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

GB/T 43617.4-2024

**Rolling bearings - Noise testing of rolling bearing greases - Part
4: Test and evaluation method NQ**

滚动轴承 滚动轴承润滑脂噪声测试 第4部分：测试和评估方法NQ
(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is part 4 of GB/T 43617 "Rolling bearings - Test for noise from rolling bearing greases". GB/T 43617 has been issued.

The following parts were published.

- Part 1: Basic principles, test components and test equipment;
- Part 2: Test and evaluation methods BQ;
- Part 3: Test and evaluation methods MQ;
- Part 4: Test and evaluation methods NQ.

This document is equivalent to ISO 21250-4:2020 "Rolling bearings - Tests for noise from rolling bearing greases - Part 4: Tests and evaluation Estimation Method NQ.

Introduction

Rolling bearing life theory emphasizes that the use of clean and uniform lubricants is the key to extending bearing life. GfT Worksheet 3[3] Covers the theory and practice of rolling bearing lubrication.

Grease lubrication is the most common type of rolling bearing lubrication. The cleanliness level of bearing grease is affected by base oil, thickener, additives (including Solid lubricant additives) and the manufacturing process, and reflected in the running noise. Therefore, it is recommended to conduct rolling bearing grease noise test.

In addition, the grease noise test specified in this document can help grease manufacturers develop low-noise greases with high damping capacity.

It can also help rolling bearing manufacturers and end users to select low-noise grease with high damping capacity.

This document combines ISO 21250-1, ISO 21250-2 and ISO 21250-3 and covers the determination and evaluation of rolling bearing grease noise.

Requirements for test components and test instruments for the NQ method.

GB/T 43617 "Rolling bearings - Test for noise from rolling bearing grease" consists of four parts.

-- Part 1: Basic principles, test components and test equipment. Aims to specify the common terms, basic principles and test methods for the noise testing of rolling bearing greases.

This document contains the symbols, test principles, test conditions, test components and test equipment.

-- Part 2: Test and evaluation methods BQ. To specify the noise test of rolling bearing grease according to the BQ method and evaluation.

-- Part 3: Test and evaluation methods MQ. To specify the test and evaluation methods for rolling bearing grease noise according to the MQ method.

Evaluate.

-- Part 4: Test and evaluation methods NQ. To specify the test and evaluation methods for rolling bearing grease noise according to the NQ method.

Evaluate.

Rolling bearings Rolling bearing grease noise test Part 4: Test and evaluation methods NQ

1 Scope

This document specifies the test and evaluation method NQ for rolling bearing grease noise.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 24610.1-2019 Rolling bearing vibration measurement method Part 1: Fundamentals (ISO 15242-1:2015, IDT) GB/T 24610.2-2019 Rolling bearing vibration measurement

method Part 2: Centripetal bearings with cylindrical bores and cylindrical outer surfaces Ball bearings (ISO 15242-2:2015, IDT) GB/T 43617.1-2024 Rolling bearings Rolling bearing grease noise test Part 1: Basic principles, test components and Tester (ISO 21250-1:2020, IDT) ISO 492 Rolling bearings-Radial bearings-Geometrical specifications (GPS) and tolerances bearings-Geometrical product specifications (GPS) and tolerance values] Note. GB/T 307.1-2017 Rolling bearings - Radial bearings - Product geometry specifications (GPS) and tolerances (ISO 492:2014, IDT) ISO 5593 Rolling bearings-Vocabulary Note. GB/T 6930-2024 Vocabulary of rolling bearings (ISO 5593:2023, IDT) ISO 15242-1 Rolling bearings-Measuring methods Part 1: Fundamentals for vibration-Part 1: Fundamentals) Note. GB/T 24610.1-2019 Rolling bearing vibration measurement method Part 1: Fundamentals (ISO 15242-1.:2015, IDT) ISO 21250-1 Rolling bearings - Test for noise from rolling bearing greases - Part 1: Basic principles, test kits and test apparatus (Rolling bearings-Noise testing of rolling bearing greases-Part 1: Basic principles, testing assembly and test machine Note. GB/T 43617.1-2024 Rolling bearings - Test for noise from rolling bearing greases - Part 1: Basic principles, test components and testers (ISO 21250-1:2020, IDT)

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in ISO 5593, ISO 15242-1 and ISO 21250-1 and the following apply.

ISO and IEC maintain databases of terminology used in standardization work at the following URLs.

Air bearing spindle

The spindle is supported by high-precision air bearings.