This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN 10219-2:2019

Cold formed welded steel structural hollow sections - Part 2: Tolerances, dimensions and sectional properties

© CEN 2019 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN 10219-2:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN 10219-2:2019	2019-05-08

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2019-05-26	77.140.75
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

National Foreword

I.S. EN 10219-2:2019 is the adopted Irish version of the European Document EN 10219-2:2019, Cold formed welded steel structural hollow sections - Part 2: Tolerances, dimensions and sectional properties

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

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 10219-2

May 2019

ICS 77.140.75

English Version

Cold formed welded steel structural hollow sections - Part 2: Tolerances, dimensions and sectional properties

Profils creux de construction soudés, formés à froid en aciers - Partie 2 : Tolérances, dimensions et caractéristiques du profil

Kaltgeformte geschweißte Hohlprofile für den Stahlbau - Teil 2: Grenzabmaße, Maße und statische Werte

This European Standard was approved by CEN on 20 March 2019.

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, Serbia, 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: Rue de la Science 23, B-1040 Brussels

© 2019 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

This is a free page sample. Access the full version online.

Contents

Page

European foreword ... 3
1 Scope ... 4
2 Normative references ... 4
3 Terms and definitions ... 4
4 Symbols ... 4
5 Information to be obtained by the manufacturer ... 5
6 Tolerances ... 6
7 Measurement of size and shape ... 8
8 Dimensions and sectional properties ... 13
Annex A (normative) **Formulae for the calculation of sectional properties** ... 14
A.1 General ... 14
A.2 Circular hollow sections ... 14
A.3 Rectangular or square, hollow sections ... 15
A.4 Elliptical hollow sections ... 17
Annex B (normative) **Sectional properties for a limited range of standard sizes** ... 19
Bibliography ... 44

This is a free page sample. Access the full version online.

European foreword

This document (EN 10219-2:2019) has been prepared by Technical Committee CEN/TC 459 "ECISS - European Committee for Iron and Steel Standardization"[1], the secretariat of which is held by AFNOR.

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 November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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

This document supersedes EN 10219-2:2006.

The main changes with respect to the previous edtion are listed below:

a) elliptical hollow sections were added;

b) Annex A concerning the additional tolerances for piling tubes was removed;

c) subclause 5.2 was added with one option;

d) in Table 3 the length tolerances for exact length were changed;

e) in 7.1 one paragraph was added;

f) standard was editorially revised.

This standard consists of the following parts:

— EN 10368, *Steel structural hollow sections – General (Characteristics, evaluation of conformity and marking)* (in preparation)

— EN 10219-1, *Cold formed welded steel structural hollow sections - Part 1: Technical delivery conditions*

— EN 10219-2, *Cold formed welded steel structural hollow sections - Part 2: Tolerances, dimensions and sectional properties*

— EN 10219-3, *Cold formed welded steel structural hollow sections - Part 3: Technical delivery conditions for mechanical engineering purposes* (in preparation)

It forms part of a series of standards on hollow sections together with EN 10210-1 to EN 10210-3.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

---

[1] Through its subcommittee SC 3 "Structural steels other than reinforcements" (secretariat: DIN)

This is a free page sample. Access the full version online.

1 Scope

This document specifies tolerances for cold formed welded circular, square, rectangular and elliptical structural hollow sections, manufactured in wall thicknesses up to 40 mm, in the following size ranges:

— circular: Outside diameters up to 2 500 mm;

— square: Outside dimensions up to 500 mm × 500 mm;

— rectangular: Outside dimensions up to 500 mm × 300 mm;

— elliptical: Outside dimensions up to 480 mm × 240 mm.

The formulae for calculating sectional properties of sections manufactured to the dimensional tolerances of this standard, to be used for the purposes of structural design, are given in Annex A.

Dimensions and sectional properties for a limited range of more common sizes are given in Annex B.

NOTE The designation of the sections' major axis (yy) and minor axis (zz) aligns with the axis designation used for structural design in the structural Eurocodes.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10219-1, *Cold formed welded structural hollow sections of non-alloy and fine grain steels — Part 1: Technical delivery conditions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10219-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Symbols

For the purposes of this document, the symbols defined in Table 1 apply.

Table 1 — Symbols and definitions

Symbol	Unit	Definition
A	cm²	Cross-sectional area
A_m	mm²	Area of the surface delimited by the perimeter at mid-thickness
A_s	m²/m	Superficial area per metre length
B	mm	Specified side dimension of a square hollow section. Specified dimension of the shorter side of a rectangular hollow section. Specified outside dimension of an elliptical section on its minor axis
C_1/C_2	mm	Length of corner region of a square or rectangular hollow section

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation