periphery soil self consolidation, collapse and ground load acting.

2.1.13 Down Drag

It is referred to the sum of negative shaft resistance acted on higher than the neutral point of an individual pile.