SLOVENSKI STANDARD
SIST EN 10223-7:2003

01-april-2003

Jeklena žica in žični izdelki za ograje - 7. del: Iz jeklenih žic zvarjene ograjne plošče

Steel wire and wire products for fences - Part 7: Steel wire welded panels - For fencing

Stahldraht und Drahterzeugnisse für Zaüne - Teil 7 : Geschweisste Paneele für Zaüne

Fils et produits tréfilés en acier pour clôtures - Partie 7 : Panneaux en acier soudés - Pour clôturage

Ta slovenski standard je istoveten z: **EN 10223-7:2002**

ICS:

77.140.65	Jeklene žice, jeklene vrvi in verige	Steel wire, wire ropes and link chains
91.090	Konstrukcije zunaj stavb	External structures

SIST EN 10223-7:2003 **en**

EUROPEAN STANDARD

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EN 10223-7

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ICS 77.140.65

English version

Steel wire and wire products for fences - Part 7: Steel wire welded panels - For fencing

Fils et produits tréfilés en acier pour clôtures - Partie 7 : Panneaux en acier soudés - Pour clôturage

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This European Standard was approved by CEN on 1 August 2002.

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 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 Management Centre has the same status as the official versions.

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

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

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Contents

Foreword

This document EN 10223-7:2002 has been prepared by Technical Committee ECISS/TC 30 "Steel wires", the secretariat of which is held by BSI.

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 2003, and conflicting national standards shall be withdrawn at the latest by March 2003.

The European Standard comprises the following parts:

Part 1: Zinc and zinc alloy coated steel barbed wire

Part 2: Hexagonal steel wire netting of agricultural, insulation and fencing purposes

Part 3: Hexagonal steel wire netting for engineering purposes

Part 4: Steel wire welded mesh fencing

Part 5: Steel wire woven hinged joint and knotted mesh fencing

Part 6: Steel wire chain link fencing

Part 7: Steel wire welded panels - For fencing

Annex A is normative.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This Part of this European Standard specifies requirements for steel wire welded mesh panels for fencing. The panels are used for fencing parks, schools, sport stadia, public buildings, factories, airports, military sites, etc.

This International Standard specifies the general characteristics of welded mesh supplied as panels and recommended coatings, properties and tolerances. This International Standard is applicable to panels made from round or shaped wires not thicker than 10 mm.

The panels have round, rectangular or triangular wires and double horizontal wires. The use of V-shaped vertical wires is optional.

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 (including amendments).

EN 10021, *General technical delivery requirements for steel and iron products.*

EN 10204, *Metallic products — Types of inspection documents.*

EN 10218-1, *Steel wire and wire products — General — Part 1: Test methods.*

EN 10218-2, *Steel wire and wire products — General — Part 2: Wire dimensions and tolerances.*

EN 10244-2:2001, *Steel wire and wire products – Non-ferrous metallic coatings on steel wire — Part 2: Zinc and zinc alloy coatings.*

EN 10245, *Steel wire and wire products – Organic coatings on steel wire.*

EN ISO 1461, *Hot dip galvanised coatings on fabricated iron and steel articles – Specifications and test methods (ISO 161:1999).*

EN ISO 4892-1, *Plastics – Methods of exposure to laboratory light sources - Part 1: General guidance (ISO 4892-1:1999).*

EN ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources - Part 2: Xenon-arc sources (ISO 4892-2:1994).*

EN ISO 4892-3, *Plastics – Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 4892-3:1994).*

EN ISO 6270-1, *Paints and varnishes — Determination of resistance to humidity — Part 1: Continuous condensation (ISO 6270-1:1998).*

EN ISO 6988, *Metallic and other non-organic coatings — Sulfur dioxide test with general condensation of moisture (ISO 6988:1995).*

ISO 2809, *Paints and varnishes — Determination of light fastness of paints for interior use.*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests.*

3 Terms and definitions

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

3.1
welded panels
panels of various shape and design, made by electrically resistant welding at each wire intersection

NOTE The panels can be made out of:

a) zinc or zinc alloy coated wires (coated before welding);

b) wires that are subsequently coated after fabrication, either with zinc or zinc alloy.

In either a) or b) the panels can be subsequently organically coated.

3.2
mesh size
distance measured between the centres of two neighbouring wires

NOTE Depending on the application, the mesh size can be uniform throughout the panel or varying.

A uniform panel is shown in Figure 1.

Dimensions in millimetres

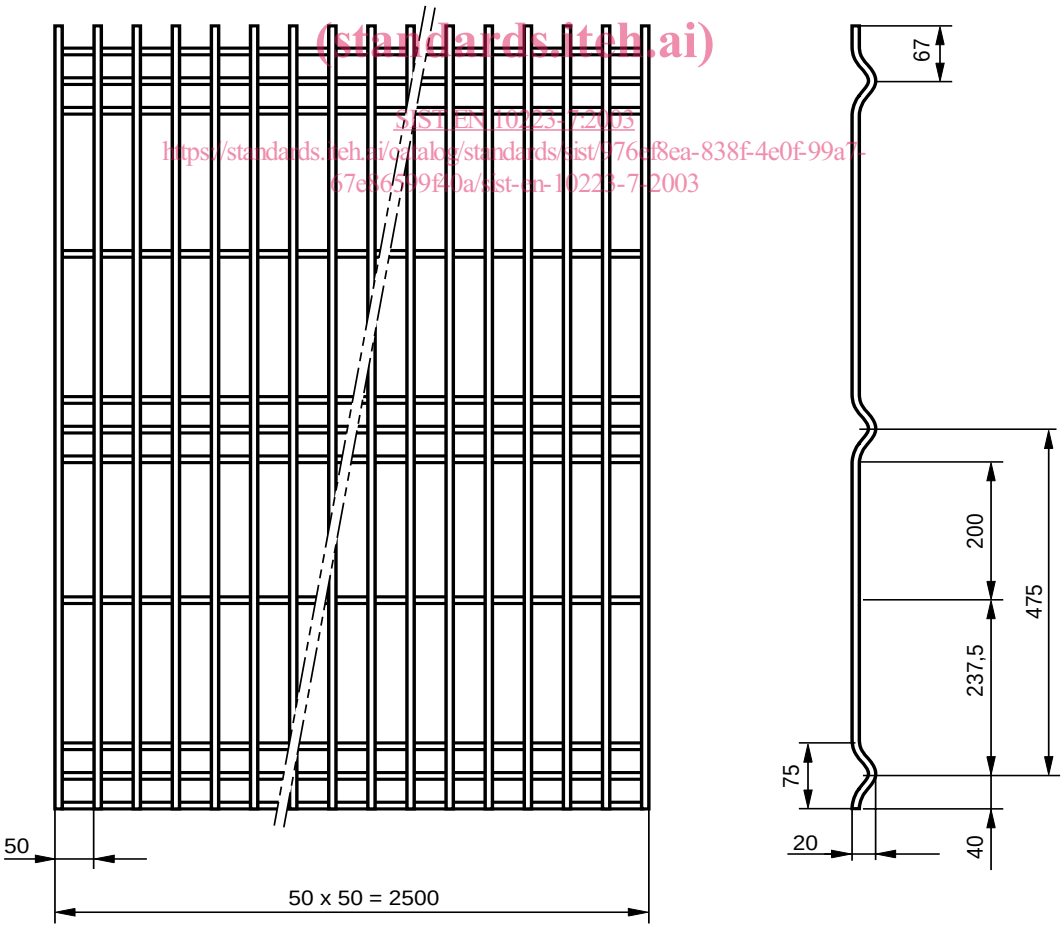

Figure 1 — Uniform panel

3.3
stiffness
stiffness is measured for the flexural strength of the panel along its vertical axis. It is the product of E.I where E is the modulus of elasticity and I is the moment of inertia

4 Information to be obtained from the purchaser

The following information as appropriate shall be obtained from the purchaser at the time of enquiry and/or order:

a) the number of this European Standard;

b) the quantity and packaging requirements;

c) the main characteristic dimensions and length, width and diameters of the wires;

d) mesh sizes for a simple and repetitive design;

e) the grade of zinc or zinc alloy coating and whether applied before or after welding;

f) whether organic coating is required, and if so, the type and colour;

g) the tensile strengths of the wires.

5 Designation

The panel shall be designated by:

a) the number of this European Standard;

b) its length;

c) its width;

d) for a simple and repetitive design: the mesh and wire dimensions;
for a more complex design: a drawing with wire dimensions, meshes and other ornamental and additional wires;

e) the type and grade of zinc alloy coating and whether applied before or after fabrication;

f) if subsequently organically coated: the type and colour of the coating.

6 Manufacture

6.1 Base metal

The base metal of the welded mesh panel shall be low carbon steel.

6.2 Fabrication

Panels shall be produced by electrical resistance welded zinc or zinc alloy coated wires or subsequently zinc or zinc alloy coated after fabrication in accordance with EN ISO 1461. No bare patches shall be permitted. Where requested by the purchaser (see 4f), the panel shall be subsequently organically coated in accordance with EN 10245-1 and the other relevant part of EN 10245 depending on the purchaser's specification. The organic coating shall be free from blisters, craters, pin holes or scratches on the base metal, visible from a distance of about 0,5 m. The substrate shall not be visible at any edge.

The type of coating and the colour shall be as specified on the order.

7 Requirements

7.1 Tensile strength

The tensile strength of the horizontal and vertical wire shall be between 350 MPa and 950 MPa. In a delivered lot, the range of tensile strengths of wires shall not differ by more than 200 MPa.

NOTE The tensile strength of the horizontal wire need not be the same as the tensile strength of the vertical wire.

7.2 Size tolerances

7.2.1 Round wires

The tolerance on the diameter of round wire shall be in accordance with EN 10218-2 level T3. For shaped wire the corresponding diameter or reference diameter shall be the diameter corresponding to the circle with the same cross-section as the sample for testing.

7.2.2 Other shapes

The tolerance shall be agreed between supplier and purchaser at the time of enquiry and/or order.

7.3 Mesh dimensions and tolerance

The nominal mesh dimensions measured between the centres of two neighbouring wires after coating shall conform to Table 1.

Table 1 — Tolerances on mesh dimensions

Mesh dimensions mm	Tolerance mm
< 50	± 2,0
≥ 50 and < 200	± 3,0
≥ 200	± 4,0

Variations in the mesh dimensions shall be a maximum of ± 3,0 mm per metre.

7.4 Coatings

7.4.1 Zinc and zinc alloy coatings

Zinc coated wires not subsequently organically coated shall conform to class A of Table 1 of EN 10244-2:2001. Zinc/aluminium (Zn95/Al5) coated wire not subsequently organically coated shall conform to class A of Table 2 of EN 10244-2:2001.

Where panels have been zinc or zinc alloy coated after fabrication, the coated panel shall conform to EN ISO 1461. Where panels do not contain round wire, the coating mass shall be the same as the specified minimum for the round wire with the same section. Where panels contain two different wires, the average of the corresponding masses shall be taken.