First edition 2016-12-01

Steel — Determination of the thickness of surface-hardened layers

Acier — Détermination de l'épaisseur des couches durcies superficielles



Reference number ISO 18203:2016(E)

ISO 18203:2016(E)

This is a preview of "ISO 18203:2016". Click here to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

All rights reserved. Unless otherwise specified, 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 Ch. de Blandonnet 8 • CP 401 CH-1214 Vernier, Geneva, Switzerland Tel. +41 22 749 01 11 Fax +41 22 749 09 47 copyright@iso.org www.iso.org

Contents			Page
Fore	word		iv
Intro	ductio	n	v
1	Scop	e	1
2	_	native reference	
3		ns and definitions	
4	Symbols, abbreviations and designations		
-			
5		ciple	
6		aratus	
7	Test specimen		4
	7.1 7.2	Selection and preparation of samplesPreparation of the surface to be examined	4 5
8		nod of measurement	
O	8.1	Hardness testing method	
	8.2	Microscopic methods	
		8.2.1 Total thickness of surface hardening depth (THD)	
		8.2.2 Compound layer thickness (CLT)	6
9	Evaluation of the results		7
	9.1	Case hardening depth (CHD), surface hardening depth (SHD) and nitriding	
	9.2	hardness depth (NHD)	
	9.3	Compound layer thickness (CLT)	
10	Test	report	
_		ormative) Interpolation method for determining the case hardening depth	
	-		
Annex B (informative) Examples of CLT measurements			
Bibli	ograpl	ıy	12

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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

For an explanation on 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.

The committee responsible for this document is ISO/TC 17, *Steel*, Subcommittee SC 7, *Methods of testing (other than mechanical tests and chemical analysis)*.

This first edition of ISO 18203 cancels and replaces ISO 2639:2002, ISO 3754:1976 and ISO 4970:1979, which have been technically revised.

Introduction

In the past, there are three ISO standards for measuring surface-hardened layer. Because those standards employed almost the same principle of measuring, it is intended to make it easy for maintenance of the standards and application of test by integrating these three standards.

The method of estimating uncertainty of measurement is not included in this document. In future revision, uncertainty of measurement may be reflected based on real applications to this test.