# DIN EN 1366-5:2021-05 (E)

## Fire resistance tests for service installations - Part 5: Service ducts and shafts

## Contents

Page


European foreword ....4

Introduction ....5

1 Scope ....6

2 Normative references ....6

3 Terms and definitions ....7

4 Test equipment ....7
4.1 General ....7
4.2 Furnace ....7
4.3 Loading equipment ....7
4.4 Gas extraction equipment (optional) ....7

5 Test conditions ....8
5.1 Furnace ....8
5.2 Loading ....8

6 Test specimen ....8
6.1 Size ....8
6.1.1 General ....8
6.1.2 Length ....8
6.1.3 Cross-section ....8
6.2 Number ....8
6.3 Design ....9
6.3.1 General ....9
6.3.2 Duct and shaft arrangement ....9

7 Installation of test specimen ....10
7.1 General ....10
7.2 Standard supporting construction ....11
7.3 Non-standard supporting constructions ....11

8 Conditioning ....11
8.1 General ....11
8.2 Water based sealing materials ....11

9 Application of instrumentation ....11
9.1 Thermocouples ....11
9.1.1 Furnace thermocouples (plate thermometers) ....11
9.1.2 Thermocouple locations ....12
9.2 Pressure ....12

10 Test procedure ....12
10.1 General ....12
10.2 Test measurements and observations ....13
10.2.1 General ....13
10.2.2 Integrity ....13
10.2.3 Insulation (temperature of the surfaces outside the furnace - for both fire exposure at the inside and exposure at the outside) ....13

10.2.4 Additional observations ..... 13
10.3 Termination of the test ..... 14

11 Performance criteria ..... 14
11.1 Integrity ..... 14
11.2 Insulation ..... 14
11.2.1 Insulation criteria for service ducts and shafts with combustible and noncombustible services ..... 14

12 Test report ..... 14

13 Field of direct application of test results ..... 15
13.1 Walls or floors through which the service ducts or shafts lead ..... 15
13.2 Sizes of ducts or shafts ..... 15
13.3 Shapes ..... 15
13.4 Admissible services ..... 15
13.5 Suspension devices for ducts ..... 15
13.5.1 Material and sizing ..... 15
13.5.2 Elongation ..... 16
13.6 Distances ..... 16
13.6.1 Distance to the supporting construction ..... 16
13.6.2 Distance of the first joint after the supporting construction ..... 16
13.6.3 Distance between service ducts or service shafts in practice ..... 16
13.6.4 Distance between service outlets and penetrated wall or floor ..... 16
13.7 Access panels ..... 16
13.8 Service outlets ..... 16

Bibliography ..... 27