ISO 17804:2020 (E)

Founding — Ausferritic spheroidal graphite cast irons — Classification

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Designation

5 Order information

6 Manufacture

7 Requirements

- 7.1 General
- 7.2 Test pieces machined from cast samples
- 7.2.1 General
- 7.2.2 Impact test
- 7.3 Test pieces machined from samples cut from a casting
- 7.4 Hardness
- 7.5 Graphite structure
- 7.6 Matrix structure

8 Sampling

- 8.1 General
- 8.2 Cast samples
- 8.2.1 Size of cast samples
- 8.2.2 Frequency and number of tests
- 8.2.3 Separately cast samples
- 8.2.4 Side-by-side cast samples
- 8.2.5 Cast-on samples
- 8.2.6 Test pieces machined from cast samples
- 8.3 Samples cut from a casting
- 8.4 Formation of test units and number of tests
- 8.4.1 General
- 8.4.2 Examples of test units
- 8.4.3 Number of tests per test unit

9 Test methods

- 9.1 Tensile test
- 9.2 Impact test
- 9.3 Hardness test
- 9.4 Graphite structure examination

10 Retests

- 10.1 Need for retesting
- 10.2 Test validity
- 10.3 Nonconforming test results
- 10.4 Heat treatment of samples and castings

11 Additional information

Annex A (normative) Abrasion-resistant grades of ausferritic spheroidal graphite cast iron

- **A.1 General**
- **A.2 Requirements**
- **A.3 Sampling**
- **A.4 Hardness test**
- **A.5 Retests**

Annex B (normative) Minimum elongation values for a test piece with original gauge length Lo = 4 × d

Annex C (informative) Guidance values for Brinell hardness

Annex D (informative) Procedure for the determination of the hardness range

- **D.1 General**
- **D.2 Procedure**

Annex E (informative) Guidance values for tensile strength and elongation after fracture for test pieces machined from samples cut from a casting[4]

Annex F (informative) Unnotched impact test

- **F.1 Purpose**
- **F.2 Requirements**
- **F.3 Sampling**
- **F.4 Test method**
- **F.5 Retests**

Annex G (informative) Additional information on mechanical and physical properties

Annex H (informative) Nodularity

Annex I (informative) Sectioning procedure for cast samples

Annex J (informative) Cross-references of similar grades of ausferritic spheroidal graphite cast iron

Page count: 34