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

GB/T 24608-2023

Inspection rules for rolling bearings and commercial parts

滚动轴承及其商品零件检验规则

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Foreword

This document was issued on 28 December 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 April 2024.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 24608-2023 governs how a lot of rolling bearings is accepted or rejected: general-purpose bearings together with the commercial parts sold on their own, meaning steel balls, ceramic balls, tapered, cylindrical, spherical and needle rollers, and bearing accessories. The inspection requirements sort the characteristics into key items and the rest, and say for each what is sampled and how it is judged. The sampling and determination methods follow, built on the attribute sampling scheme of GB/T 2828.1 with its acceptance numbers, and a further clause covers supervision inspection, where a quality level is chosen and product already in circulation is checked rather than a consignment at the point of delivery. The symbols and terms clauses tie the vocabulary back to the general bearing standards, so that a purchase specification and an inspection report mean the same thing by the same word. Bearings fail as a population rather than one at a time, and inspecting every ball or roller in a batch is not affordable, so the whole commercial relationship rests on a sampling plan agreed before the goods move. For bearing manufacturers, for the ball and roller suppliers who feed them, and for purchasers and inspection bodies setting up incoming or supervisory checks.

This document specifies the inspection rules for general-purpose rolling bearings and

their commercial parts (steel balls, ceramic balls, tapered rollers, cylindrical rollers, spherical rollers, needle rollers) and bearing accessories.

This document applies to the inspection, acceptance, and supervision and inspection of rolling bearings, their commodity parts and bearing accessories by the following organizations or institutions.

- a) the quality department within the supplier organization (the first party);
- b) the purchaser or purchasing organization (the second party);
- c) inspection and testing agency (the third party).

2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with dates, only the versions corresponding to the dates are applicable to this document; for referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 307.1-2017 Rolling bearings - Radial bearings - Geometrical product specifications (GPS) and tolerance values

GB/T 2828.1-2012 Sampling procedures for inspection by attributes - Part 1. Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 4199 Rolling bearings - Tolerances - Definitions

GB/T 6930 Rolling bearings - Vocabulary

GB/T 7811-2015 Rolling bearings - Symbols for physical quantities

3 Terms and definitions

The terms and definitions defined in GB/T 4199, GB/T 6930 and GB/T 2828.1-2012 and the following terms and definitions apply to this document.

3.1 supervision and inspection

A means by which government departments control product quality through random inspections.

3.2 conformity assessment

Demonstration that specified requirements related to a product, process, system, person or organization are fulfilled.

[Source. GB/T 27000-2023, 3.1, modified]

4 Symbols and abbreviations

The symbols and abbreviations given in GB/T 307.1-2017 and GB/T 7811-2015 and the following apply to this document.

Ac. Acceptance number

AQL. Acceptance quality limit (expressed as the percent nonconforming or nonconformities per 100 items)

n. Sample size

p0. Supervision quality level

Re. Rejection number

r. Rejection limit

5 Inspection requirements

5.1 Key items

5.1.1 Sampling and determination of key items of rolling bearings shall be in accordance with the provisions of Table 1.

5.1.2 The sampling and determination of key items of commercial parts shall be in accordance with the provisions of Table 2.

5.1.3 The materials and working surfaces of rolling bearings and their commercial parts and bearing accessories shall comply with the requirements of relevant standards.

5.2 Inspection level

b) specify the acceptance quality limit (AQL) value;

c) select the type of sampling plan;

d) determine the severity of this inspection (normal, tightened or reduced inspection) based on the previous inspection results and the adjustment and transfer rules. Normal inspection shall be used at the beginning of the

inspection;

e) submit product lot;

f) check the packing quality and marking;

g) determine the sampling plan;

h) random sampling;

i) testing samples;

j) determine whether to accept or reject the batch based on the number of non-conforming items in the sample and the acceptance number A_c and rejection number R_e in the sampling plan;

k) acceptable batches;

l) Disposal of unacceptable batches.

6.2 Batch formation

6.2.1 The varieties, models, specifications, materials and process conditions of the product lots submitted for inspection shall be as similar as possible and the manufacturing time shall be similar.

6.2.2 The lot size of products submitted for inspection and the method of submission of each lot may be determined by negotiation between the first party and the second party.

6.3 Sample inspection

6.3.1 Inspect the sample units one by one according to the specified inspection items.

6.3.2 The technical conditions of each item shall be in accordance with the relevant standards. For items where the technical conditions are not specified in the standards, they shall be in accordance with the sample drawings or technical documents approved by the first or second party.

6.4 Determination of acceptable lots and unacceptable lots

6.4.1 Single sampling inspection

Use the single sampling inspection plan table. According to the sample inspection results, if the number of nonconforming items found in the sample is less than or equal to the acceptance number, the lot shall be considered acceptable. If the number of