DIN 18500-1:2022-10 (E)

Cast stone - Part 1: Terminology, requirements, testing

Contents

Page

Foreword ... 4

Introduction ... 5

1 Scope ... 6

2 Normative references ... 6

3 Terms and definitions ... 8
3.1 General terms and definitions ... 8
3.2 Stone processing types and surface design types ... 9
3.3 Methods of manufacturing cast stone ... 12

4 Requirements ... 13
4.1 General ... 13
4.2 Suitability ... 14
4.3 Aggregates ... 14
4.4 Concrete admixtures and additives ... 14
4.5 Requirement at the time of delivery ... 15
4.6 Cast stone with structurally required reinforcement ... 15
4.7 Facing concrete, backing concrete ... 15
4.8 Fire behaviour ... 15
4.9 Stone processing types and design types ... 15
4.10 Appearance and dimensions ... 15
4.10.1 General ... 15
4.10.2 Multi-layer design ... 15
4.10.3 Assessment (appearance) of surfaces ... 15
4.10.4 Dimensional tolerances ... 16
4.10.5 Facing thickness ... 16
4.10.6 Concrete cover of reinforcement ... 17
4.11 Weathering resistance ... 17
4.12 Wear due to abrasive stress (abrasive wear) ... 17
4.13 Mechanical strengths ... 17
4.13.1 Design of loadbearing components ... 17
4.13.2 Flexural strength requirements ... 18
4.13.3 Compressive strength requirements ... 18
4.13.4 Breaking load requirements ... 18
4.14 Slip resistance ... 18

5 Test methods ... 19
5.1 Surface appearance ... 19
5.2 Dimensions ... 19
5.3 Flatness ... 19
5.4 Strength ... 19
5.4.1 Compressive strength ... 19
5.4.2 Flexural strength ... 19
5.5 Weathering resistance ... 19
5.6 Abrasive wear ... 20
5.7 Slip resistance ... 20
5.8 Test report ... 20

Annex A (informative) Examples of products for the scope ... 21

Bibliography ... 23

Tables

Table 1 — Dimensional tolerances and flatness tolerances 16

Table 2 — Weathering resistance requirements 17

Table 3 — Maximum single value of abrasive wear 17

Table 4 — Breaking load classes 18