BS ISO 21250-2:2020

BSI Standards Publication

Rolling bearings — Noise testing of rolling bearing greases

Part 2: Test and evaluation method BQ+

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National foreword

This British Standard is the UK implementation of ISO 21250-2:2020.

The UK participation in its preparation was entrusted to Technical Committee MCE/7, Rolling bearings.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Contents

Page

Foreword ... **iv**
Introduction ... **v**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **1**
4 Symbols, abbreviated terms and subscripts ... **1**
5 Calculation method ... **2**
5.1 Signal processing ... 2
5.2 Calculation of damping ... 3
5.3 Calculation of peak values ... 3
6 Test method BQ+ ... **4**
6.1 Measuring principle ... 4
6.2 Testing procedure ... 4
7 Evaluation of results ... **5**
7.1 Rating scale ... 5
7.2 Damping ability ... 6
Annex A (informative) **Test machine, test setup, electronic system and test reports: examples** ... **7**
Annex B (informative) **Recommendation for inserting the amount of grease** ... **12**
Annex C (informative) **Practical hints for calibration** ... **15**
Bibliography ... **17**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*.

This document is intended to be used in conjunction with ISO 21250-1.

A list of all parts in the ISO 21250 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

The rolling bearing life theory emphasizes the use of pure and homogeneous lubricants as essential for a long bearing service life. The lubrication of rolling bearings is described in several national standards. The GfT worksheet 3[12] contains theoretical and practical knowledge of rolling bearing lubrication.

Grease lubrication is the most common type of rolling bearing lubrication. The purity grade of rolling bearing grease is influenced by thickeners, base oils, additives and solid lubricant additives as well as the manufacturing process and is reflected in the running noise. Therefore, noise testing of rolling bearing greases is recommended.

In addition, grease noise testing in accordance with this document allows the grease manufacturers to develop low-noise lubricants with better damping properties. This document can also support the rolling bearing manufacturers and end-users in the selection of low noise grease with better damping properties.

This document covers requirements for the testing assembly and the test machine of method BQ+ to determine and assess the noise characteristics of rolling bearing grease jointly with ISO 21250-1, ISO 21250-3 and ISO 21250-4.

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Rolling bearings — Noise testing of rolling bearing greases —

Part 2:
Test and evaluation method BQ+

1 Scope

This document specifies the testing and evaluation method of rolling bearing grease noise in accordance with the method BQ+.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 5593, *Rolling bearings — Vocabulary*

ISO 15242-1, *Rolling bearings — Measuring methods for vibration — Part 1: Fundamentals*

ISO 21250-1:2020, *Rolling bearings — Noise testing of rolling bearing greases — Part 1: Basic principles, testing assembly and test machine*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
sampling rate
sample rate
<signal processing> frequency with which a continuous signal is sampled and converted into a time-discrete signal

Note 1 to entry: The unit is hertz (Hz) or samples (readings) per second [samples per second (samples/s)].

3.2
peak reset
manual or automatic zeroizing of the peak detector

4 Symbols, abbreviated terms and subscripts

For the application of this document, the symbols, abbreviated terms and subscripts according to ISO 21250-1:2020, Table 1 and Table 2, in addition to the symbols and abbreviated terms contained in Table 1 and the subscripts contained in Table 2, apply.

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