



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

GB/T 39741.2-2021

**Plain bearings - Tolerances - Part 2: Tolerances on geometrical
characteristics and surface roughness for shafts and thrust
collars**

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Foreword

GB/T 39741 "Tolerance of Sliding Bearings" consists of the following two parts.

---Part 1.Cooperation;

---Part 2.Geometric tolerances and surface roughness of shaft and thrust shoulder.

This part is Part 2 of GB/T 39741.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this part is equivalent to the adoption of ISO 12129-2:2019
"Tolerance of Sliding Bearings Part 2.Shape and Position of Shaft and Thrust Shoulder
Tolerance and surface roughness".

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 27939-2011 Quality control technology and inspection of sliding bearing geometry and material quality characteristics (ISO 12301.

2007, IDT)

Compared with ISO 12129-2:2019, this part has made the following editorial changes.

--- In the title and text, use "geometric tolerance" instead of "shape and position tolerance", and "geometricalcharacteristics" in the English title

"Formandposition". The types of geometric tolerances specified in this section include shape tolerances, directional tolerances, position tolerances, and jumps.

Dynamic tolerance (see the latest GPS geometric tolerance classification), the "shape and position tolerance" in the original title cannot cover all the specifications specified in this section

Therefore, the title is modified to cover all the technical content of this section.

This part was proposed by China Machinery Industry Federation.

This part is under the jurisdiction of the National Sliding Bearing Standardization Technical Committee (SAC/TC236).

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This part is explained by the National Technical Committee for Standardization of Sliding Bearings.

Sliding bearing tolerance part 2.shaft and

Geometric tolerance and surface roughness of thrust shoulder

1 Scope

This part of GB/T 39741 specifies the geometric tolerances and surface roughness of the shaft, flange, and thrust shoulder of the sliding bearing unit.

This section applies to radial or thrust sliding bearings installed horizontally or vertically, or a combination of the two.

This section does not apply to crankshaft sliding bearing units of internal combustion engines.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

ISO 12301 Plainbearings-Quality Quality Control Technology and Inspection
(Plainbearings-Quality

control techniques and inspection of geometrical and material quality characteristics)

3 Terms and definitions

There are no terms and definitions that need to be defined in this document.

The website of the ISO and IEC standardized terminology database is as follows.

4 General

The reliability of the sliding bearing not only depends on the material selection and fit of the bearing, but also depends on the shaft and thrust shoulder of the sliding bearing unit.

quality.

The accuracy grade range of the sliding bearing is determined according to the minimum lubricating film thickness h_{min} .

It can be obtained by reference to ISO 7902-1, ISO 7902-2 and ISO 7902-3 or through other suitable calculation methods. If calculated

If there is a significant difference in the thickness of the lubricating oil film between the radial sliding bearing and the thrust sliding bearing, the journal (parameters t_1 , t_2 , t_3 and the rough surface of the journal can be adjusted.

Roughness) and shoulder (parameter t_4 , t_5 and surface roughness of thrust shoulder) specify different accuracy levels.

5 Dimensions and tolerances

See Figure 1~Figure 4 and Table 1.

The picture shows the sliding bearing installed horizontally.

6 Design

In terms of product engineering, the transition part between the radial part and the axial part on the shaft can also be made into a concave shape.

Due to the many types of bearing seals, detailed requirements for the bearing seal area cannot be given. The geometric dimensions of the shaft and thrust shoulder and

The surface roughness should be compatible with the selected bearing seal.

7 Inspection

The quality characteristic inspection shall be carried out in accordance with the provisions of ISO 12301.

8 mark

Accuracy class 20, with two thrust shoulders at the position of the radial thrust sliding bearing, which can bear the axial double-sided load (B) shaft (see

Figure 2) Examples of geometric tolerances and surface roughness markings are as follows.

Sliding bearing GB/T 39741.2-B20

If the accuracy grades of the journal and the thrust shoulder are inconsistent, the accuracy grades should be marked in the order of journal/thrust shoulder, example

as follows.

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