

ANSI S2.8-2007
(Revision of ANSI S2.8-1972)

AMERICAN NATIONAL STANDARD

Technical Information Used for Resilient Mounting Applications

ANSI S2.8-2007
(Revision of ANSI S2.8-1972)

Accredited Standards Committee S2, Mechanical Vibration and Shock

Standards Secretariat
Acoustical Society of America
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Secretariat

Acoustical Society of America

Approved March 22, 2007

American National Standards Institute, Inc.

Abstract

This standard establishes requirements to promote appropriate exchange of information regarding the application and selection of isolation for the reduction of vibrations generated by equipment and machines. It is beyond the scope of this standard to present characteristics of resilient mountings. Rather, it is intended to outline, in standardized form, what data should be presented to enable the experienced designer to apply resilient mountings correctly. Also, the standard defines terminology in a further effort to ease the problem of communication between user and manufacturer.

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Foreword

[This Foreword is for information only, and is not a part of the American National Standard ANSI S2.8-2007 American National Standard Technical Information Used for Resilient Mounting Applications].

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 a revision of ANSI S2.8-1972, which has been technically revised. This new edition has been restructured and some of the formulae, terms and definitions, and illustrations (Figures) have been revised and corrected. Additional exhibits, illustrations, and tables have been added to this revision of this document.

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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Working Group S2/WG 4, Characterization of the Dynamic Mechanical Properties of Visco-elastic Polymers, which assisted Accredited Standards Committee S2, Mechanical Vibration and Shock, in the development of this standard, had the following membership.

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Suggestions for improvements of 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, 35 Pinelawn Road, Suite 114E, Melville, New York 11747-3177. Telephone: 631-390-0215; FAX: 631-390-0217; E-mail: asastds@aip.org

Introduction

Users of resilient mountings are sometimes handicapped in applying mounting systems properly because sufficient technical information is not furnished by the manufacturer. Consequently, the users often conduct their own experimental evaluation of mountings and perhaps unknowingly duplicate work already performed by the manufacturer. Also, in some industries and military applications, the user may not be at liberty to disclose applicable information which might otherwise facilitate suggestions and recommendations by the mounting manufacturer. Hence, many times the user must acquire considerable proficiency in the art of applying resilient mountings and, in these instances, they need appropriate technical information from the manufacturer.

On the other hand, some manufacturers of resilient mountings have experience covering a wide variety of mounting applications. Manufacturers, in most instances, are willing to use their background information for solving the user's mounting problems. However, it frequently is difficult for the manufacturer to provide this service, because the user has not furnished sufficient information to the manufacturer regarding the application.

This American National Standard is intended to serve as a guide for the exchange of technical information regarding the application of isolation for vibrations generated by equipment and machines, and for use between the customer and supplier of resilient mounting systems for their proper applications.

For the purposes of this ANSI Standard, a resilient mounting system is defined as a flexible element or system used between an equipment item and its supporting structure to attenuate the transmission of shock or vibration from the equipment and machine to the structure.

This is a preview of "ANSI S2.8-2007". [Click here to purchase the full version from the ANSI store.](#)

American National Standard

Technical Information Used for Resilient Mounting Applications

1 Scope

This American National Standard establishes the requirements to promote an appropriate exchange of information regarding the application and selection of isolation for the reduction of vibrations generated by equipment and machines. Therefore, use of this standard can improve communication among engineers, manufacturers and end-users concerned with vibration isolation.

It is beyond the scope of this standard to present characteristics of resilient mountings. Rather, it is intended to outline, in standardized form, what data and preliminary technical information should be presented to enable the experienced designer to apply resilient mountings correctly.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ANSI S1.1-1994 *American National Standard Acoustical Terminology*

ANSI S2.1-2000/ISO 2041:1990 *American National Standard Vibration and shock - Vocabulary*

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in ANSI S1.1-1994, ANSI S2.1-2000/ISO 2041:1990, and the following apply.

3.1

axial stiffness

load-deflection ratio of a mounting along the line of application of the load

NOTE Stiffness is the ratio of change of force to the corresponding change in translational (or rotational) deformation of an elastic element. The stiffness can be dynamic or static, and the mounting shall have an axis of symmetry.

3.2

base mounting system

system which has the resilient mountings attached underneath the mounted item (see Figure 1)