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Second edition  
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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*



Reference number  
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## Foreword

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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](http://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](http://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.

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## 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.