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## **Microstructure of cast irons — Part 2: Graphite classification by image analysis**

*Microstructure des fontes —*

*Partie 2: Classification du graphite par analyse d'image*



Reference number  
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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

ISO/TR 945-2 was prepared by Technical Committee ISO/TC 25, *Cast irons and pig irons*.

ISO 945 consists of the following parts, under the general title *Microstructure of cast irons*:

- *Part 1: Graphite classification by visual analysis*
- *Part 2: Graphite classification by image analysis* [Technical Report]

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## Introduction

Image analysis, as well as other testing methods, is part of the general or specific assessment of the quality of castings to be agreed between the manufacturer and purchaser at the time of acceptance of the order.

The characterisation of the graphite particle shape in cast irons is often made visually, using the reference sketches of ISO 945-1. The procedure described in ISO 945-1 has an inherent subjective character that can be overcome by using image analysis and appropriate computer software.