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

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**Building construction machinery and equipment - General rules
for borehole construction with rotary drilling rigs**

建筑施工机械与设备 旋挖钻机成孔施工通用规程

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China Machinery Industry Federation. This standard by the national construction machinery and construction equipment Standardization Technical Committee (SAC/TC328) centralized. This standard is drafted by: Beijing Sany Heavy Machinery Co., Ltd., Beijing CIB Machinery Co., Ltd., Beijing CSR Times Heavy Machinery Co., Ltd., Hunan Sunward Intelligent Machinery Co., Foton Lovol International Heavy Industry Co., Ltd., Shandong Xin country basis Engineering Co., Ltd., Zhengzhou Kawashima Machinery Equipment Co., Ltd., Shenzhen City, measuring Detection Technology Co., Ltd., Beijing Institute building mechanization Study hospital. The main drafters of this standard. Li silver, GUO Chuan new, recounts Huang, Wu Yue, Zhu Jianxin, WANG Qing-jun, Wei Desheng, Guo Bing, Fu Weizhong, Yi Di liters, Wu Fangxiao, Liuhui Bin. Building construction machinery and equipment Rotary drilling rig into the hole General Construction Regulations

1 Scope

China's national general rules for constructing boreholes with rotary drilling rigs. It specifies the requirements and the procedure for forming bored piles with a rotary drilling rig, covering the preparation, the drilling, the support of the hole, the inspection and the records. A rotary drilling rig forms a large-diameter hole by lowering a drilling bucket or auger on a telescopic kelly bar, filling it, and lifting it out to discharge - repeatedly, until the hole reaches depth. It is the dominant method for bored piles in China because it is fast, quiet compared with driving, and produces no vibration, so it can be used beside existing buildings where a driven pile could not. The difficulty is that the pile is cast in a hole nobody can see. Everything that determines whether the finished pile carries its load happens out of sight: whether the hole stayed open or the sides collapsed and left a void or a soil inclusion in the concrete; whether the base was cleaned or a layer of loose spoil was left under it, which is the commonest defect and the one that costs the most settlement; whether the hole was drilled vertical; and whether the fluid or casing supporting the walls did its job. So the rules are procedural and the inspections are the substance. The standard covers the setting out and the site preparation, the casing and the drilling fluid and the level

that must be maintained in the hole, the drilling itself and the rate, the checking of depth, diameter and verticality, the cleaning of the base and its verification, the time limit between completing the hole and placing concrete, and the records that constitute the evidence for a component that cannot be inspected afterwards. Issued on 23 December 2010 and in force since 1 July 2011.

This standard specifies the construction machinery and equipment Construction of rotary drilling rig into the hole (hereinafter referred to as. Rotary Drilling Hole) process planning. This standard applies to rotary drilling rig into the hole construction.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB 50202 foundation engineering foundation construction quality acceptance

GB 50300 Construction Quality Acceptance of uniform standards JGJ46 construction site temporary electrical safety technical specifications JGJ

94 Building Pile technical specifications

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Stabilizing Solution drilling fluid for stability of borehole wall Drilling process protects cell walls, earth pressure balance and suspended sediment and so on and has not mixed with the concrete slurry characteristics. The main material stable liquid include water, bentonite, barite, carboxymethyl cellulose, sodium salt, alkali, water seepage preventing agent, humic acid decomposition agent and family Lignin decomposition like family, also commonly known as a stable liquid mud.

3.2 Viscosity viscosity Mud flows, mud between solid and solid internal, between solid and liquid, the liquid internal friction between molecules. Construction Site Measurement methods conventionally used funnel viscosity measurement in seconds.

3.3 Mud cake mud wall Low permeability layer has a certain strength from stable liquid diffusion formed in the wall of the hole.

3.4 Chiang Khong hole clean To reach the hole bottom sediment clean up process design requirements.

3.5 Hypercube overgrouting Design the pouring of concrete is greater than the required amount.