

# 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

---

<b>Contents</b>	<b>Page</b>
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

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