



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

GB/T 10919-2021

Gauges for straight-sided splines

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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 of Standardization Documents" Drafting.

This document replaces GB/T 10919-2006 "Rectangular Spline Gauge", compared with GB/T 10919-2006, except for structural adjustment and editing

In addition to the sexual changes, the main technical changes are as follows.

- a) A chapter "Terms and Definitions" has been added (see Chapter 3);
- b) A chapter "Symbols and Description" has been added (see Chapter 4);
- c) The "Classification" chapter is added, and the GB/T 10919-2006 3.3 "External Spline Gauge Inspection Function" and 3.4 "Internal Spline Use Tabularization of "Gauge Inspection Function" and 3.6 "Rules for the Use of Gauges" (see Chapter 5,.2006 Edition 3.3, 3.4, 3.6);
- d) Added "gauge type" (see 6.1);
- e) The coaxiality requirement of the spline ring gauge has been added, and the runout of the spline plug gauge has been modified to coaxiality (see Figure 6);
- f) The requirements for adjacent pitch tolerance, cumulative pitch tolerance, and pitch tolerance of the gauge have been added (see 7.2.2);
- g) Added "Tolerance" in the "Requirements" section (see 8.7);
- h) A chapter "Inspection Methods" has been added (see Chapter 9);
- i) Appendix A is added, and 3.2 "Application Conditions" and 3.5 "Supplementary Inspection of Splines" in GB/T 10919-2006 are moved into the appendix

Record A (see Appendix A, 3.2 and 3.5 of the.2006 edition).

This document refers to the requirements of the gauge part in ISO 14.1982 "Dimensions, Tolerances and Inspections of Inner Circle Centering Rectangular Splines for Cylindrical Shafts"

Drafting, the degree of consistency is non-equivalent.

1 Scope

This document specifies the type and design principles, tolerances, requirements, and inspection of rectangular spline gauges for inspection of small-diameter centered rectangular splines for cylindrical shafts.

Inspection methods, signs and packaging.

This document is applicable to the inspection of rectangular splines specified in GB/T 1144-2001 (minor diameter nominal diameter 11mm~112mm, large diameter male

The diameter is 14mm~125mm and the key width/keyway width is 3mm~18mm) Design, production and use of rectangular spline gauges.

2 Normative references

The content of the following documents constitutes an indispensable clause of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

GB/T 1957-2006 Technical conditions for smooth limit gauges

GB/T 10920-2008 Thread gauge and smooth limit gauge type and size

GB/T 17163-2008 Basic terminology of geometric quantity measuring instrument terminology

GB/T 17164-2008 Geometric quantity measuring instrument terminology product terminology

3 Terms and definitions

The terms and definitions defined in GB/T 17163-2008 and GB/T 17164-2008 apply to this document.

3.1

A physical measuring tool with a standard rectangular tooth profile that can reflect the boundary conditions of the inner (outer) rectangular spline under inspection.

[Source. GB/T 17164-2008,6.1.12]

4 Symbols and description

The symbols and descriptions listed in Table 1 apply to this document.

Table 1 Symbols and descriptions

Symbol description unit

B Spline key width/keyway width mm

D Spline diameter mm

d Spline diameter mm

H Rectangular spline gauge (hereinafter referred to as "gauge") small diameter tolerance value μm

H' Tolerance value of gauge diameter μm

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