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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 3808-2018

Verification of pendulum-type impact testing machines

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Table of Contents

Foreword

The national standard for the Charpy pendulum impact test series of metallic materials consists of the following three separate standards.

---GB/T 229 metal material Charpy pendulum impact test method;

---GB/T 3808 pendulum impact tester inspection;

---GB/T 18658 Pendulum impact tester for indirect inspection with Charpy V-notch standard specimens.

This standard is one of the national standards of this series.

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

This standard replaces GB/T 3808-2002 "Inspection of pendulum impact tester", compared with GB/T 3808-2002, the main technology

The changes are as follows.

--- Revised the terminology and definition of energy (see 3.2, 3.2 of.2002);

--- Adjusted the terms and definitions related to the sample (see 3.3, 3.3, 3.4 of.2002);

--- Modified symbols and abbreviations (see Chapter 4, Chapter 4 of the.2002 edition);

--- Added Appendix A, Appendix B, Appendix C, Appendix D (see Appendix A, Appendix B, Appendix C, Appendix D).

This standard uses the redrafting method to modify the use of ISO 148-2.2008 "Metal material Charpy pendulum impact test part 2. test

Machine inspection.

The technical differences between this standard and ISO 148-2.2008 and their reasons are as follows.

--- Regarding the normative reference documents, this standard has been adjusted with technical differences to adapt to the technical conditions of China, within the adjustment

The content is reflected in Chapter 2, "Regulatory References", and the specific adjustments are as follows.

* Replace ISO 148-1 with GB/T 229 modified to adopt international standards;

* Replace ISO 148-3 with GB/T 18658 modified to international standards;

--- Turn the note of 6.3.6 in ISO 148-2.2008 into a clause so that the required clause in the original note complies with GB/T 1.1-

The provisions of.2009;

--- Removed the numbering of 6.4.5.1, 6.4.5.2 and 6.4.5.3 in ISO 148-2.2008, and changed the note in the original 6.4.5.2 into a

For the text, the original texts 6.4.5.1, 6.4.5.2 and the provisions of the notes are expressed in terms of the items, and the provisions of the original text 6.4.5.3 become the standard.

Clause 6.4.5, in order to make the suspension paragraphs appearing in the original text and the provisions with the requirements in the note comply with the provisions of GB/T 1.1-2009,

At the same time, the original numbers "6.4.5.1 and 6.4.5.2" quoted in 8.3 of this standard are modified to "6.4.5a" and 6.4.5b)";

--- Added the guidance for the following items in the B.2.3 Chinese formula (B.17) of ISO 148-2.2008;

--- The "pendulum axis" described in footnote form in Figure 4 of ISO 148-2.2008 is indicated by the number 5 and the footnote form is used in the figure.

The angle symbols "alpha" and "beta" of the description are replaced by direct description of the symbols to comply with the national standards for technical drawings.

For ease of use, the following editorial changes have been made to this standard.

--- In line with the existing standard series, change the standard name to "Inspection of pendulum impact tester";

--- Removed the numbering of 8.3.1 and 8.3.2 of ISO 148-2.2008, and stated the provisions of the original texts 8.3.1 and 8.3.2 as listed.

So that the suspension segment appearing in the original text meets the requirements of GB/T 1.1-2009;

--- Added the informative Appendix D "Arc-type, rectangular impact specimens".

There are technical differences between this standard and ISO 148-2.2008, and the terms involved in these differences have been passed in the margins of their outer margins.

The vertical single line (|) is marked.

Introduction

The suitability of a pendulum impact tester for metal material acceptance testing is usually based on calibration and sizing of its dial

Qualitative tests, such as the detection of the shape and span of the support sample anvil. Calibration of the dial is generally done by measuring the mass of the pendulum and

Check the pendulum lift for the different readings on the dial. The outstanding advantage of this method of evaluating the impact tester is that only the measurement is traceable to

The amount of national benchmarks. The authenticity of these traceability measurements reduces the need to arbitrate for the suitability of the impact tester for material acceptance testing.

Essential.

However, when testing samples of the same material, it is sometimes found that it is evaluated by the direct test described above and meets all dimensional requirements.

The two test machines gave distinct impact values. The value measured by one test machine satisfies the technical requirements of the material, while the other

The measured value does not meet the requirements, and this difference is commercially important. In order to avoid this difference, the buyer of certain materials will mention

Additional requirements. all impact testing machines sold to them for material acceptance testing are subject to the standard test specimens provided by the buyer.

Conduct an indirect test. Within the specified limit values, only the value measured by the test machine is the same as the value given by the standard sample.

Can be received.

Inspection of pendulum impact tester

1 Scope

This standard specifies the inspection method for the components of the pendulum impact tester. This standard applies to impacts with 2mm or 8mm

The blade is subjected to a pendulum impact tester (hereinafter referred to as a test machine) for pendulum impact test according to the test method specified in GB/T 229.

This standard can be applied to similar testing machines of other energies and different structures.

The test machine used in the general laboratory or research laboratory engaged in the detection of metal materials in the industry is in accordance with the provisions of this standard.

Testing Machine. Some of the more demanding testing machines are called standard impact testing machines. GB/T 18658 specifies the relevant standard punch

The technical requirements for testing the test machine.

This standard describes two methods of inspection.

a) Direct test method. The nature of the method is a static test method, that is, by measuring the key components of the test machine to ensure that it is full

The requirements of this standard. The inspection and calibration instruments used should demonstrate traceability to national benchmarks. When the test machine is installed, repaired or

When the test method gives an unqualified result, it shall be inspected by direct test method;

b) Indirect test method. The nature of the method belongs to the dynamic test method, that is, the test sample is used to check the points on the scale of the indicator device.

Indication.

For test machines that do not meet the requirements of this standard, both direct test and indirect test methods shall be used to test and fill

The requirements of Chapters 6 and 7.

GB/T 18658 specifies the technical requirements for standard specimens.

The indirect test method specified in this standard considers the total energy absorbed by the sample during the fracture process. The total absorbed energy includes.