DIN EN 16668:2025-05 (E)

Industrial valves - Requirements and testing for metallic valves as pressure accessories

Contents

Page

European foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 8

4 Category of valves 9

5 Requirements 9
5.1 Design 9
5.1.1 General 9
5.1.2 Shell design strength 10
5.1.3 Protection against exceeding the allowable limits 10
5.2 Materials 10
5.2.1 General requirements 10
5.2.2 European harmonized material standards 10
5.2.3 European approval of materials (EAM) 10
5.2.4 Particular Material Appraisal (PMA) 11
5.2.5 Requirements for prevention of brittle fracture at low temperatures 11
5.2.6 Selection of bolting material 11
5.2.7 Material selection for parts other than shell 11
5.3 Manufacturing 12
5.3.1 Welding 12
5.3.2 Heat treatment 14
5.3.3 Traceability 14
5.3.4 Qualification of non-destructive testing personnel 14
5.4 Non-destructive testing (NDT) 14
5.4.1 Non-destructive testing of steel castings 14
5.4.2 Non-destructive testing of joint welding 14
5.5 Final assessment 14
5.6 Marking 15
5.7 Surface and coating testing 15
5.8 Documentation 15
5.8.1 Documentation for final inspection 15
5.8.2 Accompanying documents 16

Annex A (normative) Classification of valves 17

Annex B (informative) European harmonized standards for materials and components for shell parts 22

Annex C (informative) European Approval of Materials (EAM) 24

Annex D (informative) European harmonized standards for valves 25

Annex E (informative) Non-destructive testing of steel castings 27

E.1 Terms and definitions 27
E.2 Non-destructive testing of steel castings 27

Annex F (normative) Non-destructive testing (NDT) of joint welding 35

F.1 General 35
F.2 Non-destructive testing (NDT) extent 35
F.3 Selection of NDT-methods 41

Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2014/68/EU (Pressure Equipment Directive) aimed to be covered 42

Bibliography 44