DIN EN 1364-4:2014-05 (E)

Fire resistance tests for non-loadbearing elements - Part 4: Curtain walling - Part configuration

Contents

Page

Foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 7

4 Test equipment 8
4.1 General testing principles 8
4.2 Furnace configuration 9
4.3 Supporting floor 9

5 Test conditions 9

6 Test specimen 10
6.1 Size 10
6.2 Number of specimens 10
6.3 Design 10
6.3.1 General 10
6.3.2 Standard configuration 11
6.3.3 Restraint of the specimen 11
6.3.4 Surfaces 12
6.3.5 Perimeter seal 12
6.4 Construction 13
6.5 Verification 13

7 Installation of the test specimen 13
7.1 General 13
7.2 Supporting floor 13
7.2.1 Standard supporting floor 13
7.2.2 Non-standard supporting floor 13
7.3 Furnace closure 14
7.4 Fixing of the framing system 14

8 Conditioning 14

9 Application of instrumentation 14
9.1 Thermocouples 14
9.1.1 Furnace thermocouples (plate thermometers) 14
9.1.2 Unexposed face thermocouples 14
9.2 Pressure 17
9.3 Radiation 17

10 Test procedure 17

11 Performance criteria 17

12 Test report 18

13 Field of direct application of test results 19
13.1 Rules for curtain walling type A 19
13.1.1 General rules 19
13.1.2 Rules for the complete construction 19
13.1.3 Framing system 21
13.1.4 Spandrel panels 24
13.2 Rules for curtain walling type B 28
13.3 Perimeter seal 28
13.3.1 General 28
13.3.2 Material 28
13.3.3 Width/depth 29
13.3.4 Fixing of the perimeter seal 29
13.3.5 Covering 29
13.4 Supporting floor 29

Annex A (informative) Guidance on testing curtain walling - part configuration 44

A.1 Standard configuration 44
A.1.1 General 44
A.1.2 Supporting floor 44
A.1.3 Parts of a curtain walling 44
A.1.4 Specimen selection 45
A.2 Test principles and requirements 45
A.3 Fire from the inside 47
A.3.1 General 47
A.3.2 Curtain walling type A 47
A.3.3 Curtain walling type B 47
A.3.4 Perimeter seal 48
A.3.5 Fixing of the framing system 48
A.4 Fire from the outside 48

Annex B (normative) Standard configurations 51

Annex C (normative) Radiation calculation 56

Annex D (normative) Field of direct application of test results for unitised construction 59

D.1 Rules for curtain walling type A 59
D.1.1 General 59
D.1.2 Exposure conditions 59
D.1.3 Rules for the complete construction 59
D.1.4 Spandrel panels 59
D.2 Rules for curtain walling type B 59

Bibliography 60