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

JG/T 518-2017

Replacing JG/T 3055-1999

**Pile dynamic tester
(English Translation)**

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Appendix A (Normative) Test Method for Zero Output, Linearity, and Repeatability of the Strain Measurement Subsystem

Appendix B (Normative) Test Method for Output Noise, Dynamic Range, and Channel Consistency Error of the Tester

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces JG/T 3055-1999 "Foundation Tester." Compared with JG/T 3055-1999, the main technical changes are as follows.

- Modify the classification of the pile dynamic tester;
- Removed the performance requirements of the speed measurement subsystem;
- Increased the requirements for limiting the additional mass of the accelerometer;
- Removed the dynamic force measurement subsystem performance requirements;
- Increased the performance requirements of the low-strain impact force measurement subsystem;
- Removed the electromagnetic compatibility and electromagnetic compatibility test requirements;
- Removed reliability and reliability test requirements;
- Removed the sample rule requirements for the number of samples;
- Deleted the original Appendix A "associated faults and non-associated faults", added Appendix "Zero output of strain measurement subsystem, linearity and repetitive test methods" (see Appendix A);
- Added Appendix "Test Method for Output Noise, Dynamic Range, and Channel Consistency Error of the Tester" (see Appendix B).

This standard is proposed by the Institute of Standardization of Housing and Urban-Rural Development Standards.

This standard is under the jurisdiction of the Ministry of Housing and Urban-Rural Development and Foundation Standardization Technical Committee for Building Foundations.

This standard is mainly drafted by. China Academy of Building Research, China Academy of Metrology, Beijing Zhibolian Technology Co., Ltd., Wuhan Yanhai Engineering Technology Co., Ltd., Jianxin Foundation Engineering Co., Ltd., Wuhan Zhongyan Technology Co., Ltd., Europe and the United States earth equipment China Co., Ltd., Shanghai Ruixin Instrument

Technology Co., Ltd., Ningxia Architectural Design and Research Institute Co., Ltd.

1 Scope

This standard specifies the classification, technical requirements, test methods, inspection rules, signs, packaging, transportation and Storage.

This standard applies to the use of low-strain or high-strain pile inspection methods, vertical piles (axial for inclined piles) compressive bearing capacity for engineering piles.

Measurement and analysis instrument for dynamic detection of pile integrity.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB 191 packaging storage and transportation logo GB 4793.1 Safety requirements for electrical equipment for measurement, control and laboratory use Part 1. General requirements General specification of GB/T 6587 electronic measuring instruments GB/T 13823.20 Calibration method for vibration and shock sensors General method for accelerometer resonance test GB/T 20485.21 Vibration and shock sensor calibration methods. Part 21. Calibration by vibration comparison method GB/T 20485.22 Vibration and shock sensor calibration methods - Part 22. Calibration with impact comparison method JG J106 Building Foundation Inspection Technical Specifications JJG 623 resistance strain gauge

3 Terms and Definitions

The following terms and definitions as defined by JG J106 apply to this document.

A test and analysis instrument for detecting the vertical compressive bearing capacity and pile integrity of engineering foundation piles under dynamic loading can also be used for pre-testing Pile-making and steel piles for piling process monitoring.

It consists of sensors, cables, signal processors, data collectors, storage monitors, and more. The measurement system can be based on the measured physical quantity at the same time, it is divided into three subsystems. acceleration, strain and impact.

Compiled by computer, dynamic signal analyzer or digital signal processor with computational analysis function, and according to the principle of dynamic test pile method the system consists of application software that can process and analyze measured data.