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

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Acoustic testing method for spacecraft

航天器声试验方法

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document adopts ISO.19924.2017 "Acoustic testing of space systems".

The following minimal editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Test Methods for Acoustics in Spacecraft".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Aerospace Technology and Its Applications (SAC/TC425).

1 Scope

This document specifies the requirements for reverberation chamber acoustic testing systems, testing techniques, testing procedures, and test interruptions, and describes evaluation methods, etc., as...

Technical support and supplements for ISO 15864 acoustic testing.

This document applies to acoustic testing of spacecraft systems, subsystems, and component products. The technical requirements in this document may be adjusted based on the product testing requirements.

The purpose is to cut.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 15864.20211) General test methods for space systems, subsystems and components.

ISO 14620 (all parts) - Safety requirements for space systems

3 Terms and Definitions

The following terms and definitions apply to this document.

A room with a hard, highly reflective surface has a diffuse sound field.

diffuse sound field

A sound field with uniform energy density within a specific region, resulting in equal energy flux probabilities in all directions at every point within that region.

Note: The sound energy density is consistent at any location and in any direction within this region.

sound pressure

Unless otherwise specified, sound pressure is defined as the root mean square value of instantaneous sound pressure over a given time interval.

Note: The unit is usually Pa.

Sound pressure level (SPL) L_p the sound pressure level can be calculated using formula (1).

$$L_p = 20 \lg(p/p_0) \quad (1)$$