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

GB/T 21945-2008

**Numerical control sector gear shaping machines - Testing of
the accuracy**

数控扇形齿轮插齿机 精度检验

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 General requirements

Foreword

The standard proposed by China Machinery Industry Federation. The standard metal cutting machine tools by the National Standardization Technical Committee (SAC/TC22) centralized. This standard was drafted. Yichang lead plane technology limited liability company, Tianjin No.1 Machine Tool Works. The main drafters of this standard. Juwan whole, Cheng Liangfan.

This not only unified standards such precision machine tools and inspection standard in the country, CNC sector gear shaping machine Accuracy test finished products provide the technical basis and delivery and acceptance, but also to promote the CNC sector gear interpolation upgrading and technological progress gear machine products and promote Product trade and economic development, improve the quality of these products help to stabilize and enhance the market competitiveness of products. CNC sector gear shaping machine accuracy test

1 Scope

GB/T 21945-2008 is the Chinese national standard on numerical control sector gear shaping machines - testing of the accuracy, in the field of manufacturing engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 3 June 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2009. Classification: ICS 25.040.20, CCS J56. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the CNC sector gear shaping machine (hereinafter referred to as "Machine") requirements and methods of geometric accuracy and precision testing. This standard applies to the maximum workpiece diameter to 200mm CNC sector gear shaping

machine.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 8170-1987 Rules for rounding numbers

GB/T 17421.1-1998 Test code for machine tools - Part 1. under no-load or finishing conditions Geometric accuracy of machines (Eqv ISO 230-1.1996)

GB/T 17421.2-2000 Test code for machine tools - Part 2. CNC axis positioning accuracy and repeatability of determination (Eqv ISO 230-2.1997)

3 General requirements

3.1 of this standard shall GB/T 17421.1-1998 and GB/T 17421.2-2000. Especially the mounting accuracy inspection before Spindles and other parts of the warming air operation, precision test methods and test tools.

3.2 before testing the machine, the first table (or columns) in the middle position of travel, and then adjust the level of machine installation. For tilting table Oblique machine tools, work surfaces should be placed in 0 ° position, then the machine leveling. Level on the bench in the middle position in the longitudinal and transverse directions Reading not more than 0.04/1000.

3.3 When testing side when scraping the surface, allowing the test pad Block between surface and probe test. The accuracy of test items

3.4 standard listed in the order, the order does not indicate the actual test. In order to test tools and test assembly and disassembly convenient, Any order for inspection.

3.5 inspection tools, according to the structural characteristics of the standard test is not required in all projects. For the purpose of acceptance testing requirements, the Users can obtain the manufacturer agreed to choose some interesting test items, but these items must be clearly stated in the test machine when ordering.

3.6 when the measured length of this standard is not the same length, tolerances should be GB/T 17421.1-1998 off provisions in

2.3.1.1 Operators. Result of the conversion is less than 0.001mm, 0.001mm based upon the count.

3.7 Tolerance calculation result mantissa according to the provisions GB/T 8170-1987 of rounding to the nearest 0.001mm.

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