ISO 945-1:2008-11 (E)

Microstructure of cast irons - Part 1: Graphite classification by visual analysis

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 General 1
2.1 Designation system for classifying graphite in cast irons 1
2.2 Visual classification of graphite 9

3 Sampling and preparation of samples 10
3.1 Samples taken from a casting 10
3.2 Sample preparation 10

4 Procedure for graphite classification 10
4.1 Procedure for visual classification of graphite 10
4.2 Evaluation of the analysis results 10

5 Reference images 11
5.1 General 11
5.2 Reference images for graphite form 11
5.3 Reference images for the distribution of graphite (form I) 11
5.4 Reference images for graphite size 11

6 Designation of graphite by form, distribution and size 11
6.1 Designation system 11
6.2 Designation of intermediate graphite sizes 12
6.3 Designation of mixed graphite forms, distributions and sizes 12
6.4 Nodule count 13

7 Report 13

Annex A (informative) Typical graphite forms in cast-iron materials (Examples of photomicrographs) 15

Annex B (informative) Distribution of flake (lamellar) graphite (form I) (Examples of photomicrographs) 16

Annex C (informative) Common terminology and main occurrences concerning graphite in cast irons 17

Bibliography 19