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Standards

Irish Standard
I.S. EN ISO 15186-2:2010

Acoustics - Measurement of sound insulation in buildings and of building elements using sound intensity - Part 2: Field measurements (ISO 15186-2:2003)

I.S. EN ISO 15186-2:2010

Incorporating amendments/corrigenda/National Annexes issued since publication:

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English Version

Acoustics - Measurement of sound insulation in buildings and of building elements using sound intensity - Part 2: Field measurements (ISO 15186-2:2003)

Acoustique - Mesurage par intensité de l'isolation acoustique des immeubles et des éléments de construction - Partie 2: Mesurages in situ (ISO 15186-2:2003)

Akustik - Bestimmung der Schalldämmung in Gebäuden und von Bauteilen aus Schallintensitätsmessungen - Teil 2: Messungen am Bau (ISO 15186-2:2003)

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Foreword

The text of ISO 15186-2:2003 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 15186-2:2010 by Technical Committee CEN/TC 126 “Acoustic properties of building elements and of buildings” the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2011, and conflicting national standards shall be withdrawn at the latest by March 2011.

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The text of ISO 15186-2:2003 has been approved by CEN as a EN ISO 15186-2:2010 without any modification.

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I.S. EN ISO 15186-2:2010

INTERNATIONAL STANDARD

ISO 15186-2

First edition
2003-06-01

Acoustics — Measurement of sound insulation in buildings and of building elements using sound intensity —

Part 2: Field measurements

*Acoustique — Mesurage par intensité de l'isolation acoustique des
immeubles et des éléments de construction —*

Partie 2: Mesurages in situ



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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.

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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.

ISO 15186-2 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 2, *Building acoustics*.

ISO 15186 consists of the following parts, under the general title *Acoustics — Measurement of sound insulation in buildings and of building elements using sound intensity*:

- *Part 1: Laboratory measurements*
- *Part 2: Field measurements*
- *Part 3: Laboratory measurements at low frequencies*

Acoustics — Measurement of sound insulation in buildings and of building elements using sound intensity —

Part 2: Field measurements

1 Scope

1.1 General

This part of ISO 15186 specifies a sound intensity method to determine the *in-situ* sound insulation of walls, floors, doors, windows and small building elements. It is intended for measurements that have to be made in the presence of flanking transmission. It can be used to provide sound power data for diagnostic analysis of flanking transmission or to measure flanking sound insulation parameters.

This part of ISO 15186 can be used by laboratories that could not satisfy the requirements of ISO 15186-1, which deals with laboratory measurements with no or little flanking transmission. ISO 15186-3 deals with measurements under laboratory conditions, at low frequencies.

This part of ISO 15186 also describes the effect of flanking transmission on measurements made using the specified method, and how intensity measurements can be used

- to compare the *in-situ* sound insulation of a building element with laboratory measurements where flanking has been suppressed (i.e. ISO 140-3),
- to rank the partial contributions for building elements, and
- to measure the flanking sound reduction index for one or more transmission paths (for validation of prediction models such as those given in EN 12354-1).

This method gives values for airborne sound insulation, which are frequency dependent. They can be converted into a single number, characterizing the acoustic performance, by application of ISO 717-1.

1.2 Precision

The reproducibility of this intensity method is estimated to be equal to or better than that of the methods of ISO 140-10 and ISO 140-4, when measuring a single small and large building element, respectively.

NOTE 1 If sound reduction measures made using this method are to be compared with those made using the conventional reverberation room method in various parts of ISO 140, then it will be necessary to introduce an adaptation term that reflects the bias between the test methods. This term is given in Annex A.

NOTE 2 Some information about the accuracy for this part of ISO 15186 and its relationship to the sound reduction index measured according to ISO 140-3 and ISO 140-4 is given in Annex B.

NOTE 3 Flanking transmission is discussed in Annex C.

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