

Laboratory measurement of noise from waste water installations

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Laboratory measurement of noise from waste water installations

Mesurage en laboratoire du bruit émis par les installations d'évacuation des eaux usées

Messung der Geräusche von Abwasserinstallationen im Prüfstand

This European Standard was approved by CEN on 23 September 2004 and includes Amendment 1 approved by CEN on 28 July 2019.

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Contents	Page
European foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Notations	7
5 Principle of the test method	8
5.1 Structure-borne sound measurements (index s)	8
5.2 Airborne sound measurement (index a)	8
6 Equipment	8
6.1 Requirements for the frequency range of measurement	8
6.2 Requirements for the acoustic equipment	8
6.3 Requirements for the hydraulic equipment.....	8
6.4 Requirements for the wall structural sensitivity measuring equipment.....	8
7 Test facilities	9
7.1 Construction requirements.....	9
7.2 Acoustic requirements.....	9
8 Test specimen	9
8.1 Geometry.....	9
8.2 Mounting of the specimen.....	11
9 Test procedure and evaluation	12
9.1 Wall structural sensitivity measurement.....	12
9.2 Flow rate.....	13
9.3 Measurements.....	13
9.4 Correction for background noise	13
9.5 Normalisation.....	14
9.6 Calculation of structure-borne sound level L_{sn} and normalisation with respect to the acoustic properties of the wall	14
9.7 Calculation of the airborne level L_{an}	15
10 Calculation of single number quantities	15
10.1 Single number descriptor for structure-borne sound.....	15
10.2 Single number descriptor for airborne sound.....	15
11 Precision	15
11.1 Repeatability.....	15
11.2 Reproducibility	15
12 Expression of results	15
13 Test report	16
Annex A (normative) Wall structural sensitivity measurement	17
Annex B (informative) Background ; application of reciprocity for calibrating the test wall	18
Bibliography	20

European foreword

This document (EN 14366:2004+A1:2019) has been prepared by Technical Committee CEN/TC 126 “Acoustic properties of building elements and of buildings”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by April 2020 and conflicting national standards shall be withdrawn at the latest by April 2020.

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This document includes Amendment 1 approved by CEN on 28 July 2019.

This document supersedes EN 14366:2004.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

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Introduction

Noise from wastewater installations is generated by the flow and fall of water in the piping system. There are many different ways to install such systems in buildings, depending on national building codes. They may be firmly cemented into walls and floors, fixed by clips in walls and covered slabs, or hung exposed in the plenum above a suspended ceiling. It seems advisable, therefore, to define measuring methods for both structure-borne and airborne sound.

Important noise sources are bends after vertical sections, but also discontinuities, e.g. inlets, couplings and sleeves. Apart from that the noise impact on the inhabitants of a building strongly depends on the material properties of the pipes, on the methods used in joining and fastening them and on the local building practice.

1 Scope

This document:

- specifies methods for the measurement of airborne and structure-borne sound produced in waste water and rain water installations under laboratory conditions;
- defines the expression of the results.

It is applicable to waste water piping systems and parts thereof, but not to the actual sources of the wastewater, e.g. lavatories, toilets and bathtubs or any active units. It applies to pipes with natural ventilation and made of any common material in commonly used diameters (up to 150 mm).

A1 The test results can be used for the comparison of products and materials, but cannot be used as values obtained in buildings in situ; in situ values can be predicted using the procedure described in EN 12354-5:2009, 5.5, which transfers laboratory data to field data, assuming the in-situ installation is exactly the same as the one described in the test report. **A1**

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.

EN 61672-1, *Electroacoustics - Sound level meters - Part 1: Specifications (IEC 61672-1:2002)*

EN ISO 140-3:1995, *Acoustics – Measurement of sound insulation in buildings and of building elements – Part 3: Laboratory measurements of airborne sound insulation of building elements (ISO 140-3:1995)*

EN ISO 354, *Acoustics – Measurement of sound absorption in a reverberation room (ISO 354:2003)*

EN ISO 6926, *Acoustics – Requirements for the performance and calibration of reference sound sources used for the determination of sound power levels (ISO 6926:2000)*

ISO 5348, *Mechanical vibration and shock – Mechanical mounting of accelerometers*

ISO 16063-21, *Methods for the calibration of vibration and shock transducers – Part 21: Vibration calibration by comparison to a reference transducer*

3 Terms and definitions

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

3.1

waste water

any type of water including rainwater evacuated from buildings into the sewer system

3.2

waste water installation

the total of pipes and all fixing components, used to evacuate waste water, but excluding the actual sources of the waste water, e.g. sinks, toilets, bathtubs, gutter or any active units (pumps...)