BS EN 10149-2:2013

BSI Standards Publication

Hot rolled flat products made of high yield strength steels for cold forming

Part 2: Technical delivery conditions for thermomechanically rolled steels

bsi.

...making excellence a habit.™

Document Sharing Hub

Full document details: BS EN 10149-2:2013

National foreword

This British Standard is the UK implementation of EN 10149-2:2013. It supersedes BS EN 10149-2:1996 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/103, Structural Steels Other Than Reinforcements.

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 2013. Published by BSI Standards Limited 2013

ISBN 978 0 580 73972 9

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 30 September 2013.

Amendments issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS EN 10149-2:2013

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 10149-2

September 2013

ICS 77.140.50

Supersedes EN 10149-2:1995

English Version

Hot rolled flat products made of high yield strength steels for cold forming - Part 2: Technical delivery conditions for thermomechanically rolled steels

Produits plats laminés à chaud en aciers à haute limite d'élasticité pour formage à froid - Partie 2: Conditions techniques de livraison des aciers obtenus par laminage thermomécanique

Warmgewalzte Flacherzeugnisse aus Stählen mit hoher Streckgrenze zum Kaltumformen - Teil 2: Technische Lieferbedingungen für thermomechanisch gewalzte Stähle

This European Standard was approved by CEN on 17 August 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2013 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 10149-2:2013: E

Documents
Document Sharing Hub

Full document details: BS EN 10149-2:2013

Contents

Page

Foreword 3

1 Scope 4

2 Normative references 4

3 Terms and definitions 4

4 Information to be supplied by the purchaser 4
4.1 General 4
4.2 Options 5

5 Dimensions, mass and tolerances 5
5.1 Dimensions and tolerances 5
5.2 Mass of steel 5

6 Classification and designation 5
6.1 Classification 5
6.2 Designation 5

7 Technical requirements 5
7.1 Steel manufacturing process 5
7.2 Delivery condition 5
7.3 Chemical composition 5
7.4 Mechanical properties 6
7.5 Technological properties 6
7.5.1 Weldability 6
7.5.2 Formability 6
7.6 Surface finish 7
7.7 Internal soundness 7

8 Inspection and testing 7
8.1 General 7
8.2 Sampling 7
8.3 Test units 7
8.4 Verification of chemical composition 7
8.5 Preparation of samples and test pieces 8
8.6 Test methods 8
8.7 Retests and resubmission for testing 8
8.8 Inspection documents 8

9 Marking 8

10 Disputes 8

11 Options 8

Annex A (normative) **Location of test pieces** 11

Annex B (informative) **Minimum inside bend radii for cold forming** 12

Bibliography 13

Documents
Document Sharing Hub

Full document details: BS EN 10149-2:2013

Foreword

This document (EN 10149-2:2013) has been prepared by Technical Committee ECISS/TC 103 “Structural steel other than reinforcements”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2014, and conflicting national standards shall be withdrawn at the latest by March 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 10149-2:1995.

In comparison with EN 10149-2:1995, the following significant technical changes were made:

— Scope was modified;

— subclause 6.1 was revised;

— subclause 7.4.1 was modified;

— subclause 7.5.3 was completely revised;

— Option 13) was added in Clause 11;

— steel grades S900MC and S960MC were added in Tables 1, 2 and B.1;

— footnotes f and g were added in Table 2.

The titles of the other Parts of this European Standard are:

— *Part 1: General technical delivery conditions*;

— *Part 3: Technical delivery conditions for normalized or normalized rolled steels*.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Documents
Document Sharing Hub
Full document details: BS EN 10149-2:2013

1 Scope

This European Standard, in addition to EN 10149-1, specifies requirements for flat products made of weldable, hot-rolled, high yield strength steels for cold forming.

The grades are given in Table 1 (chemical composition) and Table 2 (mechanical properties) and are supplied in the thermomechanically rolled delivery condition as given in 7.2.

The steels specified in this European Standard are applicable to hot-rolled flat products in the thickness range of:

— 1,5 mm to 20 mm for the steels which have a specified minimum yield strength of 315 MPa[1)] up to and including 460 MPa[1)];

— 1,5 mm to 16 mm for the steels which have a specified minimum yield strength of 500 MPa[1)] up to and including 700 MPa[1)]; and

— from 2 mm up to 10 mm for the steels with a minimum yield stress in the range from 900 MPa[1)] to 960 MPa[1)].

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.

EN 10029, *Hot-rolled plates 3 mm thick or above - Tolerances on dimensions and shape*

EN 10051, *Continuously hot-rolled strip and plate/sheet cut from wide strip of non-alloy and alloy steels - Tolerances on dimensions and shape*

EN 10149-1:2013*, Hot rolled flat products made of high yield strength steels for cold forming - Part 1: General technical delivery conditions*

EN ISO 14713-2:2009, *Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures - Part 2: Hot dip galvanizing (ISO 14713-2:2009)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10149-1:2013 apply.

4 Information to be supplied by the purchaser

4.1 General

The information to be supplied by the purchaser shall be in accordance with EN 10149-1.

---

1) 1 MPa = 1 N/mm^2.

Documents
Document Sharing Hub
Full document details: BS EN 10149-2:2013