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Acoustics and vibration - Laboratory measurement of vibro-acoustic transfer properties of resilient elements - Part 5: Driving point method for determination of the low-frequency transfer stiffness of resilient supports for translatory motion (ISO 10846-5:2008)

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Akustik und Schwingungstechnik - Laborverfahren zur Messung der vibro-akustischen Transfereigenschaften elastischer Elemente - Teil 5: Ermittlung der Transfersteifigkeit elastischer Stützelemente aus der Eingangssteifigkeit bei Anregung in translatorischer Richtung und tiefen Frequenzen (ISO 10846-5:2008)

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Ta slovenski standard je istoveten z: EN ISO 10846-5:2009

ICS:

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17.160	Vibracije, meritve udarcev in vibracij	Vibrations, shock and vibration measurements

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EUROPEAN STANDARD

EN ISO 10846-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2009

ICS 17.140.01; 17.160

English Version

Acoustics and vibration - Laboratory measurement of vibro-acoustic transfer properties of resilient elements - Part 5: Driving point method for determination of the low-frequency transfer stiffness of resilient supports for translatory motion (ISO 10846-5:2008)

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Foreword

The text of ISO 10846-5:2008 has been prepared by Technical Committee ISO/TC 43 "Acoustics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10846-5:2009 by Technical Committee CEN/TC 211 "Acoustics" the secretariat of which is held by DS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by August 2009.

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INTERNATIONAL
STANDARDISO
10846-5First edition
2008-08-15

**Acoustics and vibration — Laboratory
measurement of vibro-acoustic transfer
properties of resilient elements —**

Part 5:

**Driving point method for determination of
the low-frequency transfer stiffness of
resilient supports for translatory motion****(standards.iteh.ai)***Acoustique et vibrations — Mesurage en laboratoire des propriétés de
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*Partie 5: Méthode du point d'application pour la détermination de la
raideur dynamique de transfert basse fréquence en translation des
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Reference number
ISO 10846-5:2008(E)

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Published in Switzerland

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Foreword

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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.

ISO 10846-5 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*, and ISO/TC 108, *Mechanical vibration, shock and condition monitoring*.

ISO 10846 consists of the following parts, under the general title *Acoustics and vibration — Laboratory measurement of vibro-acoustic transfer properties of resilient elements*:

- *Part 1: Principles and guidelines*
- *Part 2: Direct method for determination of the dynamic stiffness of resilient supports for translatory motion*
- *Part 3: Indirect method for determination of the dynamic stiffness of resilient supports for translatory motion*
- *Part 4: Dynamic stiffness of elements other than resilient supports for translatory motion*
- *Part 5: Driving point method for determination of the low-frequency transfer stiffness of resilient supports for translatory motion*

Introduction

Passive vibration isolators of various kinds are used to reduce the transmission of vibration. Examples are automobile engine mounts, resilient supports for buildings, resilient mounts and flexible shaft couplings for shipboard machinery and small isolators in household appliances.

This part of ISO 10846 specifies a driving point method for measuring the low-frequency dynamic transfer stiffness function of linear resilient supports. This includes resilient supports with non-linear static load-deflection characteristics provided that the elements show an approximate linearity for vibration behaviour for a given static preload. This part of ISO 10846 belongs to a series of International Standards on methods for the laboratory measurement of vibro-acoustic properties of resilient elements, which also includes documents on measurement principles, on a direct method and on an indirect method. ISO 10846-1 provides global guidance for the selection of the appropriate International Standard.

The laboratory conditions described in this part of ISO 10846 include the application of static preload, where appropriate.

The results of the method described in this part of ISO 10846 are useful for resilient supports that are used to prevent low-frequency vibration problems and to attenuate structure-borne sound in the lower part of the audible frequency range. However, for complete characterization of resilient elements that are used to attenuate low-frequency vibration or shock excursions, additional information is needed, which is not provided by this method.

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