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

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Forestry machinery - portable chain saw rebound test

林业机械 便携式油锯 反弹试验

(English Translation)

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Foreword

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

This standard uses the redrafting method to modify the use of ISO 9518:1998 "Forest Machinery Portable Chainsaw Rebound Test".

This standard has structural changes compared with ISO 9518:1998, and there are many adjustments in structure. Appendix B lists this standard and ISO 9518:1998 compared to the chapter number change comparison checklist.

The technical differences between this standard and ISO 9518:1998 and their reasons are as follows.

- a) that the ISO 6535 standard has been revised several times, and this standard should reference the latest version of the method standard;
- b) Since the original definition of 3.3 "calculated bounce angle" does not reflect the meaning of the calculation, the content of its definition has been modified and changed to "in model".

When the rebound occurs under the condition, the backlash angle of the hand-held chain saw to the operator and the upper side calculated according to the mathematical model";

- c) deleted the Appendix B (informative) Basic computer program to adapt to the current development of computer language and increase operability, Facilitate the implementation of standards;

- d) Deleted the content related to the Basic computer program in the text, that is, the contents and warnings of the notes in 4.6.2 of ISO 9518.

The documents of our country that have a consistent correspondence with the international documents referenced in this standard are as follows.

---GB/T 19387-2012 Portable Chainsaw Chain Brake Performance Test Method (ISO 6535:2008, IDT) this standard changes two errors in the international standard.

a) 4.4.1.1, 4.4.1.3, 4.4.1.4 errors in 4.6.2.1~4.6.2.3 of the international standard ISO 9518:1998, this the standard was revised and the terms of reference were changed to 4.4.1.2, 4.4.1.4, and 4.4.1.5, respectively.

b) ISO 13772:2009 cited in the note in 4.5.4.2 of the International Standard ISO 9518:1998, but not listed in the reference this standard adds a reference to the chapter and lists the national standard GB/T 20456-2012 corresponding to the international standard.

References.

This standard is proposed and managed by the National Forestry Machinery Standardization Technical Committee (SAC/TC61).

Introduction

The movement of the chain saw during the rebound can be modeled using mathematical models. Based on engineering principles, you can predict the chainsaw movement Vertical, horizontal, and rotational components. In this standard, a computer program with a predictable chain saw that moves the operator back and up toward the peak position the form is used to represent this model. This position is called "calculating the bounce angle" and its description is shown in Figure 1.

The computer program uses standard engineering dynamics equations to predict the bounce energy, the characteristics of the chain saw, and the operator being simulated.

The action of the chainsaw trajectory. The operator's reaction force is determined by analyzing the high-speed moving image of the handle when the actual rebound occurs.

Set 1).

1) For more details, see the review of content and development in the Bounce Test Computer Program, available from the Portable Power Equipment Manufacturers Association (Mengge, Maryland, USA) 514, Office Building, Bethesda District, 4720 Marley County, zip code 20814).

The data input to the computer is physically tested by a fully assembled (ie power head, guide and saw chain) Rebound energy test.

The rebound energy test of the chain saw was carried out on a specially developed equipment (also called a rebound machine) for this purpose. At the request Under controlled conditions, the fiberboard sample was moved so that its flat surface was in contact with the guide head and rebounded. The equipment and standardized samples have been proven the bounce energy of any different saw/guide/saw chain combination can be simulated and tested.

The test procedure requires that the test be performed within the conditions that the peak bounce energy of a particular saw, guide, and saw chain combination can be measured.

When the rotating part of the chain saw is braked by the chain brake, a torque is generated which reduces the rebound angle. This has been considered in the program A factor.

Appendix A is a flow chart of a computer program that determines the bounce angle.

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1 Scope

This standard specifies the method for determining the rebound angle of a portable chain saw (hereinafter referred to as a chain saw) with a guide and a saw chain.

This standard has been proved to be used to evaluate the rebound angle and rebound when the oil saw with engine displacement not exceeding 80cm³ rebounds.

An accurate measure of energy. This standard does not apply to chainsaws with an engine displacement exceeding 80 cm³. In addition, due to the rebound of the structural ruler the inch limit requires that the effective sawing length of the guide of the test chain saw should not exceed 63 cm.

Note: Although this standard applies to chain saws, the rebound machine and test procedures are equally applicable to electric chain saws. In order to make this test method suitable for electric chain saws, some Instructions and procedures related to electric chain saws are included in this standard.

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 edition (including all amendments) applies to this document.

ISO 6535 portable chain saw chain brake performance test method
(Portablechain-saws-Chainbrakeperform-Ance) BOM-0100 rebound machine bill of materials (Kickbackmachine-Bilofmaterials)

3 Terms and definitions

The following terms and definitions apply to this document.

Guide head shield bartipguard A detachable and replaceable shield that is mounted on the head of the guide to prevent contact with the chain of the guide head.

Chain brake lever A device used to start a chain brake, usually replaced by a front hand guard.

Calculate the bounce angle computedkickbackangle when bounce occurs under simulated conditions, the hand-held chain saw calculated from the mathematical model is oriented

toward the rear and rear recoil angles of the operator.

see picture 1.