

JB

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

JB/T 7361-1994

Rolling bearings - Hardness test methods for parts

滚动轴承 零件硬度试验方法

(English Translation)

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1 Scope

This standard specifies the hardness test method for the steel and non-ferrous metal bearing parts.

This standard is applicable to the hardness test of the steel bearing parts after quenching and tempering, the finished bearing parts, and the non-ferrous metal bearing parts.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard;

however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable.

For undated references, the latest edition of the referenced document applies.

GB/T 230.1-2004 Metallic Rockwell hardness test - Part 1. Test method (scales A, B, C, D, E, F, G, H, K, N, T) (ISO 6508-1.1999, MOD)

GB/T 1184-1996 Geometrical tolerancing - Geometrical tolerance for features without individual tolerance indications (eqv ISO 2768-2.1989)

GB/T 4340.1-1999 Metallic materials - Vickers hardness test - Part 1. Test methods (eqv ISO 6507-1.1997)

GB/T 17394-1998 Metallic materials - Leeb hardness test

JB/T 1255-2001 Specification for heat-treatment of rolling bearing parts made from high carbon chromium steel

3 Symbols

The following symbols apply to this standard.

be. The effective width of the ferrule end face (the ferrule wall thickness minus the internal and external chamfer size);

D. Nominal outer diameter of the ferrule;

Dw. Nominal diameter of rolling body;

HRA. A scale Rockwell hardness;

HRC. C scale Rockwell hardness;

HLD. Leeb hardness as measured by D-type impact device;

HV. Vickers hardness;

Ra. Surface roughness.

4.1 Laboratory

Hardness laboratory shall be dry, clean, AND free from strong vibration or corrosive gas sources around. The indoor temperature is generally 10°C ~

35°C; as for the test having higher accuracy requirements, the room temperature shall be controlled at 23°C ± 5°C, AND it shall be equipped with workstations, standard parts cabinets and dust cover and so on.

4.2 Test equipment

All kinds of hardness testers and standard parts which are used for hardness test shall be regularly verified.

5.1

Bearing parts shall be demagnetized before being subjected to hardness test.

5.2

The surface roughness Ra of the hardness test surface and the positioning surface of the bearing parts shall be as specified in Table 1.

Table 1

Test methods Rockwell method Vickers method Leeb method

Ra (max)

μm 0.8 0.32 2.0 5.3 The hardness test surface of the bearing parts shall be flat and smooth, AND be free from such defects as oil stains, especially the burns, decarburization, and cracks and so on.

5.4

The positioning surface of the bearing parts for hardness test shall be free from such defects as oxide scale, coarse scratches, burrs, bump damages and so on.

5.5

When measuring the Rockwell hardness and Vickers hardness of the bearing ferrule, spherical roller, and convex roller, the parallelism of the two end faces shall comply with the requirements of level 8 tolerance in Table B3 of

GB/T 5859 | GB/T 4663 | JB/T 7363 |