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ANSI/AFBMA
Std. 13-1987
(Revision of ANSI/AFBMA
Std. 13-1970)

AMERICAN NATIONAL STANDARD

AFBMA STANDARD

ROLLING BEARING VIBRATION AND NOISE

(METHODS OF MEASURING)

Sponsor
**The Anti-Friction Bearing
Manufacturers Association, Inc.**

Approved September 2, 1987
American National Standards Institute, Inc.



American National Standard

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FOREWORD

(This Foreword is not part of ANSI/AFBMA Standard 13-1987, Rolling Bearing Vibration and Noise (Methods of Measuring))

This standard was originally developed by the Annular Bearing Engineers Committee (ABEC) and the Roller Bearing Engineers Committee (RBEC) of The Anti-Friction Bearing Manufacturers Association, Inc., (AFBMA), in response to increasing demands from industry and government services for standards to cover the measurement of noise and vibration in rolling contact (ball and roller) bearings.

As a result of the studies and deliberations of these committees of the AFBMA, members of which had frequent association and contact with equipment builders and users who have need for quiet running bearings, this standard was presented to Sectional Committee B3 of The American National Standards Institute for their review and approval in September 1969. After approval of that committee in December 1969, this standard was approved by The American National Standards Institute on November 20, 1970. This standard was reapproved in 1977 and in 1986.

In response to growing interest for standards for measuring noise and vibration of instrument ball bearings, Section III to the Standard was added in 1987. This section provides the concepts which should be part on any specified test methods for instrument ball bearing noise and vibration.

Suggestions for the improvement of this Standard gained through experience with its use will be welcomed. These should be sent to the American National Standards Institute, Inc. 1430 Broadway, New York, NY 10018.

The officers of Accredited Standards Committee B3 of the American National Standards Institute and the organizations represented at the time the Standard was submitted are as follows:

S. R. Ahlman, Chairman

G. T. Satterfield, Secretary

American Society of Agricultural Engineers
 American Society of Lubrication Engineers
 Anti-Friction Bearing Manufacturers Association
 Hydraulic Institute
 National Machine Tool Builders Association
 Society of Automotive Engineers
 U.S. Department of Defense, DISC
 U.S. Department of the Navy

AFBMA Standards
for Ball and Roller Bearings
and Balls

- 1 — Terminology
- 4 — Tolerance Definitions and Gaging Practices
- 7 — Shaft and Housing Fits for Metric Radial Ball and Roller Bearings (Except Tapered Roller Bearings) Conforming to Basic Boundary Plans
- 8.1 — Ball and Roller Bearing Mounting Accessories, Metric Design
- 8.2 — Ball and Roller Bearing Mounting Accessories, Inch Design
- 9 — Load Ratings and Fatigue Life for Ball Bearings
- 10 — Metal Balls
- 11 — Load Ratings and Fatigue Life for Roller Bearings
- 12.1 — Instrument Ball Bearings, Metric Design
- 12.2 — Instrument Ball Bearings, Inch Design
- 13 — Rolling Bearing Vibration and Noise
- 14 — Housings for Bearings With Spherical Outside Surfaces
- 15 — Ball Bearings With Spherical Outside Surfaces and Extended Inner Ring Width (Includes Eccentric Looking Collars)
- 16.1 — Airframe Ball, Roller and Needle Roller Bearings, Metric Design
- 16.2 — Airframe Ball, Roller and Needle Roller Bearings, Inch Design
- 17 — Needle Rollers, Metric Design
- 18.1 — Needle Roller Bearings — Radial, Metric Design
- 18.2 — Needle Roller Bearings — Radial, Inch Design
- 19 — Tapered Roller Bearings — Radial, Inch Design
- 19.1 — Tapered Roller Bearings — Radial, Metric Design
- 20 — Radial Bearings of Ball, Cylindrical Roller and Spherical Roller Types, Metric Design
- 21 — Metric Thrust Needle Roller and Cage Assemblies and Thrust Washers
- 21.2 — Thrust Bearings of Ball, Cylindrical Roller, Tapered Roller and Needle Roller Types, Inch Design
- 22 — Spherical Plain Bearings, Joint Type

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AMERICAN NATIONAL STANDARD

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ROLLING BEARING VIBRATION AND NOISE

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