



SLOVENSKI STANDARD
SIST EN 10249-1:1998
01-avgust-1998

Hladno oblikovana obešala iz nelegiranih jekel - 1. del: Tehnični dobavni pogoji

Cold formed sheet piling of non alloy steels - Part 1: Technical delivery conditions

Kaltgeformte Spundbohlen aus unlegierten Stählen - Teil 1: Technische Lieferbedingungen

Palplanches profilées à froid en aciers non alliés - Partie 1: Conditions techniques de livraison

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Ta slovenski standard je istoveten z: EN 10249-1:1995

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ICS:

77.140.45	Nelegirana jekla	Non-alloyed steels
77.140.70	Jekleni profili	Steel profiles

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EUROPEAN STANDARD

EN 10249-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 1995

ICS 77.140.70

Descriptors: iron and steel products, metal sections, sheet piling, steels, unalloyed steels, chemical composition, grades : quality, classification, designation, mechanical properties, tests, inspections, marking

English version

Cold formed sheet piling of non alloy steels - Part 1: Technical delivery conditions

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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.

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CEN

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Ref. No. EN 10249-1:1995 E

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Foreword

This European Standard was prepared by SC4 "Sheet piling" of Technical Committee ECISS/TC10 "Structural steels - Qualities" the secretariat of which is held by NNI.

EN 10249 is composed of two parts :

- Part 1 : Technical delivery conditions,
- Part 2 : Tolerances on shape and dimensions.

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of an identical text or by endorsement, at the latest by December 1995, and conflicting national standards shall be withdrawn at the latest by December 1995.

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

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1 Scope

This part of this European Standard specifies the requirements for cold formed non alloy steel sheet piling produced from hot rolled strip or sheet with a thickness equal to or greater than 2 mm in respect of its chemical composition, mechanical and technological properties and delivery conditions.

The products specified are for general, structural and civil engineering works.

Requirements concerning the tolerances on shape and dimensions are specified in Part 2 of this European Standard.

2 Normative references

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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- | | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 steel products. |
| EN 10025 | Hot rolled products in non-alloy steels for general structural applications - Technical delivery conditions. |
| EN 10027-1 | Designation system for steel. Part 1 : Steel names, principal symbols. |
| EN 10027-2 | Designation system for steel. Part 2 : Steel numbers. |
| EN 10079 | Definition of steel products. |
| pr EN 10111 | Hot rolled non coated mild unalloyed sheet and strip for cold forming. Technical delivery conditions |
| EN 10113-2 | Hot rolled products in weldable fine grain structural steels. Part 2 : Delivery conditions for normalized/normalized rolled steels. |
| EN 10113-3 | Hot rolled products in weldable fine grain structural steels. Part 3 : Delivery conditions for thermomechanical rolled steels. |
| pr EN 10149-2 | Hot rolled flat products made of high yield strength steels for cold forming. Part 2 : Delivery conditions for thermomechanical rolled steels. |
| pr EN 10149-3 | Hot rolled flat products made of high yield strength steels for cold forming. Part 3 : Delivery conditions for normalized/normalized rolled steels. |
| EN 10204 | Metallic products. Types of inspection documents. |
| EN 10249-2 | Cold formed sheet piling of non alloy steels. Part 2 : Tolerances on shape and dimensions. |

- ECISS/IC 10** Designation system for steel. Additional symbols for steel names.
- EU 18 1)** Selection and preparation of samples and test pieces for steel and iron and steel products.
- EU 168 1)** Iron and steel products - Inspection documents - Contents.

3 Definitions

For the purpose of this European Standard, the definitions in EN 10020, EN 10021 and EN 10079 shall apply.

Furthermore, the following definition applies :

cold formed sheet piling : Products made by cold forming on a rolling machine ; the form of the product is such that when interlocking their joints or overlapping the profiles ends, they constitute a continuous sheet piling structure.

4 Information to be supplied by the purchaser

4.1 General

The following information shall be supplied by the purchaser, at the time of the enquiry and order :

- a) details of the product form, length, quantity and any further processing work that is required, e.g. surface treatment,
- b) the designation of the product (in accordance with 6.2),
- c) whether products have to be submitted to inspection and testing and if inspection and testing is required, which type of inspection and which inspection document is required (see 8.1.2).

Where no specific choice is made by the purchaser concerning a) and b), the supplier shall refer back to the purchaser.

NOTE : It is recommended that the manufacturer be informed by the purchaser at the time of the order , if the purchaser intends to carry out any surface treatment on the product after delivery.

4.2 Options

A number of options are specified in clause 10. In the event that the purchaser does not indicate a requirement to implement any of these options, the product shall be supplied in accordance with the basic specification.

5 Mass of steel

The calculated mass shall be determined using a conventional volumetric mass of 7,85 kg/dm³.

1) Until these EURONORMS are transformed into European Standards, they may be either implemented as referenced in this European Standard or the corresponding national standard given in annex A may be implemented in their place.

6 Classification and designation

6.1 Classification

This European Standard considers three of the steel grades defined by EN 10025 : S235JRC, S275JRC and S355J0C (grades suitable for cold forming).

When agreed at the time of the enquiry and order, other grades defined by EN 10025, pr EN 10111, EN 10113 Part 2 and Part 3 and pr EN 10149 Part 2 and Part 3 may be delivered.

Option 1, see 10.2.

6.2 Designation

6.2.1 Steel names ²⁾ are assigned to steel grades in accordance with EN 10027-1 and IC 10. Steel numbers are allocated to steel grades in accordance with EN 10027-2.

6.2.2 The products covered by this European Standard shall be designated in the following sequence :

- a) the name of the product, i.e. "Sheet piling",
- b) the number of this European Standard, i.e. EN 10249,
- c) the steel name or number.

EXAMPLE : Sheet piling EN 10249-S235JRC or Sheet piling EN 10249-1.0120 indicates a sheet piling in accordance with EN 10249 made of steel S235JRC (Steel number 1.0120).

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7 Technical requirements

7.1 Steel manufacturing process

7.1.1 The steel manufacturing process shall be at the manufacturer's option. Where specified at the time of the enquiry and order, the steel manufacturing process shall be reported to the purchaser.

Option 2, see 10.3.

7.1.2 The method of deoxidation shall be at the discretion of the manufacturer, except that rimming steel shall not be permitted.

7.2 Delivery conditions

Unless otherwise agreed, sheet piles shall be delivered in the as cold formed condition.

Option 3, see 10.4.

7.3 Chemical composition

The chemical compositions for both the ladle and the product analyses shall comply with the maximum values given in table 2 of EN 10025 or with the values which apply to the grade agreed

²⁾ Former national designations (steel names) are listed in annex B.

at the time of the enquiry and order and chosen from the grades defined by the other standards mentioned in 6.1.

7.4 Mechanical properties

In the delivery condition as specified in 7.2, the mechanical properties shall comply with the relevant requirements of tables 5 and 6 of EN 10025 for the required grade and quality or with the requirements which apply to the grade agreed at the time of the enquiry and order and chosen from the other grades mentioned in 6.1.

7.5 Technological properties

7.5.1 Weldability

In general, steels for cold formed sheet pile are suitable for arc welding.

7.5.2 Other requirements

Where specified at the time of the enquiry and order, the suitability and the relevant product quality requirements for hot dip zinc coating may be agreed.

Option 4, see 10.5.

7.6 Surface finish

The material shall be sound and free from any surface flaws which might preclude its use for the purpose for which it is intended.

Cutting burrs which may exist at the ends of the sheet piling are acceptable provided that they do not impair the fitness of the profiles to be interlocked and their use.

8 Inspection and testing

8.1 General

8.1.1 The products can be supplied with inspection and testing with respect to their compliance with the requirements of this European Standard.

8.1.2 Where inspection and testing is required (option 5, see 10.6), the purchaser shall specify at the time of the enquiry and order :

- a) the type of inspection and testing, i.e. specific or non-specific (see EN 10021),
- b) the type of the inspection document (see 8.8 and 4.1 c),
- c) the inspection tests. Except when agreed at the time of the enquiry and order (option 6, see 10.7), the chemical composition and the mechanical properties are determined on the feedstock material. The results of these tests will be given to the purchaser by the sheet pile producer on request (option 7, see 10.8).

8.1.3 Specific inspection and testing shall be carried out according to 8.2 to 8.6.

8.1.4 Unless otherwise agreed at the time of the enquiry and order, inspection of surface condition and dimensions shall be carried out by the manufacturer.

Option 8, see 10.9.