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Fourth edition
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Metallic materials — Vickers hardness test —

Part 1: Test method

*Matériaux métalliques — Essai de dureté Vickers —
Partie 1: Méthode d'essai*



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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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This document was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*.

This fourth edition cancels and replaces the third edition (ISO 6507-1:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

- requirements for testing hardmetals and other cemented carbides have been added;
- all references of indentation diagonals, <0,020 mm, have been removed;
- resolution requirements for the measuring system have been defined;
- the lower test force limit of the Vickers microhardness test has been expanded to 0,009 807 N;
- requirements for the periodic (weekly or daily) verifications of the testing machine are normative, and the maximum permissible bias value has been revised. Requirements for the maximum permissible error in measuring a reference indentation have been revised;
- recommendations for inspection and monitoring of the indenter have been added;
- requirements have been added for the approach velocity of the indenter prior to contact with the sample surface;
- the timing requirements for the test force application and the duration at maximum test force have been revised to indicate target time values;
- [Figure 2](#), which illustrates the requirements for the minimum distance between indentations, has been added, but the requirements have not changed;
- requirements have been added to the test report for reporting the test date and any hardness conversion method used;

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- [Annex D](#) has been revised;
- [Annexes E, F](#) and [G](#) have been added concerning Vickers hardness measurement traceability, the CCM — Working group on hardness and adjustment of Köhler illumination systems.

A list of all parts in the ISO 6507 series can be found on the ISO website.