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Microstructure of cast irons - Part 1: Graphite classification by visual analysis (ISO 945-1:2017)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/18

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN ISO 945-1

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ICS 77.080.10

Supersedes EN ISO 945-1:2008

English Version

Microstructure of cast irons - Part 1: Graphite classification by visual analysis (ISO 945-1:2017)

Microstructure des fontes - Partie 1: Classification du graphite par analyse visuelle (ISO 945-1:2017)

Mikrostruktur von Gusseisen - Teil 1: Graphitklassifizierung durch visuelle Auswertung (ISO 945-1:2017)

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European foreword

This document (EN ISO 945-1:2018) has been prepared by Technical Committee ISO/TC 25 “Cast irons and pig irons” in collaboration with Technical Committee CEN/TC 190 “Foundry technology” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2018, and conflicting national standards shall be withdrawn at the latest by August 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 945-1:2017 has been approved by CEN as EN ISO 945-1:2018 without any modification.

INTERNATIONAL STANDARD

ISO 945-1

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Microstructure of cast irons —

Part 1: Graphite classification by visual analysis

Microstructure des fontes —

Partie 1: Classification du graphite par analyse visuelle

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 25, *Cast irons and pig irons*.

This second edition cancels and replaces the first edition (ISO 945-1:2008), which has been technically revised. It also incorporates the Technical Corrigendum ISO 945-1:2008/Cor.1:2010. Figures 3, 4 and 5 have been corrected to a diameter of 120 mm to allow a direct comparison with the microscope display screen.

A list of all the parts in the ISO 945 series can be found on the ISO website.

Introduction

Microstructure designation is a useful feature that provides a means of classifying the graphite form, distribution and size in cast irons.

Graphite classification by visual analysis is a well-established method which is well recognized within the foundry industry as a means of quickly determining the overall graphite microstructure of a cast iron casting.

INTERNATIONAL STANDARD **ISO 945-1:2017(E)**

Microstructure of cast irons —

Part 1:
Graphite classification by visual analysis

1 Scope

This document specifies a method of classifying the microstructure of graphite in cast irons by comparative visual analysis.

The purpose of this document is to provide information about the method of graphite classification. It is not intended to give information on the suitability of cast-iron types and grades for any particular application.

The particular material grades are specified mainly by mechanical properties and, in the case of austenitic and abrasion resistant cast irons, by their chemical composition. The interpretation of graphite form and size does not allow a statistically valid statement on the fulfilment of the requirements specified in the relevant material standard.

2 Normative references

There are no normative references in this document.

