DIN EN 14366-1:2023-09 (E)

Laboratory measurement of airborne and structure-borne sound from service equipment - Part 1: Application rules for waste water installations

Contents

Page

European foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 7

4 Symbols 8

5 Measuring method 9
5.1 Airborne sound measurements 9
5.2 Structure borne sound measurements 10
5.2.1 General 10
5.2.2 Calibration of the test facilities 10
5.2.3 Indirect procedures for testing the specimen 11
5.2.4 Specimen free velocity direct measurement 12
5.2.5 Specimen single equivalent mobility estimation 12

6 Equipment 13
6.1 Requirements for the frequency range of measurement 13
6.2 Requirements for the acoustic equipment 13
6.3 Requirements for the hydraulic equipment 13
6.4 Requirements for the vibration measuring equipment 13

7 Test facilities 14
7.1 Construction requirements 14
7.1.1 Test room 14
7.1.2 Test wall 14
7.2 Acoustic requirements 14

8 Test specimen 14
8.1 Geometry 14
8.1.1 Components 14
8.1.2 Falling height *h* 14
8.1.3 Standard configuration 14
8.1.4 Other configurations considered 16
8.2 Mounting of the specimen 16
8.2.1 General 16
8.2.2 Requirements for airborne sound measurement 16
8.2.3 Requirements for the standard configuration 16

9 Expression of the results 17
9.1 General 17
9.2 For use in comparing products and materials 17
9.2.1 General 17
9.2.2 Single number descriptor for airborne sound 18
9.2.3 Single number descriptor for structure-borne sound 18
9.3 For use in predicting equipment sound pressure levels in buildings 19
9.4 Summary 19

10 Accuracy 19

11 Test report **20**
Annex A (normative) **Cases of vertical pipes with offset and horizontal pipes** **22**
A.1 General **22**
A.2 Vertical pipes with offset **22**
A.3 Horizontal pipes **22**
Annex B (normative) **Test procedures for piping system mitigation measures** **26**
B.1 General **26**
B.2 Mitigation measure characterization **26**
B.2.1 Pipe enclosure (technical shaft) **26**
B.2.2 Pipe lining **28**
B.3 Single number descriptor for mitigation measures **29**
B.4 Test results for mitigation measures **29**
B.4.1 Pipe enclosure **29**
B.4.2 Pipe lining **29**
Annex C (informative) **Link from EN 14366:2004+A1:2019 to EN 14366-1** **31**
Bibliography **32**