NSAI Standards

Irish Standard
I.S. EN ISO 11205:2009

Acoustics - Noise emitted by machinery and equipment - Engineering method for the determination of emission sound pressure levels in situ at the work station and at other specified positions using sound intensity (ISO 11205:2003)

I.S. EN ISO 11205:2009

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I.S. EN ISO 11205:2009

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 11205

August 2009

ICS 17.140.01

Supersedes EN ISO 11205:2003

English Version

Acoustics - Noise emitted by machinery and equipment - Engineering method for the determination of emission sound pressure levels in situ at the work station and at other specified positions using sound intensity (ISO 11205:2003)

Acoustique - Bruits émis par les machines et les équipements - Méthode d'expertise pour la détermination par intensimétrie des niveaux de pression acoustique d'émission in situ au poste de travail et en d'autres positions spécifiées (ISO 11205:2003)

Akustik - Geräuschabstrahlung von Maschinen und Geräten - Verfahren der Genauigkeitsklasse 2 zur Bestimmung von Emissions-Schalldruckpegeln am Arbeitsplatz und an anderen festgelegten Orten unter Einsatzbedingungen aus Schallintensitätsmessungen (ISO 11205:2003)

This European Standard was approved by CEN on 27 July 2009.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN ISO 11205:2009: E

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Foreword

The text of ISO 11205:2003 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 11205:2009 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 February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 11205:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directives.

For relationship with EU Directives, see informative Annexes ZA and ZB, which are integral parts of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 11205:2003 has been approved by CEN as a EN ISO 11205:2009 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 98/37/EC, amended by 98/79/EC on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements of that Directive and associated EFTA regulations.

WARNING - Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Annex ZB
(informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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I.S. EN ISO 11205:2009

INTERNATIONAL STANDARD

ISO 11205

First edition
2003-11-15

Acoustics — Noise emitted by machinery and equipment — Engineering method for the determination of emission sound pressure levels *in situ* at the work station and at other specified positions using sound intensity

Acoustique — Bruits émis par les machines et les équipements — Méthode d'expertise pour la détermination par intensimétrie des niveaux de pression acoustique d'émission in situ au poste de travail et en d'autres positions spécifiées

Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 11205 was prepared by Technical Committee ISO/TC 43, *Accoustics*, Subcommittee SC 1, *Noise*.

Acoustics — Noise emitted by machinery and equipment — Engineering method for the determination of emission sound pressure levels *in situ* at the work station and at other specified positions using sound intensity

1 Scope

This International Standard specifies an engineering method (grade 2 accuracy) to determine the emission sound pressure level of machines *in situ*, at the work station or at other specified positions, using sound intensity. It is an alternative to ISO 11201, ISO 11202 and ISO 11204 for *in situ* measurements. It is applicable to all kinds of test environments provided that the requirements on background noise and field indicators are fulfilled.

This International Standard is applicable to equipment emitting stationary broadband noise. The noise can differ between operational cycles and can be with or without discrete frequency or narrow band components.

2 Normative references

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

ISO 7574-1, *Acoustics — Statistical methods for determining and verifying stated noise emission values of machinery and equipment — Part 1: General considerations and definitions*

ISO 12001, *Acoustics — Noise emitted by machinery and equipment — Rules for the drafting and presentation of a noise test code*

IEC 60942:2003, *Electroacoustics — Sound calibrators*

IEC 61043:2003, *Electroacoustics — Instruments for the measurement of sound intensity — Measurements with pairs of pressure sensing microphones*

3 Terms and definitions

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

3.1
sound intensity
$\vec{I}$
time-averaged instantaneous flow of sound energy per unit of area and per unit time in the direction of the local instantaneous acoustic particle velocity in a temporally stationary sound field

$$\vec{I} = \lim_{T\to\infty} \frac{1}{T}\int_0^T p(t)\vec{u}(t)\,\mathrm{d}t$$