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

GB/T 43916-2024

**Vacuum technology - Vacuum gauges - Specifications,
calibration and measurement uncertainties for capacitance
diaphragm gauges**

真空技术 真空计 电容薄膜真空计的规范、校准和测量不确定度
(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting:

This document is equivalent to ISO :20146:2019 "Vacuum technology - Vacuum gauges - Specifications, calibration and measurement uncertainty of capacitance diaphragm vacuum gauges":

"Determination":

The following minimal editorial changes were made to this document:

--- Supplemented the reference number description for the symbols in Figure A:1:

1 Scope

This document defines the terms related to capacitance diaphragm vacuum gauge (CDG), specifies the parameters that must be given for capacitance diaphragm vacuum gauge, and describes it describes the measurement uncertainty that must be considered during calibration and operation of the instrument:

This document is applicable to the calibration of CDG using ISO 3567 and ISO 27893 and is a supplementary note when used as a reference standard:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document:

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document:

ISO 3529-1 Vacuum technology-Vocabulary-Part 1: General terms General terms) Note: GB/T 3163-2007 Vacuum technical terms (ISO 3529:1981, MOD) ISO 3529-3 Vacuum technology - Vocabulary - Part 3: Total and partial pressure vacuum gauges Note: GB/T 3163-2007 Vacuum technical terms (ISO 3529:1981, MOD) Note: GB/T 34873-2017 Vacuum gauge calibration by direct comparison with a standard vacuum gauge (ISO 3567:2011, IDT) ISO 27893 Vacuum technology - Uncertainty assessment of calibration results of vacuum gauges directly compared with standard vacuum gauges Note: GB/T 34876-2017 Vacuum technology Vacuum gauge and standard vacuum gauge direct comparison calibration results uncertainty assessment (ISO 27893: 2011, IDT)

ISO/IEC Guide 98-3 Uncertainty of measurement Part 3: Guide to the expression of uncertainty in measurement Note: GB/T 27418-2017 Evaluation and expression of measurement uncertainty (ISO/IEC Guide 98-3, MOD) ISO/IEC Guide 99 International Vocabulary of Metrology Basics and Common Concepts and Related Terms (VIM) [Internationalvocabulary-]

3 Terms and definitions

ISO 3529-1, ISO 3529-3, ISO 3567, ISO 27893, ISO/IEC Guide98-3, ISO/IEC Guide99 the following terms and definitions apply to this document: