
**Mechanical vibration — Vibration of
rotating machinery equipped with active
magnetic bearings —**

**Part 1:
Vocabulary**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

*Vibrations mécaniques — Vibrations de machines rotatives équipées de
paliers magnétiques actifs —*

<https://standards.iteh.ai/catalog/standards/sist/258288-7153-474f947d-19acdff1910b/iso-14839-1-2002-amd-1-2010>
Partie 1: Vocabulaire
AMENDEMENT 1



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 14839-1:2002/Amd 1:2010](https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010)

<https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

Amendment 1 to ISO 14839-1:2002 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration, shock and condition monitoring*, Subcommittee SC 2, *Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles and structures*.

TECHNICAL STANDARD PREVIEW

(standards.iteh.ai)

[ISO 14839-1:2002/Amd 1:2010](https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010)

<https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 14839-1:2002/Amd 1:2010

<https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010>

Mechanical vibration — Vibration of rotating machinery equipped with active magnetic bearings —

Part 1: Vocabulary

AMENDMENT 1

Page v, Foreword

Add the following to the list of parts:

- Part 3: Evaluation of stability margin

The following part is under preparation:

- Part 4: Technical guidelines

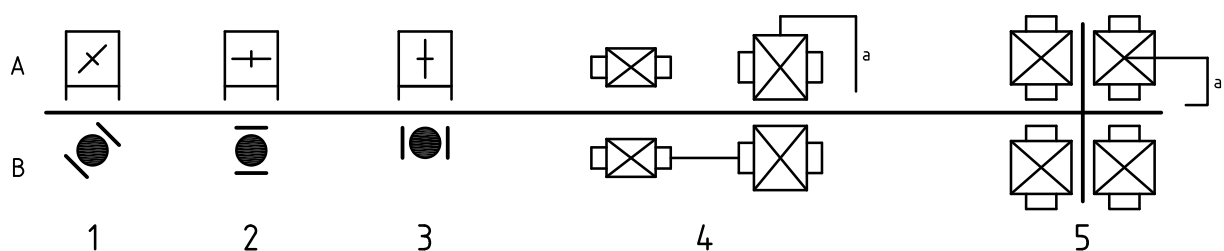
iTech STANDARD PREVIEW
(standards.itech.ai)

Page 1, Clause 1

After “active magnetic bearings” insert “and touch-down bearings”

Page 1, Clause 1

Replace Figure 1 by the following.



Key

- A simplified symbols (see ISO 8826-2)
- B conventional symbols
- 1 angular ball bearing
- 2 deep-groove ball bearing
- 3 thrust ball bearing
- 4 radial active magnetic bearing
- 5 axial active magnetic bearing
- a With sensor.

Page 2, 1.4, definition

Replace “equipment supporting” by “means to support”.

Page 3, 1.8, term

Replace “based” by “biased”.

Page 4, 1.9, definition

Insert “horizontal” before “rotor”.

Page 4, 1.9, Figure 4, Key 1

Replace “core” by “coil”.

Page 6, 1.11, term and definition

Replace the existing text by the following, but retain references to figures.

nominal magnetic gap

distance between the magnetic materials of the rotor and the stator inside the AMB when the journal centre of the rotor is located in the clearance centre of the bearing stator

Page 16, 4.1, Figure 12

Replace the existing legend by the following.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Figure 12 — Current-force characteristic; linearization by AMB bias current I_0 for a typical 2-quadrant power amplifier

<https://standards.iteh.ai/catalog/standards/sist/d4256266-7155-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010>

Page 20, 5.7, term, definition, and reference to figure

Replace the existing text by the following.

operation mode of AMB power amplifier

characteristic of AMB power amplifiers:

- 2-quadrant: output voltage positive or negative while current always positive;
- 4-quadrant: output voltage positive or negative while current arbitrarily positive or negative

See Figure 12.

Page 21, 5.7, Figure 14

Delete this figure and renumber all following figures and their references.

Page 24, 6.1, term and definition

Replace the existing text by the following.

touch-down bearing

bearing installed in the magnetic bearing rotor system, which is designed to limit the rotor motion and to prevent contact with the AMB stator or rotor surface

NOTE Other designations include: auxiliary bearing, emergency bearing, retainer bearing, back-up bearing, catcher bearing.

Page 26, Bibliography

Update the title of ISO 2041 to read “*Mechanical vibration, shock and condition monitoring — Vocabulary*”

Add the following entry.

[3] ISO 8826-2, *Technical drawings — Rolling bearings — Part 2: Detailed simplified representation*

Page 27, Alphabetical index

Delete the following entry.

AMB clearance 1.11

Add the following entries.

back-up bearing 6.1

catcher bearing 6.1

nominal magnetic gap 1.11

Replace “permanent-magnet-based AMB” by “permanent-magnet-biased AMB”.

Replace “operation class of AMB power amplifier” by “operation mode of AMB power amplifier”.

iteh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 14839-1:2002/Amd 1:2010](https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010)

<https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdff1910b/iso-14839-1-2002-amd-1-2010>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 14839-1:2002/Amd 1:2010](https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdf1910b/iso-14839-1-2002-amd-1-2010)
<https://standards.iteh.ai/catalog/standards/sist/da258288-7153-474f-947d-19acdf1910b/iso-14839-1-2002-amd-1-2010>

ICS 01.040.17; 17.160

Price based on 3 pages