
Jeklena žica in žični izdelki za ograje in mreže - 3. del: Jeklene pletene mreže s šesterokotnimi zankami za uporabo v gradbeništvu

Steel wire and wire products for fencing and netting - Part 3: Hexagonal steel wire mesh products for civil engineering purposes

Stahldraht und Drahterzeugnisse für Zäune und Drahtgeflechte - Teil 3:
Stahldrahtgeflecht mit sechseckigen Maschen für bauwirtschaftliche Zwecke

Fils et produits tréfilés en acier pour clôtures et grillages - Partie 3: Produits en grillage à mailles hexagonales en acier pour applications industrielles

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Ta slovenski standard je istoveten z: EN 10223-3:2013

ICS:

77.140.65	Jeklene žice, jeklene vrvi in verige	Steel wire, wire ropes and link chains
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EUROPEAN STANDARD

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Steel wire and wire products for fencing and netting - Part 3: Hexagonal steel wire mesh products for civil engineering purposes

Fils et produits tréfilés en acier pour clôtures et grillages -
Partie 3: Produits en grillage à mailles hexagonales en acier
pour applications en génie civil

Stahldraht und Drahterzeugnisse für Zäune und
Drahtgeflechte - Teil 3: Stahldrahtgeflecht mit sechseckigen
Maschen für bauwirtschaftliche Zwecke

This European Standard was approved by CEN on 29 June 2013.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 10223-3:2013) 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 June 2014, and conflicting national standards shall be withdrawn at the latest by June 2014.

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 10223-3:1997.

In comparison with the previous edition, the entire document has been revised.

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* (the present document)
- *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*

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 10223-3:2013 (E)**1 Scope**

This European Standard specifies requirements for the dimensions, coatings, test methodology and delivery conditions of steel wire mesh products having meshes of hexagonal shape specified for engineering purposes.

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 10088-1, *Stainless steels — Part 1: List of stainless steels*

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

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

EN 10245-1, *Steel wire and wire products — Organic coatings on steel wire — Part 1: General rules*

EN 10245-2, *Steel wire and wire products — Organic coatings on steel wire — Part 2: PVC finished wire*

EN 10245-3, *Steel wire and wire products — Organic coatings on steel wire — Part 3: PE coated wire*

EN 10245-5, *Steel wire and wire products — Organic coatings on steel wire — Part 5: Polyamide coated wire*

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

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

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

EN ISO 9223:2012, *Corrosion of metals and alloys — Corrosivity of atmospheres — Classification, determination and estimation (ISO 9223:2012)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

EN ISO 16120-1, *Non-alloy steel wire rod for conversion to wire — Part 1: General requirements (ISO 16120-1)*

EN ISO 16120-2, *Non-alloy steel wire rod for conversion to wire — Part 2: Specific requirements for general-purpose wire rod (ISO 16120-2)*

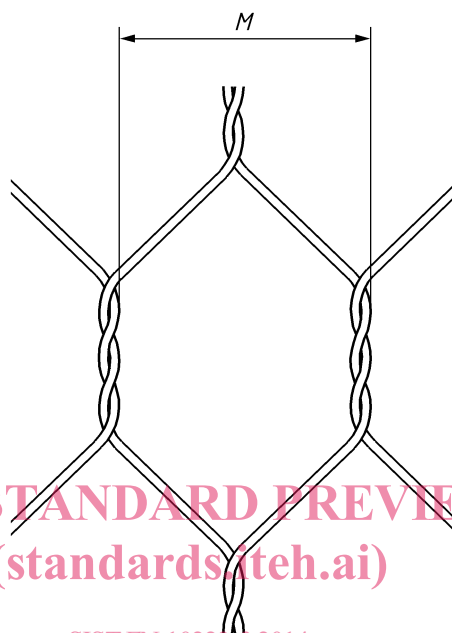
3 Terms and definitions

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

3.1

mesh size of hexagonal mesh

distance measured at right angles between two twisted sides M (see Figure 1)



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Key

M calculated average value after measuring the distance between two twisted sides over ten meshes

Figure 1 – Mesh size

3.2

double twisted hexagonal mesh

hexagonal-netting consisting of hexagonal shaped meshes, formed by twisting adjacent wires two by two, alternatively forming a twist to the right and to the left

3.3

mesh designations

definition of the hexagonal mesh type related to typical dimension of mesh

Note 1 to entry: Example of mesh designation: 8 x 10.

3.4

twist

tight winding of two wires around each other measured as each revolution of the two wires over 180°

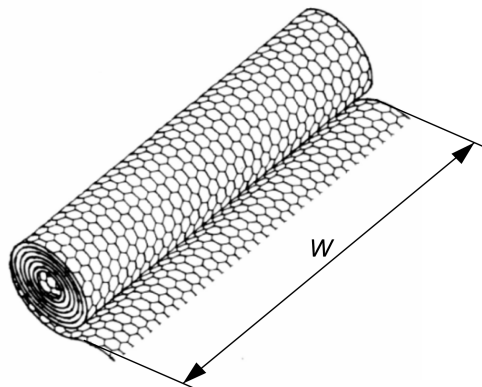
Note 1 to entry: The wires rotate only in one direction.

3.5

hexagonal steel wire mesh in rolls

mesh to be used for rockfall and slope protections

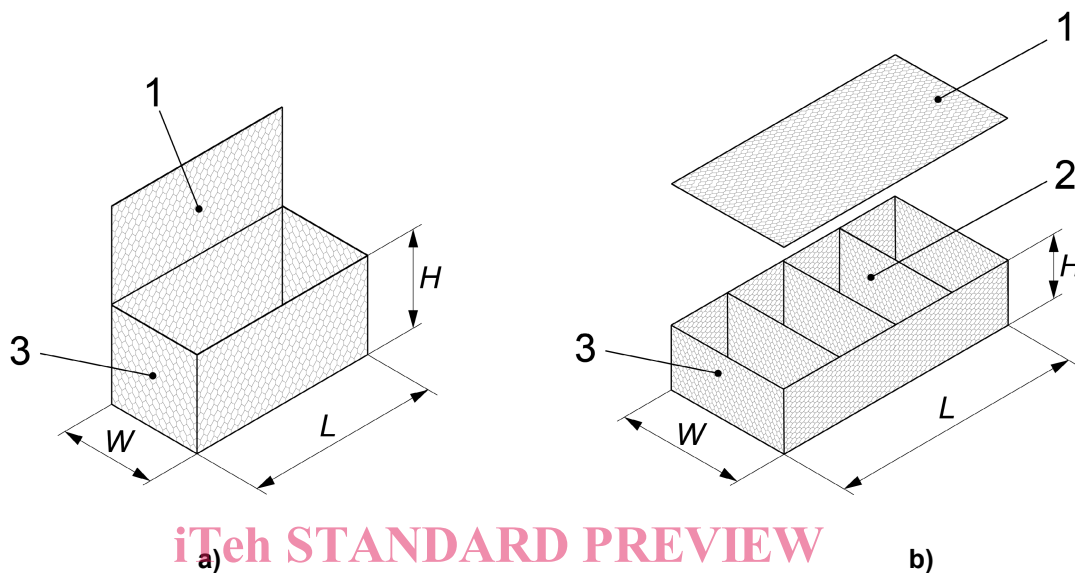
Note 1 to entry: The netting is a longitudinal border composed of a single selvage wire: this wire has a greater diameter than that used for the net (see Figure 2).

**Key** W width**Figure 2 – Mesh in rolls****iTeh STANDARD PREVIEW**
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3.6

gabion

double twisted steel wire mesh box made with a base panel and lateral side, see Figure 3a) (and eventually internal diaphragms, see Figure 3b)), connected together according to manufacturer's recommendations



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Key

- 1 lid
- 2 diaphragms
- 3 end panels
- H height
- L length
- W width

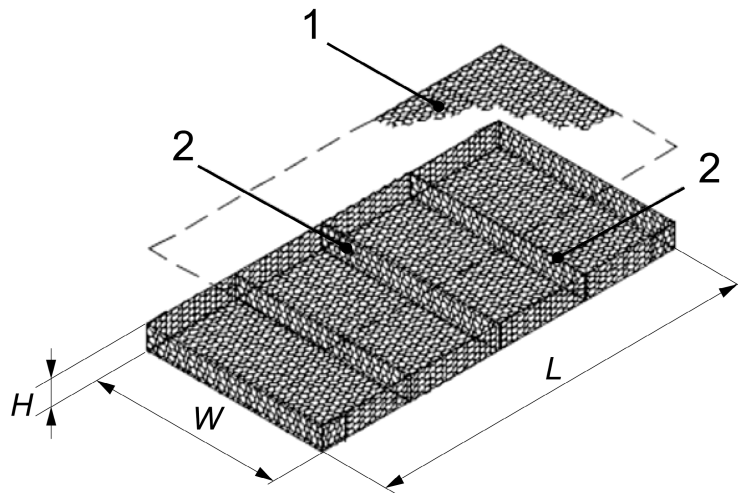
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The end external borders of base panel shall have a selvedge wire with a diameter greater than the one used for the longitudinal reinforcement. The lid of the structure can be made with a detached double twisted steel wire mesh panel.

Figure 3 — Example of gabion without diaphragm a) and example of gabion with diaphragm b)

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3.7 mattress
double twisted steel wire mesh unit with large dimensions (L and W) and small thickness (H), provided with internal diaphragms with a nominal spacing of 1,00 m and a separated lid (also with mesh in rolls)

**Key**

- 1 lid
- 2 diaphragms
- H height
- L length
- W width

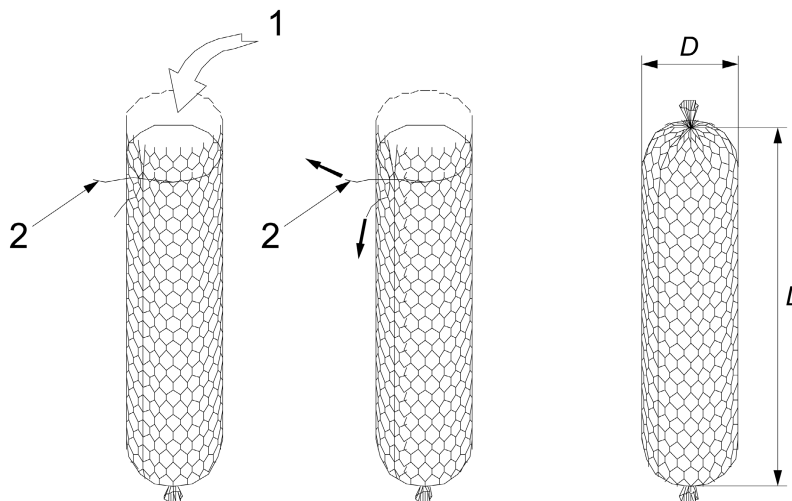
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Figure 4 – Mattress

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3.8 sack gabions
cylindrical double twisted steel wire mesh unit with a lateral opening to allow the stone filling on job site

**Key**

- 1 filling
- 2 lacing wire
- D diameter of the sack gabions
- L length of the sack gabions

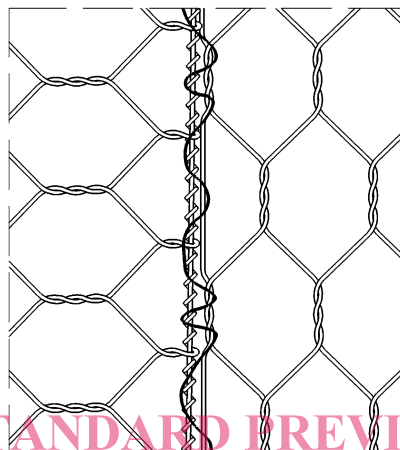
Figure 5 – Example of sack gabions

3.9**bracing tie**

length of zinc or zinc-aluminium coated steel wire for use with the equivalent corrosion protection of the gabions or organic coated or stainless steel for organic coated mesh wire used for support by forming a diagonal brace across the corners, inside of the gabion container

3.10**lacing wire**

for gabions and gabion mattresses; steel wire coated with zinc, zinc-aluminium alloy or organic over-coating, stainless steel wire used to assemble and interconnect empty gabions and to close and secure units filled with stone, as a replacement for spiral binders or rings and also used as bracing tie to prevent face deformation



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Figure 6 — Lacing wire

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3.11**gabion ring**

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C-shaped ring, made from very high resistance zinc or zinc-aluminium alloy coated steel wire or stainless steel wire, used to assemble and interconnect the empty gabions and to close and secure the units filled with stone

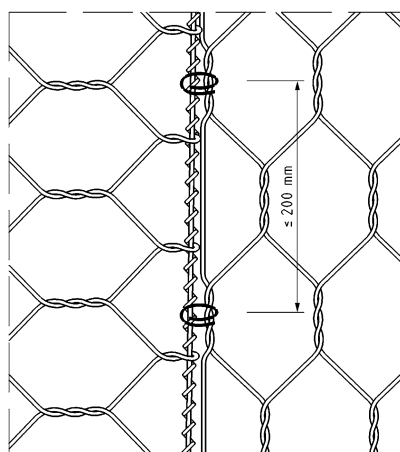


Figure 7 — Rings

3.12**soil reinforcement units for retaining structure**

double twisted steel wire mesh units used for soil reinforced structures and slope consolidation

Note 1 to entry: For structures with vertical facing (see Figure 8), units are made with a hexagonal wire mesh continuous base panel for the reinforcement and the facing portion of the structure.