

This is a preview of "ISO 7438:2020". [Click here to purchase the full version from the ANSI store.](#)

Fourth edition
2020-10

Metallic materials — Bend test

Matériaux métalliques — Essai de pliage



Reference number
ISO 7438:2020(E)

© ISO 2020

This is a preview of "ISO 7438:2020". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

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

This is a preview of "ISO 7438:2020". [Click here to purchase the full version from the ANSI store.](#)

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols, designations and units	1
5 Principle	2
6 Test equipment	2
6.1 General.....	2
6.2 Bending device with supports and a former.....	4
6.3 Bending device with a V-block.....	4
6.4 Bending device with a clamp.....	4
7 Test piece	4
7.1 General.....	4
7.2 Edges of rectangular test pieces.....	4
7.3 Width of the test piece.....	5
7.4 Thickness of the test piece.....	5
7.5 Test pieces from forgings, castings and semi-finished products.....	5
7.6 Agreement for test pieces of greater thickness and width.....	5
7.7 Length of the test piece.....	5
8 Procedure	6
9 Interpretation of results	7
10 Test report	7
Annex A (informative) Determination of the bend angle from the measurement of the displacement of the former	8
Annex B (normative) Bend test at plane strain conditions	9
Bibliography	13

This is a preview of "ISO 7438:2020". [Click here to purchase the full version from the ANSI store.](#)

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 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 164, *Mechanical testing of metals*, Subcommittee SC 2, *Ductility testing*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 459, *ECISS – European Committee for Iron and Steel Standardization*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 7438:2016), which has been technically revised.

The main change compared to the previous edition is the addition of new [Annex B](#), describing bending test at plane strain condition.

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.