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

GB/T 5288-2007

Replacing GB/T 5288-1985

**Slideways grinding machines with two columns -- Test of the
accuracy**

龙门导轨磨床精度检验

(English Translation)

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Foreword

This standard is equivalent to international standards ISO 4703:2001 "Test conditions for gantry rail grinding machine accuracy test" (in English).

This standard is equivalent translation ISO 4703:2001.

For ease of use, this standard made the following editorial changes.

- In order to be consistent with other standards, the standard name will be changed to "gantry rail grinder precision testing";
- "This International Standard" be replaced by "this standard";
- With a decimal point instead of a comma as the decimal point, "";
- To ISO 4703:2001 and other international standards referenced with have been adopted in place of the corresponding international standard for our country standard;
- Increasing the reference standard GB/T 19660-2005;
- Remove the ISO 4703:2001 Foreword and Introduction;
- Remove the ISO 4703. Appendix A (informative Annex) 2001;
- Remove the "Found bias" Tolerance a bar.

This standard replaces GB/T 5288-1985 "gantry rail grinder accuracy test." the main changes compared to 5288-1985 standard and GB/T as follows.

- Increased Chapter 2, "Normative references";
- Increased Chapter 3, "and the term axis name";
- Increased Chapter 8, "CNC axis positioning accuracy and repeatability";
- Remove the "pre-tune test." the standards and supporting standards.
- JB/T 4147-1999 "gantry rail grinder technical conditions." the standard proposed by China Machinery Industry Federation.

This standard by the National Standardization Technical Committee cutting machine technology (SAC/TC22) centralized.

This standard was drafted. Shanghai Heavy Machine Tool Plant.

1 Scope

This standard specifies the general use and general precision gantry rail grinder geometric accuracy, precision and positioning accuracy and repeatability given Check digit precision. This standard specifies the accuracy test corresponding tolerance.

This standard applies only to straight line motion of the grinding table portable machine. Fixed table and rotary table machine is not a in the scope of this standard.

This standard is only crawling noise machine for accuracy test, does not apply to the operation to check the machine (such as vibration, unusual, moving parts Etc.), does not apply to machine parameter checking (such as speed, feed rate, etc.). These checks should

be carried out before testing the accuracy.

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 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) GB/T 19660-2005 Industrial automation systems and integration - Numerical control of machines and motion coordinate system named (ISO 841:2001, IDT)

3 Terms and axis name

This standard gives the terminology of the main components of the machine, according to GB/T 19660-2005 named axis. See terms and naming axis

Figure 1 and Table 1.

Note: The horizontal axis is considered to be when the main spindle axis (YZ and Vp -W) can be changed, then Q instead of R. In this case, the coordinates of each inspection Changes accordingly.

Note: Figure in Notes 1 to 12 are shown in Table 1.

Figure 1

GB/T 5288-2007/ISO 4703:2001