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NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE PEOPLE'S REPUBLIC OF CHINA

JJF 1903-2021

Calibration Specification for Shock Response Spectrum Testing Machines

冲击响应谱试验机校准规范

(English Translation)

Issued on: February 23, 2021 **Implemented on: August 23, 2021**

Issued by: State Administration for Market Regulation

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Introduction

This specification is compiled in accordance with the rules stipulated in JJF 1071-2010 "Rules for the Compilation of National Metrology and Calibration Specifications".

In the formulation of this specification, full consideration has been given to JJF 1156-2006 "Measurement Terms and Determination of Vibration and Shock Speed the terms, symbols,

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and definitions in the Interpretation, as well as GB/T 2423.5-2019 ``Environmental Testing Part 2: Test Method Method Test Ea and Guidelines. Shock, GJB150.18A-2009 "Environmental Test Method for Military Equipment Laboratory No.

Technical requirements for shock response spectrum test and test equipment in Part 18: Impact Test.

This specification is released for the first time.

Calibration specification for shock response spectrum testing machine

1 Scope

This specification applies to the shock response spectrum of the 10kHz frequency range to achieve the maximum absolute acceleration shock response spectrum Calibration of the testing machine.

2 Reference documents the following documents are cited in this specification.

JJF 1156-2006 Vibration impact speed measurement terms and definitions GB/T 2423.5-2019 Environmental Test Part 2: Test Method Test Ea and Guideline. Impact GJB150.18A-2009 Military equipment laboratory environmental test method Part 18: Impact test for dated reference documents, only the dated version applies to this specification; for all undated references the latest version (including all amendments) is applicable to this specification.

3 Term

3.1 Reference spectral shape Absolute acceleration spectrum curve used for calibration or test setting.

3.2 Maximum absolute acceleration shock response spectrum maximumabsolutelyaccelerationshockresponse spectrum with absolute acceleration as the response parameter, the shock response spectrum has the maximum value.

Note: The shock response spectrum mentioned in this specification refers to the maximum absolute acceleration shock response spectrum.

3.3 Shock response spectrum reference tolerance referencetoleranceofshockresponsespectrum Specify the maximum allowable error of the measured impulse response spectrum curve deviating from the reference spectrum shape to determine the impulse response spectrum the baseline of the working state of the testing machine.

Note: The reference tolerance range can be selected as [-1.5dB, 3dB], [-3dB, 3dB], [-6dB, 6dB], [-3dB, 6dB], [-6dB, 9dB], different tolerances can also be used in sections.

4 overview

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The shock response spectrum testing machine is used in the shock test of the product, and the shock response spectrum of the product is obtained to determine its Performance under impact environment. There are two main types of equipment for realizing the shock response spectrum test. mechanical shock response spectrum testing machine and Electric vibration desktop shock response spectrum testing machine.

The main principle of the mechanical shock response spectrum testing machine is to use a hammer head to hit the response table to make the hit response table Generate a response environment that simulates shocks. It consists of response table, hammerhead, electronic control system, measuring system and other auxiliary devices composition. The response table is the main structure of the testing machine, which is used to install the specimens and withstand the impact excitation; the main electronic control system the hammer should be controlled by the computer according to the set parameters, and the impact response spectrum should be generated by hitting the response table; the measurement system is under test when the inspection machine is working, the time domain and response spectrum curve of each detection point are measured; other auxiliary devices mainly include driving

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