INTERNATIONAL STANDARD

ISO 7905-4

Second edition
2022-06

Plain bearings — Bearing fatigue —

Part 4: Tests on half-bearings of a metallic multilayer bearing material

Paliers lisses — Fatigue des paliers —

Partie 4: Essais sur demi-coussinets en matériau antifriction métallique multicouche

Reference number
ISO 7905-4:2022(E)

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Published in Switzerland

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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).

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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 123, *Plain bearing*, Subcommittee SC 2, *Materials and lubricants, their properties, characteristics, test methods and testing conditions*.

This second edition cancels and replaces the first edition (ISO 7905-4:1995), which has been editorially revised.

The main changes compared to the previous edition are as follows:

— adjustments to ISO/IEC Directives, Part 2:2018 have been made;

— Annex A has been revised;

— the Bibliography has been revised.

A list of all parts in the ISO 7905 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.

Plain bearings — Bearing fatigue —

Part 4: Tests on half-bearings of a metallic multilayer bearing material

1 Scope

This document specifies a method for the determination of the endurance limit in fatigue of half-bearings of a multilayer bearing material.

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 4386-3, *Plain bearings — Metallic multilayer plain bearings — Part 3: Non-destructive penetrant testing*

3 Terms and definitions

No terms and definitions are listed in this document.

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 https://www.electropedia.org/

4 Symbols

The symbols used in this document are described in Table 1.

Table 1 — Symbols

Symbol	Description	Unit
A_1	coefficient of stress at the bearing backing	—
$a_{1,i}$	3 coefficients at the outside of the bearing back with i = 0, 1, 2	—
A_2	coefficient of stress at the surface of the lining	—
$a_{2,i}$	3 coefficients at the surface of the lining with i = 0, 1, 2	—
b	bearing width	mm
B_1	coefficient of stress at the bearing backing	—
$b_{1,i}$	3 coefficients at the outside of the bearing back with i = 0, 1, 2	—
B_2	coefficient of stress at the surface of the lining	—
$b_{2,i}$	3 coefficients at the surface of the lining with i = 0, 1, 2	—
E	Young's modulus	MPa
E_1	Young's modulus, steel bearing backing, $E_1 = 210 \cdot 10^3$	MPa