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AKUSTIKA
Keskkonnamüra kirjeldamine, mõõtmine ja hindamine
Osa 2: Helirõhu taseme määramine

Acoustics
Description, measurement and assessment of
environmental noise
Part 2: Determination of sound pressure levels
(ISO 1996-2:2017, identical)

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-ISO 1996-2:2017 „Akustika. Keskkonnamüra kirjeldamine, mõõtmine ja hindamine. Osa 2: Helirõhu taseme määramine“ sisaldb rahvusvahelise standardi ISO 1996-2:2017 „Acoustics. Description, measurement and assessment of environmental noise. Part 2: Determination of sound pressure levels“ identset ingliskeelset teksti.

Ettepaneku rahvusvahelise standardi ümbertrüki meetodil ülevõtuks on esitanud EVS/TK 61, standardi avaldamist on korraldanud Eesti Standardikeskus.

Standard EVS-ISO 1996-2:2017 on jõustunud sellekohase teate avaldamisega EVS Teataja 2017. aasta novembrikuu numbris.

Standard on kätesaadav Eesti Standardikeskusest.

Sellesse standardisse on parandus EVS-ISO 1996-2:2017/AC:2018 sisse viitud ja tehtud parandused tähistatud sümbolitega **[AC]** ja **AC**.

This Estonian Standard EVS-ISO 1996-2:2017 consists of the identical English text of the International Standard ISO 1996-2:2017 „Acoustics. Description, measurement and assessment of environmental noise. Part 2: Determination of sound pressure levels“.

Proposal to adopt the International Standard by reprint method has been presented by EVS/TK 61, the Estonian Standard has been published by the Estonian Centre for Standardisation

Standard EVS-ISO 1996-2:2017 has been endorsed with a notification published in the November 2017 issue of the official bulletin of the Estonian Centre for Standardisation.

The standard is available from the Estonian Centre for Standardisation.

The Corrigendum EVS-ISO 1996-2:2017/AC:2018 has been incorporated into this version of the standard and the corrections made are indicated by symbols **[AC]** and **AC**.

Käsitlusala

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Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Measurement uncertainty	3
5 Instrumentation for acoustical measurements	5
5.1 General	5
5.2 Calibration	6
5.3 Verification	6
5.4 Long-term monitoring	6
6 Principles	6
6.1 General	6
6.2 Independent measurements	7
7 Operation of the source	8
7.1 General	8
7.2 Road traffic	8
7.2.1 L_{eq} measurement	8
7.2.2 L_{max} measurement	9
7.3 Rail traffic	9
7.3.1 L_{eq} measurement	9
7.3.2 L_{max} measurement	9
7.4 Air traffic	10
7.4.1 L_{eq} measurement	10
7.4.2 L_{max} measurement	11
7.5 Industrial plants	11
7.5.1 L_{eq} measurement	11
7.5.2 L_{max} measurement	11
8 Meteorological conditions	12
8.1 General	12
8.2 Favourable propagation	13
8.3 Effects of precipitation on measurements	13
9 Measurement procedures	13
9.1 Selection of measurement time interval	13
9.1.1 Long-term measurements	13
9.1.2 Short-term measurements	14
9.2 Microphone location	14
9.2.1 Outdoors	14
9.2.2 Indoors	15
9.3 Measurements	15
9.3.1 Long-term unattended measurements	15
9.3.2 Short-term attended measurements	16
9.3.3 Residual sound	17
9.3.4 Frequency range of measurements	17
9.3.5 Measurements of meteorological parameters	17
10 Evaluation of the measurement results	18
10.1 General	18
10.2 Determination of $L_{E,T}$, $L_{eq,T}$ and $L_{N,T}$	18
10.2.1 $L_{E,T}$ and $L_{eq,T}$	18
10.2.2 $L_{N,T}$	18

10.3	Treatment of incomplete or corrupted data.....	19
10.3.1	General.....	19
10.3.2	Wind sound	19
10.4	Level correction for residual sound.....	19
10.5	Determination of standard uncertainty.....	19
10.6	Determination of L_{den}	20
10.6.1	Determination from long-term L_{eq} measurements	20
10.6.2	Determination from long-term L_E measurements of individual events.....	20
10.6.3	Determination from short-term measurements	21
10.7	Maximum level, L_{max}	22
11	Extrapolation to other locations.....	22
11.1	General.....	22
11.2	Extrapolation by means of calculations.....	22
11.3	Extrapolation by means of measured attenuation functions.....	23
12	Calculation.....	23
12.1	General.....	23
12.2	Calculation methods.....	24
12.2.1	General.....	24
12.2.2	Specific procedures	24
13	Information to be recorded and reported	24
Annex A (informative) Determination of radius of curvature.....		26
Annex B (informative) Microphone locations relative to reflecting surfaces		29
Annex C (informative) Selection of measurement/monitoring site.....		34
Annex D (informative) Correction to reference condition		36
Annex E (informative) Elimination of unwanted sound		41
Annex F (informative) Measurement uncertainty		42
Annex G (informative) Examples of uncertainty calculations		44
Annex H (informative) Maximum sound pressure levels		49
Annex I (informative) Measurement of residual sound		52
Annex J (informative) Objective method for assessing the audibility of tones in noise — Engineering method		54
Annex K (informative) Objective method for assessing the audibility of tones in noise — Survey method		56
Annex L (informative) National and European source specific calculation models		57
Bibliography		60

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

This third edition cancels and replaces the second edition (ISO 1996-2:2007), which has been technically revised.

A list of all the parts in the ISO 1996 series can be found on the ISO website.

Introduction

Measurements of environmental noise are complicated because there is a great number of variables to consider when planning and performing the measurements. As each measurement occasion is subject to current source and meteorological conditions which cannot be controlled by the operator, it is often not possible to control the resulting uncertainty of the measurements. Instead, the uncertainty is determined after the measurements based on an analysis of the acoustic measurements and collected data on source operating conditions and on meteorological parameters important for the sound propagation.

Because this document has the ambition both to comply with new and stricter requirements on measurement uncertainty calculations and to cover all kinds of sources and meteorological conditions, it has become more complicated than what a standard covering a single, specific source and application could have been. The best use of the standard is to use it as a basis for developing more dedicated standards serving specific sources and aims.

Acoustics — Description, measurement and assessment of environmental noise —

Part 2: Determination of sound pressure levels

1 Scope

This document describes how sound pressure levels intended as a basis for assessing environmental noise limits or comparison of scenarios in spatial studies can be determined. Determination can be done by direct measurement and by extrapolation of measurement results by means of calculation. This document is primarily intended to be used outdoors but some guidance is given for indoor measurements as well. It is flexible and to a large extent, the user determines the measurement effort and, accordingly, the measurement uncertainty, which is determined and reported in each case. Thus, no limits for allowable maximum uncertainty are set up. Often, the measurement results are combined with calculations to correct for reference operating or propagation conditions different from those during the actual measurement. This document can be applied on all kinds of environmental noise sources, such as road and rail traffic noise, aircraft noise and industrial noise.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1996-1:2016, *Acoustics — Description, measurement and assessment of environmental noise — Part 1: Basic quantities and assessment procedures*

ISO 20906:2009/Amd 1:2013, *Acoustics — Unattended monitoring of aircraft sound in the vicinity of airports — Amendment 1*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO/IEC Guide 98-3, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

IEC 60942, *Electroacoustics — Sound calibrators*

IEC 61260, *Electroacoustics — Octave-band and fractional-octave-band filters*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1996-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>