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GB/T 271-2017

Replacing GB/T 271-2008

Rolling bearings - Classification

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Standardization Administration Committee.

Table of Contents

Foreword

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

This Standard replaces GB/T 271-2008 *Rolling bearings - Classification*. Compared with GB/T 271-2008, the main technical modifications are as follows:

- added “long face roller bearings” in classification according to roller type (see 4.2 of this Edition);
- modified the name of “open bearing, closed bearing” to “open type bearing, closed type bearing”; and modified the definition of closed type bearing (see 4.7 of this Edition, 4.7 of Edition 2008);
- modified the definitions of separable bearing and un-separable bearing (see 4.9 of this Edition, 4.9 of Edition 2008);
- added “large bearing” in the classification according to nominal diameter size (see Clause 5 of this Edition);
- added structure type of some bearings (see Table B.1 of this Edition).

This Standard was proposed by China Machinery Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Rolling Bearings of Standardization Administration of China (SAC/TC 98).

The drafting organizations of this Standard: Luoyang Bearing Research Institute Co., Ltd., Fujian Yongan Bearing Co., Ltd., National Accreditation Center for Chinese Conformity Assessment, Handan Hongli Bearing Co., Ltd.

Main drafters of this Standard: Zhang Bowen, Qian Weihua, Ding Liyong, Qin Zhitao, Wang Lifeng.

Versions of standard substituted by this Standard are:

- GB 271-1964, GB 271-1987, GB/T 271-1997, GB/T 271-2008.

Rolling bearings - Classification

1 Scope

This Standard specifies the classification of rolling bearings.

This Standard is applicable to the classification management of rolling bearing products.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 276, *Rolling bearings - Deep groove ball bearings - Boundary dimensions*

GB/T 281, *Rolling bearings - Self-aligning ball bearings - Boundary dimensions*

GB/T 283, *Rolling bearings - Cylindrical rolling bearings - Boundary dimensions*

GB/T 285, *Rolling bearings - Double row cylindrical roller bearings - Boundary dimensions*

GB/T 288, *Rolling bearings - Self-aligning roller bearings - Boundary dimensions*

GB/T 290, *Rolling bearings - Needle roller bearings, drawn cup without inner rings - Boundary dimensions*

GB/T 292, *Rolling bearings - Angular contact ball bearings - Boundary dimensions*

GB/T 294, *Rolling bearings - Three-point and four-point contact ball bearings - Boundary dimensions*

GB/T 296, *Rolling bearings - Double row angular contact ball bearings - Boundary dimensions*

GB/T 297, *Rolling bearings - Tapered roller bearings - Boundary dimensions*

GB/T 299, *Rolling bearings - Metric double row tapered roller bearings - Boundary dimensions*

GB/T 300, *Rolling bearings - Four row tapered roller bearings - Boundary dimensions*

GB/T 301, *Rolling bearings - Thrust ball bearings - Boundary dimensions*

GB/T 3882, *Rolling bearings - Insert bearings and eccentric looking collars - Boundary dimensions*

GB/T 4605, *Rolling bearings - Thrust needle roller and cage assemblies, thrust washers*

GB/T 4663, *Rolling bearings - Cylindrical thrust roller bearings - Boundary dimensions*

GB/T 5801, *Rolling bearings - Needle roller bearings, dimension series 48, 49 and 69 - Boundary dimensions and tolerances*

GB/T 5859, *Rolling bearings - Self-aligning thrust roller bearings - Boundary dimensions*

GB/T 6445, *Rolling bearings - Needle roller bearing track rollers - Boundary dimensions and tolerances*

GB/T 6930, *Rolling bearings - Vocabulary*

GB/T 16643, *Rolling bearings - Combined needle roller - Thrust roller bearings - Boundary dimensions*

GB/T 20056, *Rolling bearings - Radial needle roller and cage assemblies - Boundary dimensions and tolerances*

GB/T 24604, *Rolling bearings - Angular contact thrust ball bearings used for machine tool screws*

GB/T 25760, *Rolling bearings - Combined needle roller bearings with thrust ball bearings - Boundary dimensions*

GB/T 25761, *Rolling bearings - Combined needle roller bearings with angular contact ball bearings - Boundary dimensions*

GB/T 25768, *Rolling bearings - Combined needle roller bearings with double direction thrust cylindrical roller bearings*

b) particular bearing - the bearing particularly used in or mainly used in specific host or special condition.

4.6 Rolling bearing, according to whether the dimensions conform to the standard size, is divided into:

a) standard bearing - the bearing that dimensions comply with standard size;

b) non-standard bearing - the bearing that any size in dimensions does not comply with the provisions on standard size.

4.7 Rolling bearing, according to whether it has seal or dust cover, is divided into:

a) open type bearing - the bearing without dust cover and seal;

b) closed type bearing - the bearing with dust cover or seal.

4.8 Rolling bearing, according to the representation unit for dimension size and tolerance, is divided into:

a) metric bearing - the rolling bearing of which dimension size and tolerance uses metric unit;

b) inch bearing - the rolling bearing of which dimension size and tolerance uses inch unit.

4.9 Rolling bearing, according to whether its component can be separated, is divided into:

a) separable bearing - the bearing of which sub-component can be separated;

b) un-separable bearing - the bearing of which sub-component cannot be separated.

4.10 Rolling bearing, according to product extension classification, is divided into:

a) bearing;

b) combined bearing;

c) bearing unit.

4.11 Rolling bearing, according to its structural shape (e.g., with or without outer ring, with or without cage, with or without groove as well as the shape of the ring, the structure of the rib, etc.), can be also divided into many structural

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