

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

**JGJ 79-2012**

Replacing JGJ 79-2002

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**Technical code for ground treatment of buildings**

建筑地基处理技术规范

**(English Translation)**

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## Explanation of Wording in This Code

## List of Quoted Standards

### **1.0.1**

This Code is formulated with a view to implementing technical and economic policies issued by the nation during ground treatment design and construction, and achieving safety and usability, advanced technology, economic rationality, quality guarantee and environmental protection.

### **1.0.2**

This Code is applicable to the design, construction and quality inspection for the ground treatment of buildings.

### **1.0.3**

Ground treatment shall use local materials in accordance with the requirements of engineering design and local conditions, so as to meet the requirements of environmental protection and resources conservation.

#### **1.0.4**

Ground treatment of buildings shall not only meet the requirements this Code but also comply with those in the current relevant ones of the nation.

#### **2.1.1 Ground treatment, ground improvement**

Technical measures taken in order to increase ground bearing capacity and improve its deformability or permeability

#### **2.1.2 Composite ground, composite foundation**

Artificial foundation so formed by reinforcing or replacing partial soil mass that subsoil and vertical reinforcement jointly bear loads

#### **2.1.3 Characteristic value of subsoil bearing capacity**

Pressure value corresponding to specified deformation within linear deformation section of subsoil pressure deformation curve determined by load test, and its maximum value is the proportion limit value

#### **2.1.4 Replacement layer of compacted fill**

Compacted replacement layer formed by backfilling non-aggressive materials of stable nature and higher strength after excavating soft soil layer or uneven soil layer within certain range under the foundation base

#### **2.1.5 Replacement layer of tensile reinforcement**

Replacement layer formed by laying single-layer or multi-layer horizontal reinforced materials into the materials of the replacement layer

#### **2.1.6 Preloaded ground, preloaded foundation**

Consolidated and compacted foundation formed by preloading with surcharge of fill and/or vacuum preloading

#### **2.1.7 Preloading with surcharge of fill**

Ground treatment method to make the subsoil consolidated and compacted by adding loads on the ground

#### **2.1.8 Vacuum preloading**

Ground treatment method to make the subsoil consolidated and compacted by vacuumizing and draining the sealed membrane covering on the ground surface of shaft

#### **2.1.9 Compacted ground, compacted fill**

The ground with the fill compacted in layers by virtue of flat roller, vibrating roller, impact roller or other rolling equipment

#### **2.1.10 Rammed ground, rammed earth**

Ground with compacted pier body formed through subsoil compacting treatment (repeat raising the ram and loosening to make it free fall that will generate impact and vibration energy on the ground) or replacement

#### **2.1.11 Composite foundation with sand-gravel columns**

Composite foundation with vertical reinforcement of compacted sand-gravel formed by extruding gravel, sand or sand-gravel into the holes

#### **2.1.12 Composite foundation with cement-fly ash-gravel piles**

Composite foundation with vertical reinforcement formed by grouting the mixture of cement, fly ash and gravel with water in the soil

#### **2.1.13 Composite foundation with rammed soil-cement columns**

Composite foundation with vertical reinforcement formed by ramming in layers the mixture of cement and soil uniformly mixed to scale in the hole

#### **2.1.14 Composite foundation with cement deep mixed columns**

Composite foundation with vertical reinforcement formed by forced mixing of curing agent (with the cement as the main material) and subsoil with deep mixer

#### **2.1.15 Composite foundation with jet grouting**

Composite foundation with vertical reinforcement of soil-cement formed by cutting and mixing with the soil mass by the spraying jet of high-pressure cement paste ejecting from the horizontal nozzle through the rotation and lifting of drill pipe

#### **2.1.16 Composite foundation with compacted soil-lime columns**

Composite foundation with vertical reinforcement formed by ramming in layers the soil-lime filled in the hole

#### **2.1.17 Composite foundation with impact displacement columns**

Composite foundation with vertical reinforcement formed by column impact holing method and ramming in layers the fill