INTERNATIONAL STANDARD

ISO 20054

Second edition
2022-06

Plain bearings — Bearings containing dispersed solid lubricants

Paliers lisses — Paliers contenant des lubrifiants solides dispersés

Reference number
ISO 20054:2022(E)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 123, *Plain bearings*, Subcommittee SC 7, *Special types of plain bearings*.

This second edition cancels and replaces the first edition (ISO 20054:2016), of which it constitutes a minor revision.

The main changes are as follows:

— the titles of 5.2, 7.3.2 and 7.3.3 have been changed to more suitable ones;

— changes in the description in 7.1 have been made due to the above changes.

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Plain bearings — Bearings containing dispersed solid lubricants

1 Scope

This document specifies the characteristics, materials, dimensions, assembly and surface finish for a bearing containing dispersed solid lubricants which is used as a solid lubricant bearing.

NOTE In the solid lubricant bearing among self-lubricating bearings there is a solid type, a coated type, an embedded type and a dispersed type, which is specified by this document.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

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

4 Symbols and units

See Table 1.

Table 1 — Symbols and units

Symbol	Description	Unit
B	Width of the bush	mm
D_i	Inside diameter of the bush	mm
D_o	Outside diameter of the bush	mm
x	Surface roughness	—

5 Characteristics

5.1 Structure

A bearing containing dispersed solid lubricants is made of sintered composite materials that contain solid lubricants dispersed uniformly in the metal matrix and is manufactured by powder metallurgy (see Figure 1).

This document includes multi-layered bearings with the sintered layer on a steel backing and both seamless and wrapped bushes (see Figure 2).

Figure 3 shows a typical microstructure of the bearings containing dispersed solid lubricants. The dispersed solid lubricants in the metal matrix vary in grain size and volume.

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