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

LY/T 1486-2023

**Hand-held earth augers
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document replaces LY/T 1486-2010 "Hand-held excavators for forestry machinery". Compared with LY/T 1486-2010, except for the structural adjustment, in addition to the integration and editorial changes, the main technical changes are as follows.

- The term "portable pit digger" was changed to "hand-held pit digger", and its definition was changed (see 3.1, 3.1 of the 2010 edition);
- Added the term and definition of "spiral blade" (see 3.3);
- Changed the term and definition of "drill diameter" (see 3.4, 3.10 of the 2010 edition);
- Deleted "Digging diameter", "Digging depth", "Excavation rate", "Maximum throwing diameter", "Drill bit", "Drill bit feed rate", "Transmission device", "Screw the terms and definitions of "drill bit length" and "drill face" (see 3.2 to 3.9 and 3.11 of the 2010 edition);
- Changed the content of "Model compilation method" (see Chapter 4, Chapter 4 of the 2010 edition);
- Changed the requirements for test site conditions (see 6.1.2, 7.3.7.2 of the 2010 edition);
- Added the requirements and test methods for "matching gasoline engine performance" (see 6.2);
- Changed the requirements and test methods of "starting performance" (see 6.3.1, 6.2.1 and 7.2.1 of the 2010 edition);
- Changed the requirements and test methods for "minimum no-load stable speed" (see 6.3.2, 6.2.2 and 7.2.2 of the 2010 edition);
- Changed the requirements and test methods for "maximum no-load speed stability" (see 6.3.3, 6.2.3 and 7.2.3 of the 2010 edition);

- Added the requirements and test methods for "curb mass" (see 6.3.5);
- Changed the requirements and test methods of "operating efficiency" (see 6.3.6, 6.3.7.4 and 7.3.7.2 of the 2010 edition);
- Added the requirements and test methods for "exhumation rate" (see 6.3.7);
- Changed the requirements and test methods for "handle" (see 6.4.2, 6.3.3 and 7.3.3 of the 2010 edition);
- Changed the requirements and test methods for "stop switch" (see 6.4.3, 6.3.4 and 7.3.4 of the 2010 edition);
- Changed the requirements and test methods for "throttle trigger" (see 6.4.4, 6.3.5 and 7.3.5 of the 2010 edition);
- Changed the requirements and test methods for "reduction gearbox" (see 6.4.5, 6.3.6 and 7.3.6 of the 2010 edition);
- Changed the requirements and test methods for "drill bit" (see 6.4.6, 6.3.7 and 7.3.7 of the 2010 edition);
- Added the requirements and test methods for "pin" (see 6.4.7);
- Deleted the requirements and test methods of "overload protection device" (see 6.4.1 and 7.4.1 of the 2010 edition);
- Added the requirements and test methods for "minimum handle arm length" (see 6.5.1);
- Added the requirements and test methods for "drill bit braking time" (see 6.5.2);
- Changed the requirements and test methods for "noise" (see 6.5.4, 6.4.3 and 7.4.3 of the 2010 edition);
- Changed the requirements and test methods for "fuel tank" (see 6.5.6, 6.4.5 and 7.4.5 of the 2010 edition);
- Added the requirements and test methods for "engine exhaust direction", "protective device" and "electromagnetic compatibility" (see 6.5.3, 6.5.8, 6.5.9);
- Changed the requirements and test methods of "reliability and durability" (see 6.6, 6.5.6.6, 7.5, 7.6 of the 2010 edition);
- Deleted the content of "Inspection Rules" (see Chapter 8 of the 2010 edition);
- Changed the contents of "Instructions for Use" and "Packaging" (see 7.2, 7.3, 9.4, 9.2 of the 2010 edition).

1 Scope

This document defines the terms and definitions of hand-held digging machines, gives the basic parameters of hand-held digging machines, and specifies the the performance requirements of the portable excavator and the requirements for marking, instruction manual, packaging, transportation and storage are described.

Test method.

This document applies to hand-held pit diggers (hereinafter referred to as pit diggers) powered by gasoline engines and with a drill bit diameter not exceeding 300 mm.

Design, development, production and testing. Ice drills, etc. can be used as reference.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 191 Pictorial markings for packaging, storage and transportation GB/T 228.1 Tensile test of metallic materials Part 1: Room temperature test method GB/T 4269.5 Operator control symbols and other markings for portable forestry machinery GB/T 5395 Forestry and garden machinery - Specification for the determination of vibration of portable hand-held machines powered by internal combustion engines - Handle vibration GB/T 9480 Rules for writing instructions for agricultural and forestry tractors and machinery, lawn and gardening power machinery GB 10395.1 Safety of agricultural and forestry machinery Part 1: General principles GB 10396 General rules for safety signs and hazard pictograms for agricultural and forestry tractors and machinery, lawn and gardening power machinery GB/T 13306 Labels GB/T 13384 General technical requirements for packaging of electromechanical products GB/T 21398 Test methods and acceptance rules for electromagnetic compatibility of agricultural and forestry machinery GB 26133 Emission limits and measurement methods for exhaust pollutants from small spark-ignition engines for non-road mobile machinery (China's first and second stage) JB/T 5135.1 General-purpose small gasoline engines Part 1: Technical requirements JB/T 5135.2 General-purpose small gasoline engines Part 2: Bench performance test methods JB/T 5135.3 General-purpose small gasoline engines Part 3: Reliability, durability test and evaluation methods LY/T 1045 Method for compiling forestry machinery product models

3 Terms and definitions

The following terms and definitions apply to this document.

Hand-held earth digger the power is transmitted to the drill bit through the speed change and transmission device by the gasoline engine, and the digging is realized by one or two people holding the drill.

machine.