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

JJF 1959-2021

Calibration Specification for General Bevel Protractors

通用角度尺校准规范

(English Translation)

Issued on: December 28, 2021 **Implemented on: June 28, 2022**

Issued by: State Administration for Market Regulation

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8 Recalibration interval(5)

Appendix A Evaluation of Uncertainty of Measurement Result of Error of Indication Value of Digital Display Angle Ruler (Example) (6)

Appendix B Calibration Certificate Inner Page Format (8)

Introduction

JJF 1071-2010 "Rules for the Compilation of National Metrology Calibration Standards", JJF 1001 "General Metrology Terms and Definitions" Together with JJF 1059.1-2012 "Assessment and Representation of Measurement Uncertainty", it forms the basis for supporting the compilation of this specification Sexual Series Norms.

In the formulation of this specification, reference is made to GB/T 6315-2008 "Vernier, Band Watch and Digital Display Universal Angle Ruler", Relevance of digital display universal angle ruler and electronic digital display angle ruler in JB/T 11243-2012 "Electronic Digital

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Display Angle Ruler" Projects and Methods.

This specification is the revision of JJG33-2002 "Universal Angle Ruler".

The main changes in this specification are as follows.

--- Expanded the scope of application of the specification, and added related items of digital display angle ruler;

--- canceled the "Appearance and Interaction" item;

--- Canceled the item of "scribed line width and width difference";

--- Canceled the item "distance from the edge of the scale surface to the scale surface of the main ruler or the distance between the pointer and the scale surface of the watch";

--- Canceled the item "Flatness of measuring surface";

--- Canceled the item "Correctness of zero position of universal angle ruler with watch";

--- Revised the "Indication Error" calibration item and calibration method;

---Added the calibration item and calibration method of the digital display angle ruler "straight edge and base ruler measuring plane parallelism";

--- Added "repeatability" calibration item;

--- Added an example of the uncertainty evaluation of the measurement result of the indication error.

Previous releases of this specification.

---JJG33-2002;

---JJG33-1979.

General Probe Calibration Specification

1 Scope

This specification applies to the calibration of vernier, table and digital angle rulers.

2 Reference documents this specification references the following documents.

JJF 1071-2010 Rules for Compilation of National Metrology and Calibration Specifications GB/T 6315-2008 Vernier, belt watch and digital display universal angle ruler 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 Overview

Universal angle ruler is an angle measuring instrument that uses the angle separated by the relative rotation of two measuring surfaces to read. press read Different digital methods

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are divided into vernier type, belt table type and digital display type. The main structure of the vernier angle ruler is shown in Figure 1.

The table angle ruler is shown in Figure 2, and the typical structure of the digital display angle ruler is shown in Figure 3.

Universal angle ruler is widely used in machining, automobile manufacturing, building decoration, drilling and other related industries.

Measurement.

(a) Type I vernier angle ruler 1-square; 2-vernier; 3-brake block;

4-sector plate; 5-block; 6-main ruler;

7-measurement surface; 8-ruler; 9-measurement surface (b) Type II vernier angle ruler 1-vernier; 2- magnifying glass; 3- jog wheel;

4-block; 5-main ruler; 6-straight ruler; 7-base ruler;

8- Additional ruler; 9- Measuring surface

Figure 1 Vernier angle ruler

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