



**International
Standard**

ISO 18203

**Steel — Determination of the
thickness of surface-hardened
layers**

*Acier — Détermination de l'épaisseur des couches durcies
superficielles*

**Second edition
2026-01**

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 18203:2026

<https://standards.iteh.ai/catalog/standards/iso/c0923d0c-6a18-413e-a99e-012e9dd7beaa/iso-18203-2026>

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 18203:2026

<https://standards.iteh.ai/catalog/standards/iso/c0923d0c-6a18-413e-a99e-012e9dd7beaa/iso-18203-2026>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2026

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols, abbreviated terms and designations	3
5 Principle	4
6 Apparatus	4
7 Test specimen	4
7.1 General	4
7.2 Measurement capability	4
7.3 Preparation of the surface to be examined	5
8 Method of measurement	6
8.1 CHD, SHD and NHD by hardness measurement	6
8.2 THD by hardness measurement	7
8.3 THD by microscopic measurement	7
9 Evaluation of the results	8
9.1 Case hardening depth (CHD), surface hardening depth (SHD) and nitriding hardness depth (NHD)	8
9.2 Total thickness of surface hardening depth (THD)	9
10 Test report	9
Annex A (normative) Interpolation method for determining the case hardening depth (CHD) – surface hardening depth (SHD) – nitriding hardness depth (NHD)	11
Bibliography	13

ISO 18203:2026

<https://standards.iteh.ai/catalog/standards/iso/c0923d0c-6a18-413e-a99e-012e9dd7beaa/iso-18203-2026>

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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 7, *Methods of testing (other than mechanical tests and chemical analysis)*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 459/SC 1, *Test methods for steel (other than chemical analysis)*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 18203:2016), which has been technically revised. standards.iteh.ai/catalog/standards/iso/c0923d0c-6a18-413e-a99e-012e9dd7beaa/iso-18203-2026

The main changes are as follows:

- removal of the reference to shot peening;
- removal of the compound layer thickness (CLT);
- introduction of standard test loads for the determination of hardness depths, and the procedure for measurements in the event of arbitration;
- extension of [Table 1](#) by Rockwell test methods;
- extension of [Table 2](#) by further abbreviations;
- precise definition of how the core hardness shall be tested;
- determination of the edge distance of the first hardness impression from the edge;
- explanation of how to determine the total thickness of surface hardening depth THD.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.