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NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE

PEOPLE'S REPUBLIC OF CHINA

JJF 1955-2021

Calibration Specification for Infrasonic Sensors (Coupler Comparison Method)

次声传感器校准规范（耦合腔比较法）

(English Translation)

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Introduction

This specification is compiled according to the rules given in JJF 1071-2010 "Rules for Compilation of National Metrology Calibration Specifications".

This specification refers to GB/T 20441.4-2006 "Measurement Microphone Part 4: Specification for Working Standard Microphone Fan", IEC 61094-5:2016 "Electroacoustic Measurement Microphone Part 5: Sound Pressure Calibration of Working Standard Microphone "Comparative Method" and JJG1019-2007 "Working Standard Microphone (Coupled Cavity Comparison Method)".

The measurement uncertainty is evaluated and evaluated according to the requirements of JJF 1059.1-2012 "Measurement Uncertainty Evaluation and Representation".

express.

This specification is published for the first time.

Infrasound Sensor Calibration Specification (Coupled cavity comparison method)

1 Scope

This specification applies to the calibration of the coupled cavity comparison method for infrasound sensors in the frequency range of 0.01Hz to 20Hz.

2 Reference documents this specification references the following documents.

JJG1019-2007 Working standard microphone (coupled cavity comparison method) JJF 1001-2011 General Metrology Terms and Definitions JJF 1034-2020 Acoustic Metrology Terms and Definitions JJF 1059.1-2012 Evaluation and representation of measurement uncertainty GB/T 3102.7-1993 Quantities and Units of Acoustics GB/T 3947-1996 Acoustic terminology GB/T 20441.4-2006 Measurement microphones - Part 4: Specification for working standard microphones IEC 61094-5:2016 Electroacoustic measurement microphones - Part 5: Working standard microphones for sound pressure calibration for dated references, only the dated version applies to this specification; for undated references the latest version (including all amendments) applies to this specification.

3 Terminology and units of measurement this specification adopts the quantities and units specified in GB/T 3102.7.

The terms and definitions defined in JJF 1001-2011, JJF 1034-2020 and GB/T 3947-1996 and the following are applicable used in this specification.

3.1 Reference sensor Infrasound sensors with pre-measured sound pressure sensitivity.

The ratio of the root sum of the rms values of all harmonic components to the rms value of the fundamental.

4 Overview

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An infrasound sensor is a sensor that can effectively detect infrasound waves. In order to meet various testing requirements, there are Capacitive, bellows box, fiber optic sensors with different working principles. The operating frequency range is generally in the 0.01Hz~20Hz, the lower limit operating frequency of the sensor for special application requirements (such as pre-earthquake prediction) can be as low as 0.001Hz.

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