
**Acoustics — Determination of sound
power levels of multisource industrial
plants for evaluation of sound
pressure levels in the environment —
Engineering method**

AMENDMENT 1

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*Acoustique — Détermination des niveaux de puissance acoustique
d'installations industrielles multisources pour l'évaluation des
niveaux de pression acoustique dans l'environnement — Méthode
d'expertise*

ISO 8297:1994/Amd 1:2021

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This document was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

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0.1, third paragraph

Replace "ISO 2204" with "ISO 12001".

Clause 2, Normative references

Replace "ISO 266:1975, *Preferred frequencies for measurements*." with:

"ISO 266, *Acoustics – Preferred frequencies*"

Replace "ISO 1996-1:1982, *Acoustics – Description and measurement of environmental noise – Part 1: Basic quantities and procedures*." with:

"ISO 1996-1, *Acoustics – Description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures*"

Replace "ISO 2204:1979, *Acoustics – Guide to International Standards on the measurement of airborne acoustical noise and evaluation of its effects on human beings*." with:

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

Delete "ISO 3744:1994, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane*."

Insert "ISO 9613-1:1993, *Acoustics – Attenuation of sound during propagation outdoors – Part 1: Calculation of the absorption of sound by the atmosphere*"

Replace "IEC 225:1966, *Octave, half-octave and third-octave band filters intended for the analysis of sound and vibrations*." with:

"IEC 61260-1, *Electroacoustics – Octave-band and fractional-octave-band filters – Part 1: Specifications*"

Replace "IEC 651:1979, *Sound level meters*." and "IEC 804:1985, *Integrating-averaging sound level meters*." with:

"IEC 61672-1, *Electroacoustics – Sound level meters – Part 1: Specifications*"

Replace "IEC 942:1988, *Sound calibrators*." with:

"IEC 60942, *Electroacoustics – Sound calibrators*"

7.1, second paragraph

Replace the paragraph with the following:

"The instruments for measuring sound pressure levels, including microphone(s) as well as cable(s), windscreen(s), recording devices and other accessories, if used, shall meet the requirements for a class 1 instrument according to IEC 61672-1. Filters shall meet the requirements for a class 1 instrument according to IEC 61260-1.

When computer-based solutions are used for a particular application the instruments for measuring sound pressure levels, including microphone(s) as well as cable(s), windscreen(s), recording devices and other accessories, if used, shall meet the relevant requirements for the measurement parameters utilized in this document for a class 1 instrument according to IEC 61672-1 for free field or random incidence application, as appropriate over the range of meteorological conditions specified in the method. Filters shall meet the requirements for a class 1 instrument according to IEC 61260-1."

7.2

In the first sentence, replace "IEC 225" with "IEC 61260-1".

7.3

In the first sentence replace "IEC 942 class 1" by "ISO 60942, class 1,".

9.4

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Replace "IEC 651" with "IEC 61672-1". (standards.iteh.ai)

10.4

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Replace the first three lines with the following:

"Calculate an area term, ΔL_s , in decibels, using the following formula, see References [1], [2] and [3]:"

10.7

In the second sentence, replace "ISO 3891" with "ISO 9613-1:1993".

Replace Table 3 with the following:

Table 3 — Decrease in sound pressure level during free propagation due to absorption in the air

Octave-band centre frequencies Hz	α dB/m
31	0
63	0
125	0
250	0,001
500	0,002
1 000	0,004
2 000	0,009
4 000	0,026
8 000	0,094

In the last sentence, replace “the appropriate values of air absorption” with “the values of air absorption given in ISO 9613-1:1993”.

Annex A, Bibliography

Delete “[1] ISO 3891:1978, *Acoustics – Procedure for describing aircraft noise heard on the ground.*”

Renumber Reference [2] as Reference [1].

Add the following new References:

[2] STÜBER B., FRITZ K.R. *Ermittlung der Schallemission großflächiger Industrieanlagen (Rundum-Messverfahren)*. Forschungsbericht 10502607, Müller-BBM, Planegg, Germany, for Umweltbundesamt, Berlin, Germany, 1986

[3] FABRIS C. *Approximation of a measurement surface for the determination of the sound power level of a large-scale industrial plant*. In: Proceedings of Inter-Noise 2018, Chicago, Illinois, 2018

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