



BSI Standards Publication

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

National foreword

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

*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*



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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
1.1 General	1
1.2 Type and size of noise source	1
1.3 Types of noise	1
1.4 Measurement uncertainty	1
2 Normative references	2
3 Definitions	2
4 Symbols	4
5 Principle of measurement procedure	5
6 Acoustic environment	5
7 Instrumentation	6
7.1 General	6
7.2 Octave-band analyser	6
7.3 Calibration	6
8 Operating conditions of the plant	6
9 Procedure	7
9.1 Measurement contour	7
9.1.1 Requirements for the measurement contour	7
9.1.2 Determining the measurement contour	7
9.2 Plant dimensions to be determined	7
9.3 Microphone height	8
9.4 Microphone direction	8
9.5 Measurements of sound pressure level	8
9.5.1 General	8
9.5.2 Measurements using a sound level meter	8
9.5.3 Measurements using integrating systems	9
9.5.4 Correction for background noise	9
10 Calculation of sound power levels for evaluating levels in the environment	9
10.1 Step 1	9
10.2 Step 2	9
10.3 Step 3	10
10.4 Step 4	10
10.5 Step 5	10
10.6 Step 6	10
10.7 Step 7	10
10.8 Step 8	11
10.9 Step 9	11
11 Noise sources significantly elevated above the characteristic height of the plant	11
12 Information to be reported	11
Annex A (informative) Bibliography	13

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.

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.

International Standard ISO 8297 was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*.

[Annex A](#) of this International Standard is for information only.

Introduction

0.1 This International Standard specifies an engineering method for determining the sound power level of multisource industrial plants which is relevant to the assessment of the noise they contribute to points in the environment around the plant. It is based on measuring the sound pressure level on a closed path (measurement contour) surrounding the plant and determining an appropriate measurement surface.

The method is intended to be applied to large industrial plants having multiple noise sources under any specified operating conditions and to other large sources provided that they can be assumed to radiate substantially uniformly in all horizontal directions.

The method described in this International Standard complies with the general recommendations given in [\[A1\] ISO 12001 \[A1\]](#).

0.2 Data obtained using this International Standard are suitable for the following purposes.

- a) To calculate the sound pressure level at given points around a plant under specified weather conditions provided that the distance of such points from the geometrical centre of the plant area is at least 1,5 times the greatest dimension of the plant area (see [figure 1](#)). All individual sources within the plant area are thereby treated as a single point source at the geometrical centre of the plant.
- b) To identify industrial areas or particular parts of such areas in terms of their contribution to the sound pressure levels at given points in the environment.
- c) To compare different sources (complete plants or component installations) in terms of their sound power level.
- d) To monitor the noise emission of a plant.