

SVENSK STANDARD

SS-EN 10223-5:2012



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Ståltråd och trådprodukter för stängsel och nät – Del 5: Grossiststängsel av stål

Steel wire and wire products for fencing and netting – Part 5: Steel wire woven hinged joint and knotted mesh fencing

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Denna standard ersätter SS-EN 10223-5, utgåva 1.

The European Standard EN 10223-5:2012 has the status of a Swedish Standard. This document contains the official version of EN 10223-5:2012.

This standard supersedes the Swedish Standard SS-EN 10223-5, edition 1.

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EUROPEAN STANDARD

EN 10223-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2012

ICS 77.140.65

Supersedes EN 10223-5:1998

English Version

Steel wire and wire products for fencing and netting - Part 5: Steel wire woven hinged joint and knotted mesh fencing

Fils et produits tréfilés en acier pour clôtures et grillages -
Partie 5: Grillage noué et grillage à raccords pivotants en
acier

Stahldraht und Drahterzeugnisse für Zäune und
Drahtgeflechte - Teil 5: Gelenk- und Knotengitter aus
Stahldraht für Zäune

This European Standard was approved by CEN on 13 October 2012.

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.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 10223-5:2012) has been prepared by Technical Committee ECISS/TC 106 "Wire rod and wires", 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 May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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 10223-5:1998.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

EN 10223 "Steel wire and wire products for fencing and netting" consists of the following parts:

- *Part 1: Zinc and zinc-alloy coated steel barbed wire*
- *Part 2: Hexagonal steel wire netting for agricultural, insulation and fencing purposes*
- *Part 3: Hexagonal steel wire mesh products 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*
- *Part 8: Welded mesh gabion products*

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SS-EN 10223-5:2012 (E)

1 Scope

This European Standard specifies preferred dimensions, properties and coatings of zinc and zinc alloy coated steel wire woven hinged joint and knotted mesh fencing.

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 10021, *General technical delivery conditions for steel products*

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

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

EN 10218-2:2012, *Steel wire and wire products — General — Part 2: Wire dimensions and tolerances*

EN 10244-1:2009, *Steel wire and wire products — Non-ferrous metallic coatings on steel wire — Part 1: General principles*

EN 10244-2:2009, *Steel wire and wire products — Non-ferrous metallic coatings on steel wire — Part 2: Zinc and zinc alloy coatings*

3 Terms and definitions

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

3.1

knotted mesh fencing

fencing with rectangular meshes made of line and stay wires zinc or zinc alloy coated to EN 10244-1:2009 and EN 10244-2:2009, class A

The line and stay wires are connected by a hinged joint spiral knot in the case of hinge joint stock fence (see Figure 1) and by a knot in the case of knotted stock fence (see Figure 2) (except for the selvedge wire which is spiral knotted):

- The top and bottom wires of the fence may consist of a larger diameter selvedge wire.
- The rectangular mesh openings may decrease in size from the top downwards.
- The line and selvedge wire are regularly and evenly crimped between the stay wires (to aid erection of the fence)

3.2

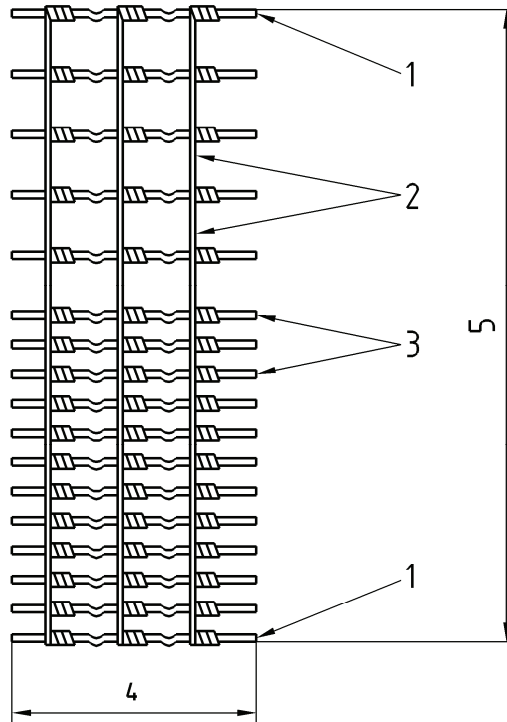
woven joint fencing

classification relating to:

- a) strength of wire:
 1. strength 1 applies to fencing manufactured from low tensile wire;
 2. strength 2 applies to fencing manufactured from high tensile wire;

b) nominal diameter of wires incorporated in the fence using:

1. *L* for light (small diameter wire);
2. *M* for medium (medium diameter wire);
3. *H* for heavy (large diameter wire)



Key

- | | |
|-----------------|----------|
| 1 selvedge wire | 4 length |
| 2 stay wire | 5 height |
| 3 line wire | |

Figure 1 — Example of woven hinged joint design

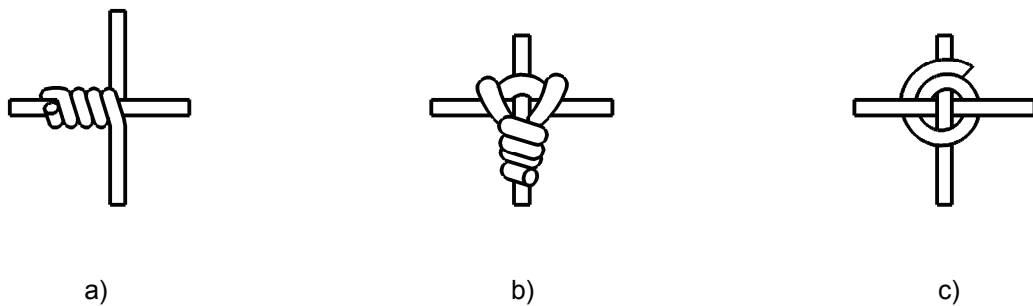


Figure 2 — Examples of knotted joint design

SS-EN 10223-5:2012 (E)

4 Information to be supplied by the purchaser

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

- a) number of this European Standard;
- b) quantity;
- c) hinged joint or knotted joint;
- d) classification (i.e. *L*, *M* or *H* and 1 or 2 according to Table 1);
- e) designation (see Clause 5, Table A.1 and Table A.2);
- f) length of rolls;
- g) height of roll;
- h) number of line wires and stay wire spacing;
- i) for *2M* and *2H* (according to Table 1) the size of selvedge wire required;
- j) coating type, zinc or zinc alloy;
- k) if uniformity of coating is to be measured;
- l) inspection documentation requirements;
- m) agreed quality characteristics for testing (see Clause 7).

5 Designation of hinged joint and knotted mesh fencing

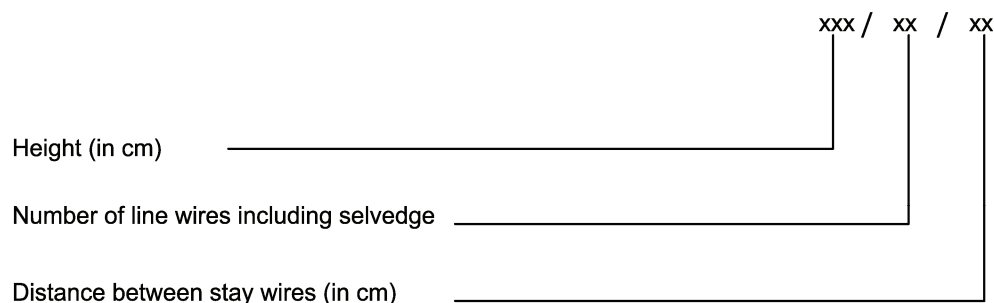


Figure 3

EXAMPLE 80/8/15

Typical designations of hinged joint and knotted mesh fencing are given in Table A.1 and Table A.2.

6 Manufacture

6.1 Base metal

Wires shall be manufactured from steel rod capable of achieving the tensile properties given in Tables 1 and 2.

6.2 Fabrication

The hinge joint or knotted fence shall be made from zinc or zinc-alloy coated wires which conform to EN 10244-1 and EN 10244-2.

The line and selvage wires shall be regularly and evenly crimped between the stay wires (to aid erection of the fence).

In the case of hinge joint fencing the wires shall be twisted at least one and a half times to ensure that the hinge joints are tightly fixed. In the case of knotted joint fencing the knots shall be manufactured so that they are tightly fixed.

7 Requirements

7.1 Tensile strength

7.1.1 Woven hinged joint fencing

The tensile strength of wires shall not be less than that given in Table 1 for the classification and tensile strength required. The tensile strength range for any one batch within a type of wire shall be not more than 200 N/mm².

7.1.2 Knotted mesh fencing

The tensile strength of the wires shall be not less than that given in Table 2. The tensile strength range in any one batch within a wire type shall be not more than 200 N/mm².

7.2 Wire diameters

7.2.1 Woven hinged joint fencing

The nominal diameters of wires shall be as given in Table 1 and shall be subject to tolerance EN 10218-2:2012 (T1 – Table 1).

7.2.2 Knotted mesh fencing

The nominal diameters of wires shall be as given in Table 2 and shall be subject to tolerance EN 10218-2:2012 (T1 - Table 1).

7.3 Tolerances

The tolerance on roll width is ± 25 mm.

The maximum variation in any individual vertical or horizontal spacing shall be no more than ± 5 mm from the nominal stated by the manufacturer.

NOTE Rolls are usually supplied with either 150 or 300 mm spacing between verticals, but other spacing may be arranged by agreement.

7.4 Coating

The zinc or zinc alloy coating of wire shall be tested in accordance with EN 10244-2:2009 complying with class A for Zn coatings and class B for Zn95/Al5 alloys (for similar service life), adherence and where specified, the uniformity of the coating