

DRAFT AMENDMENT

ISO 10140-3:2010/DAM 2

ISO/TC 43/SC 2

Secretariat: DIN

Voting begins on:
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Voting terminates on:
2014-02-05

Acoustics — Laboratory measurement of sound insulation of building elements —

Part 3: Measurement of impact sound insulation

AMENDMENT 2

Acoustique — Mesurage en laboratoire de l'isolation acoustique des éléments de construction —

Partie 3: Mesurage de l'isolation au bruit de choc

AMENDEMENT 2

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ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

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Amendment 2 to ISO 10140-3:2010 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 2, *Building acoustics*.

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Acoustics — Laboratory measurement of sound insulation of building elements — Part 3: Measurement of impact sound insulation - Amendment 2

page 9

Add the following new sub-clause as A.4.5.

A.4.5 Standardized maximum impact sound pressure level $L_{i,Fmax,V,T}$

The room-averaged maximum impact sound pressure level $L_{i,Fmax}$ that is measured in the receiving room below the floor depends on the volume of the receiving room and its reverberation time.

For comparison of laboratory measurements with results in other laboratories or in actual buildings, the result should be corrected using equation (A.3)

$$L_{i,Fmax,V,T} = L_{i,Fmax} + 10 \lg \frac{V}{V_0} - 10 \lg (Corr_T) \quad (A.3)$$

where $Corr_T$ depends on the reverberation time T_j in each case according to equation (A.4)

$$Corr_T = \frac{1 - C_0^{-1}}{1 - C^{-1}} \cdot \left(\frac{C^{(1-C)^{-1}} - C^{-(1-C)^{-1}}}{C_0^{(1-C_0)^{-1}} - C_0^{-1} \left(\frac{1 - C_0^{-1}}{1 - C^{-1}} \right)^{-1}} \right) \quad (A.4)$$

$$C_0 = \frac{T_0}{13,82 \cdot RC} \quad (A.5)$$

$$C = \frac{T}{13,82 \cdot RC} \quad (A.6)$$

Where

T is the reverberation time in the receiving room;

T_0 is the reference reverberation time; for dwellings, $T_0 = 0,5$ s;

V is the receiving room volume, in cubic metres;

V_0 is the reference receiving room volume, for dwellings, $V_0 = 50$ m³;

RC is the time constant (0,125 s) for the fast setting

To provide results in readily-comparable form, the measured impact sound pressure levels from a laboratory evaluation following the procedure of this annex should be standardized. The standardized maximum impact sound pressure level $L_{i,Fmax,V,T}$ should be calculated using equation (A.3), with room volume $V_0 = 50 \text{ m}^3$ and reverberation time $T_0 = 0,5 \text{ s}$ for the octave or one-third octave frequency bands specified in A.4.3.2.

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