ASA/ANSI S2.75-2017/Part 2

Reaffirmed by ANSI June 19, 2020

AMERICAN NATIONAL STANDARD

Shaft Alignment Methodology, Part 2: Vocabulary

Secretariat:

Acoustical Society of America

Approved on June 6, 2017

American National Standards Institute, Inc.

Abstract

The purpose of this standard is to define terminology unique to the alignment of machinery that has been in common use among engineers and technicians working in the field. Words and phrases are presented in alphabetical order. This vocabulary is intended to be used with the ANSI/ASA S2.75 series Shaft Alignment Methodology.

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Accredited Standards Committee S2, Mechanical Vibration and Shock

Standards Secretariat
Acoustical Society of America
300 Walt Whitman Road, Suite 300
Melville, NY 11747

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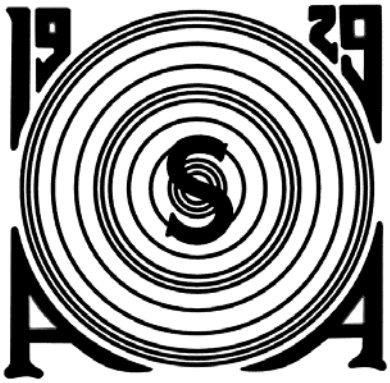

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Contents

Foreword

[*This Foreword is for information only, and is not a part of* ANSI/ASA S2.75-2017/Part 2 American National Standard Shaft Alignment Methodology, Part 2: Vocabulary. *As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the standard.*]

This standard comprises a part of a group of definitions, standards, and specifications for use in mechanical vibration and shock. It was developed and approved by Accredited Standards Committee S2 Mechanical Vibration and Shock, under its approved operating procedures. Those procedures have been accredited by the American National Standards Institute (ANSI). The Scope of Accredited Standards Committee S2 is as follows:

> *Standards, specification, methods of measurement and test, and terminology in the field of mechanical vibration and shock, and condition monitoring and diagnostics of machines, including the effects of exposure to mechanical vibration and shock on humans, including those aspects which pertain to biological safety, tolerance and comfort.*

This standard is not comparable to any existing ISO Standard.

This proposed standard was compiled to provide a common understanding of words and phrases used in machinery alignment. This standard is intended to be used by persons engaged in the installation, commissioning, and repair of machines. This is a new standard that does not duplicate definitions provided in other vocabulary standards.

At the time this Standard was submitted to Accredited Standards Committee S2, Mechanical Vibration and Shock for approval, the membership was as follows:

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J.T. Nelson, *Vice-Chair*

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..... S. Rahmatalla (Alt.)

University of Washington, Dept. of Environmental and Occupational Health Sciences .....P.W. Johnson

Vibration Institute.....R.L. Eshleman
..... B. Biby (Alt.)

Waukesha Magnetic Bearings.....K. Bornstein
.....R. Shultz (Alt.)

Individual Experts of Accredited Standards Committee S2, Mechanical Vibration and Shock, were:

A.J. Brammer
R.J. Peppin
D.D. Reynolds
D.E. Wasserman

Working Group S2/WG 15, Shaft Alignment Methodology, which assisted Accredited Standards Committee S2, Mechanical Vibration and Shock, in the development of this standard, had the following membership.

B. Biby, Chair
G. Vogel, Vice-Chair

E.M. Arteaga
T. Barham
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M. Williams
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Suggestions for improvements to this standard will be welcomed. They should be sent to Accredited Standards Committee S2, Mechanical Vibration and Shock, in care of the Standards Secretariat of the Acoustical Society of America, 1305 Walt Whitman Road, Suite 300, Melville, New York 11747. Telephone: 631-390-0215; FAX: 631-923-2875; E-mail: asastds@acousticalsociety.org.

American National Standard

Shaft Alignment Methodology, Part 2: Vocabulary

1 Scope

The words and phrases provided here are descriptive of the instruments and methods in common use for shaft alignment of industrial and utility machines. The machines have rotating shafts at speeds of several hundred revolutions per minute and higher. The machines are typically stationary, being attached to a fixed location on a structure, but could also be on a vehicle, such as a watercraft.

The definitions are intended to be used in other standards for shaft alignment and general machinery servicing.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
air gap
the internal open space in an electrical machine between the stationary and movable components that transmits energy via the magnetic field

NOTE In a motor or generator, this is the radial space between the rotor and stator.

2.2
alignment, machinery
the relative orientation of components which results in the least amount of vibration or wear

NOTE See “shaft alignment.”

2.3
alignment tolerance
the maximum allowable deviation, plus or minus, from desired values

NOTE In machinery, perfect alignment is not achievable. This tolerance provides a range that is economically achievable within a reasonable time and will not cause premature wear or excessive vibration.

2.4
anchor bolts
fasteners embedded in concrete used to secure a machine to a foundation

NOTE 1 Also known as a “J-bolt.”

NOTE 2 The fasteners could be male or female threaded.

NOTE 3 See “base” and “foundation.”