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GB/T 38250-2019 / ISO 23788:2012

Metallic materials - Verification of the alignment of fatigue testing machines

金属材料 疲劳试验机同轴度的检验

(ISO 23788:2012, IDT)

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Standardization Administration of the PRC.

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Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard, using translation method, is identical to ISO 23788:2012 “Metallic materials - Verification of the alignment of fatigue testing machines”.

China’s documents which have a consistent correspondence with the international documents normatively referenced in this Standard are as follows:

- GB/T 16825.1-2008 Verification of static uniaxial testing machines - Part 1: Tension/compression testing machines - Verification and calibration of the force-measuring system (ISO 7500-1:2004, IDT).

This Standard has made the following editorial changes:

- Unify the expression symbol of the term “Percentage bending” in the text and change “β” to “B”;

- CORRECT the symbol error in Figure 3b), c) and change “W” to “w” and “W_g” to “w_g”.

This Standard was proposed by China Machinery Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee 122 on Testing Machines of Standardization Administration of China (SAC/TC 122).

Drafting organizations of this Standard: Sinotest Equipment Co., Ltd., Shenzhen Wance Testing Machine Co., Ltd., AVIC Changcheng Institute of Metrology & Measurement, Jinan Xinguang Testing Machine Manufacturing Co., Ltd., Guangzhou University, Chengde Precision Testing Machine Co., Ltd., Centre Testing International Group Co., Ltd.

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Metallic materials - Verification of the alignment of fatigue testing machines

1 Scope

This Standard describes a method for verifying the alignment in a testing machine using a strain-gauged measuring device.

It is applicable to dynamic uniaxial tension/compression, pure torsion and combined tension/compression plus torsion fatigue testing machines for metallic materials.

The methodology outlined in this Standard is generic and can be applied to static testing machines and in non-metallic materials testing.

2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

ISO 7500-1 Metallic materials - Verification of static uniaxial testing machines - Part 1: Tension/compression testing machines - Verification and calibration of force-measuring system

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 Alignment

Coincidence of the loading axes of the load train components, including the test specimen.

Note: Departure from such coincidence can introduce additional bending moments into the specimen.

3.2 Alignment cell

Carefully machined measuring device instrumented with strain gauges for use

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