

**Külmsurvevormitud keevitatud
konstruktsiooni-õõnesprofiilid
mittelegeer- ja peeneteraterastest. Osa
1: Tehnilised tarnenõuded**

Cold formed welded structural hollow sections of
non-alloy and fine grain steels - Part 1: Technical
delivery requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 10219-1:1999 sisaldab Euroopa standardi EN 10219-1:1997 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 10219-1:1999 consists of the English text of the European standard EN 10219-1:1997.</p> <p>This document is endorsed on 23.11.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: See Euroopa standardi osa määrab kindlaks tehnilised tarnenõuded ümmarguste, ruudu- või ristkülikukujuliste külmsurvevormitud keevitatud konstruktsiooni-õõnesprofiilide kohta. Standard kehtib nende konstruktsiooni-õõnesprofiilide kohta, mis on külmsurvevormitud ilma järgneva termotöötluseta.</p>	<p>Scope:</p>
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ICS 77.140.75

Võtmesõnad: keemiline koostis, keevitatavus, konstruktsiooniterased, kvaliteediklassid, kvaliteet, külmlaetooted, margid, mehaanilised omadused, mittelegeerterased, pinnakvaliteet, profiilmetall, tarnetingimus, teraskonstruktsioon, õõnesprofiilid

Hinnagrupp S

ICS 77.140.70; 91.080.10

Descriptors: Hollow sections, structural steelwork, fine grain steel, technical delivery conditions.

English version

**Cold formed welded structural hollow sections of
non-alloy and fine grain structural steels**

Part 1: Technical delivery requirements

Profils creux pour la construction
formés à froid en aciers de
construction non alliés et à grains
fins – Partie 1: Conditions techniques
de livraison

Kaltgefertigte geschweißte Hohl-
profile für den Stahlbau aus
unlegierten Baustählen und aus
Feinkornbaustählen – Teil 1: Techni-
sche Lieferbedingungen

This European Standard was approved by CEN on 1997-06-22.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by Technical Committee ECISS/TC 10 "Structural steels - Qualities", the secretariat of which is held by NNI.

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 February 1998, and conflicting national standards shall be withdrawn at the latest by February 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This part of this European Standard specifies the technical delivery requirements for cold formed welded structural hollow sections of circular, square or rectangular form and applies to structural hollow sections formed cold without subsequent heat treatment.

The specified requirements apply to non-alloy quality steel, fine grain non-alloy quality steel and fine grain alloy special steels as defined in EN 10020.

The grades, chemical composition and mechanical properties for the non-alloy quality steels are given in annex A.

The grades, chemical composition and mechanical properties for the fine grain non-alloy quality and alloy special steels are given in annex B.

The products specified in this part of this European Standard are intended for use in construction.

NOTE: A range of steel grades is specified in this European Standard and the user should select the grade appropriate to the intended use and service conditions. The grades and mechanical properties of the finished hollow sections are compatible with those in EN 10025 and EN 10113 and some of those in EN 10149.

Requirements for tolerances, dimensions and sectional properties are contained in Part 2 of this European Standard (EN 10219-2).

This European standard does not apply to products covered by the following European Standards:

EN 10025	Hot-rolled products of non-alloy structural steels: Technical delivery conditions
EN 10113	Hot-rolled products in weldable fine grain structural steels
EN 10149	Hot-rolled flat products made of high yield strength steels for cold forming
EN 10155	Structural steels with improved atmospheric corrosion resistance: Technical delivery conditions.
EN 10210	Hot finished structural hollow sections of non-alloy and fine grain structural steels
EN 10225	Weldable structural steels for fixed offshore structures

2 Normative references

This part of this European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this part of this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 287-1	Approval testing of welders - Fusion welding Part 1: Steels
EN 288-1	Specification and approval of welding procedures for metallic materials Part 1: General rules for fusion welding
EN 288-2	Specification and approval of welding procedures for metallic materials Part 2: Welding procedure specification for arc welding
EN 288-3	Specification and approval of welding procedures for metallic materials Part 3: Welding procedure tests for arc welding of steels
EN 10002-1	Metallic materials - Tensile testing - Part 1: Method of test (at ambient temperature)
EN 10020	Definition and classification of grades of steel
EN 10021	General technical delivery requirements for steel and iron products
EN 10027-1	Designation systems for steel Part 1: Steel names, principal symbols
EN 10027-2	Designation systems for steel Part 2: Steel numbers
EN 10045-1	Metallic materials - Charpy impact test Part 1: Test method
EN 10052	Vocabulary of heat treatment terms for ferrous products
EN 10204	Metallic products - Types of inspection documents

EN 10219-2	Cold formed welded structural hollow sections of non-alloy and fine grain steels Part 2: Tolerances, dimensions and sectional properties
EN 10246-3 ¹⁾	Non-destructive testing of steel tubes Part 3: Automatic eddy current testing of seamless and welded (except submerged arc welded) steel tubes for the detection of imperfections
EN 10246-5 ¹⁾	Non-destructive testing of steel tubes Part 5: Automatic full peripheral magnetic transducer/flux leakage testing of seamless and welded (except submerged arc welded) ferromagnetic steel tubes for the detection of longitudinal imperfections
EN 10246-8 ¹⁾	Non-destructive testing of steel tubes Part 8: Automatic ultrasonic testing of the weld seam of electric resistance and induction welded steel tubes for the detection of longitudinal imperfections
EN 10246-9 ¹⁾	Non-destructive testing of steel tubes Part 9: Automatic ultrasonic testing of the weld seam of submerged arc-welded steel tubes for the detection of longitudinal and/or transverse imperfections.
EN 10246-10 ¹⁾	Non-destructive testing of steel tubes Part 10: Radiographic testing of the weld seam of submerged arc-welded steel tubes for the detection of imperfections
EN 10266 ¹⁾	Steel tubes, fittings and steel structural hollow sections - Symbols and definitions of terms for use in product standards
EN ISO 377	Selection and preparation of samples and test pieces for steel and iron products (ISO 377:1997)
EN ISO 9001	Quality systems - Model for quality assurance in design/development, production, installation and servicing (ISO 9001:1994)

¹⁾ In preparation, until this document is published as a European Standard, a corresponding national standard should be agreed at the time of enquiry and order.

- EN ISO 9002 Quality systems - Model for quality assurance in production, installation and servicing (ISO 9002:1994)
- EURONORM 103²⁾ Micrographic determination of ferritic or austenitic grain size of steel
- EURONORM 168²⁾ Iron and steel products - Inspection documents - Contents
- Information Circular No. 2 Weldable fine-grained structural steels - Recommendations for processing, in particular for welding
- CR 10260 Designation system for steel: Additional symbols for steel names
- ISO 2566-1 Steel - Conversion of elongation values
Part 1 : Carbon and low alloy steels
- ISO 14284 Steel and iron - Sampling and preparation of samples for the determination of chemical composition

3 Definitions

For the purpose of this European Standard, the following definitions apply in addition to or where different from those in EN 10020, EN 10021, EN 10052, EN 10204 and EN 10266.

3.1 cold forming: A process where the main forming is done at ambient temperature.

3.2 normalizing rolling: A rolling process in which the final deformation is carried out in a certain temperature range leading to a material condition equivalent to that obtained after normalizing so that the specified values of the mechanical properties are retained even after normalizing.

²⁾ Until these EURONORMS are transformed into European Standards, they can either be implemented or reference made to the corresponding national standards, the list of which is given in annex D to this part of this European Standard.