BS ISO 6932:2014

BSI Standards Publication

Cold-reduced carbon steel strip with a maximum carbon content of 0,25 %

bsi.

...making excellence a habit.™

Document Sharing Hub

National foreword

This British Standard is the UK implementation of ISO 6932:2014.

The UK participation in its preparation was entrusted to Technical Committee ISE/109, Coated and Uncoated Flat Products to be Used for Cold Forming.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014.
Published by BSI Standards Limited 2014

ISBN 978 0 580 82440 1

ICS 77.140.50

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2014.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS ISO 6932:2014

INTERNATIONAL STANDARD

ISO 6932

Fourth edition
2014-03-15

Cold-reduced carbon steel strip with a maximum carbon content of 0,25 %

Feuillards en acier au carbone laminés à froid avec une teneur maximale en carbone égale à 0,25 %

Reference number
ISO 6932:2014(E)

Documents
Document Sharing Hub
© ISO 2014

Full document details: BS ISO 6932:2014

COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

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
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

© ISO 2014 – All rights reserved

Documents
Document Sharing Hub

Full document details: BS ISO 6932:2014

Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Dimensions ... **2**

5 Chemical composition ... **2**
5.1 General ... 2
5.2 Heat analysis ... 2
5.3 Product analysis ... 2

6 Conditions of manufacture ... **4**
6.1 Physical properties ... 4
6.2 Steelmaking ... 4
6.3 Weldability ... 7
6.4 Application ... 7
6.5 Mechanical properties ... 7
6.6 Oiling ... 7
6.7 Edges ... 7
6.8 Surface finish ... 8

7 Dimensional and shape tolerances ... **8**

8 Sampling — Hardness or tensile test ... **11**

9 Mechanical property tests ... **11**
9.1 Hardness test ... 11
9.2 Tensile test ... 11

10 Retests ... **12**
10.1 Machining and flaws ... 12
10.2 Additional tests ... 12

11 Resubmission ... **12**

12 Workmanship ... **12**

13 Inspection and acceptance ... **12**

14 Coil size ... **12**

15 Marking ... **12**

16 Information to be supplied by the purchaser ... **13**

Bibliography ... **14**

© ISO 2014 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS ISO 6932:2014

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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 17, *Steel*, Subcommittee SC 12, *Continuous mill flat rolled products*.

This fourth edition cancels and replaces the third edition (ISO 6932:2008), which has been technically revised.

© ISO 2014 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS ISO 6932:2014

Cold-reduced carbon steel strip with a maximum carbon content of 0,25 %

1 Scope

This International Standard describes cold-reduced carbon steel strip with a maximum mass fraction of carbon of 0,25 %, furnished to two levels of closer tolerances than cold-reduced carbon steel sheet, with specific quality, specific hardness requirements or mechanical properties, specific edge, and specific finish.

NOTE This International Standard does not apply to the product in narrow widths known as cold-reduced carbon steel sheet slit from wider widths (see ISO 3574), nor does it include cold-reduced carbon steel strip with a mass fraction of carbon over 0,25 % (see ISO 4960).

Cold-reduced carbon steel strip is produced with a maximum mass fraction of the specified carbon not exceeding:

— 0,15 % for material specified to mechanical properties;

— 0,25 % for material specified to temper (hardness) requirements.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
cold-reduced carbon steel strip
product manufactured from hot-rolled, descaled coils by cold reducing to the desired thickness on a single-stand mill or on a tandem mill consisting of several single stands in series

3.2
cold reduction
process of reducing the thickness of the strip at room temperature whereby the amount of reduction is greater than that used for a *skin pass* (3.8)

3.3
aluminium killed
steel which has been deoxidized with aluminium sufficient to prevent the evolution of gas during solidification

© ISO 2014 – All rights reserved

Documents
Document Sharing Hub

Full document details: BS ISO 6932:2014

3.4
annealing
process of heating to, and holding at, a suitable temperature and then cooling at a suitable rate for such purposes as lowering hardness, facilitating cold working, producing a desired microstructure or obtaining desired mechanical, physical, or other properties

3.5
temper
designation by number or term to indicate the hardness as a minimum, as a maximum, or as a range

Note 1 to entry: The tempers are obtained by the selection and control of chemical composition by amounts of *cold reduction* (3.2), by thermal treatment, and by a skin pass.

3.6
dead soft
condition describing annealed strip produced without definite control of stretcher strains or fluting

Note 1 to entry: It is suitable for drawing and other applications where such surface characteristics are not objectionable.

3.7
surface finish
degree of smoothness or lustre of the strip

3.8
skin pass
light cold rolling of the product resulting in an increase in hardness and some loss in ductility

Note 1 to entry: The purpose of skin passing is to minimize the appearance of coil breaks, stretcher strains and fluting, or to control the shape, or to obtain the required *surface finish* (3.7).

3.9
lot
sample portion consisting of 50 t or less of strip of the same designation rolled to the same thickness and *temper* (3.5) or mechanical properties

4 Dimensions

This product is commonly produced in thicknesses of 6 mm and under, and in widths of up to 600 mm, in coils and cut lengths.

5 Chemical composition

5.1 General

The chemical composition (heat analysis) shall not exceed the values given in Tables 1 and 2.

5.2 Heat analysis

An analysis of each heat of steel shall be made by the manufacturer to determine compliance with the requirements of Tables 1 and 2. When requested at the time of ordering, this analysis shall be reported to the purchaser or his representative.

5.3 Product analysis

A product analysis can be made by the purchaser to verify the specified analysis of the product and shall take into consideration any normal heterogeneity.

The product analysis tolerances shall be in accordance with Tables 2 and 3.

© ISO 2014 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS ISO 6932:2014