SLOVENSKI STANDARD
SIST EN 10264-2:2003

01-april-2003

Jeklena žica in žični izdelki - Jeklena žica za vrvi - 2. del: Hladno vlečena nelegirana jeklena žica za vrvi za splošno uporabo

Steel wire and wire products - Steel wire for ropes - Part 2: Cold drawn non alloy steel wire for ropes for general applications

Stahldraht und Drahterzeugnisse - Stahldraht für Seile - Teil 2: Kaltgezogener Draht aus unlegiertem Stahl für Seile für allgemeine Verwendungszwecke

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Fils et produits tréfilés en acier - Fils pour câbles - Partie 2: Fil écrou a froid par tréfilage en acier non allié pour câbles d'usage courant

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Ta slovenski standard je istoveten z: EN 10264-2:2002

ICS:

77.140.45	Nelegirana jekla	Non-alloyed steels
77.140.65	Jeklene žice, jeklene vrvi in verige	Steel wire, wire ropes and link chains

SIST EN 10264-2:2003 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 10264-2

March 2002

ICS 77.140.65

English version

Steel wire and wire products - Steel wire for ropes - Part 2: Cold drawn non alloy steel wire for ropes for general applications

Fils et produits tréfilés en acier - Fils pour câbles - Partie 2: Fil écroui à froid par tréfilage en acier non allié pour câbles d'usage courant

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This European Standard was approved by CEN on 20 January 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.

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Contents

page

Foreword 3

1 Scope 4

2 Normative references 4

3 Product designation 4

4 General conditions of manufacture 5

5 Characteristics of wire 5
5.1 Tensile strength grades 5
5.2 Requirements for wire characteristics 6

6 Test methods 10
6.1 General 10
6.2 Measurement of diameter 10
6.3 Tensile test 10
6.4 Reverse bend test 10
6.5 Torsion test 10
6.6 Inspection of zinc or Zn95/Al5 alloy coating 10

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Foreword

This document (EN 10264-1:2002) 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 September 2002, and conflicting national standards shall be withdrawn at the latest by September 2002.

This European Standard for wire for ropes is made up of the following parts:

Part 1: General requirements

Part 2: Cold drawn non alloy steel wire for ropes for general applications

Part 3: Cold drawn and cold shaped non alloy steel wire for high duty applications

Part 4: Stainless steel wire

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.

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1 Scope

This part of this European Standard defines cold drawn non alloy steel wire used for the manufacture of:

— Ropes for general applications and lifts;

— Ropes for applications for which there is no specific EN standard.

This part of this standard does not apply to steel wire taken from manufactured ropes.

This part of this European standard specifies the following for cold drawn non alloy steel wire for ropes for general applications:

— dimensional tolerances;

— mechanical characteristics;

— requirements relating to the chemical composition of the steel wire;

— conditions to be satisfied by any coating.

In addition to the requirements of this part of this European standard, the requirements of prEN 10264-1 also apply.

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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).

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EN 10016-1, *Non-alloy steel rod for drawing and/or cold rolling — Part 1: General requirements.*

EN 10016-2, *Non alloy steel rod for drawing and/or cold rolling — Part 2: Specific requirements for general purposes rod.*

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

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

EN 10264-1, *Steel wire and wire products – Steel wire for ropes – Part 1: General requirements.*

3 Product designation

The designation of round wire for ropes, covered by this part of EN 10264, shall be based on the nominal diameter (*d*), surface appearance and tensile strength classification. The abbreviation for the surface finish condition is:

U (uncoated) for bright wire

A or B for zinc or zinc alloy coating depending on coating class.

SIST EN 10264-2:2003

A distinction is made between a zinc and a zinc alloy coating by the addition in brackets of “Zn/Al” for the zinc alloy.

EXAMPLE 1:

Wire for rope for general applications with nominal diameter *d* = 1,5 mm, surface appearance bright (U), tensile strength grade 1770 MPa.

Designation rope wire EN 10264- 2 - 1,5 - U - 1770

EXAMPLE 2:

Wire for rope for general applications with a nominal diameter *d* = 2,5 mm, zinc coated class A, tensile strength grade 1370 MPa.

Designation rope wire EN 10264 2 - 2,5 - A - 1370

EXAMPLE 3:

Wire for rope for general applications with a nominal diameter *d* = 1,8 mm, coated with zinc alloy, class B, tensile strength grade 1770 MPa.

Designation rope wire EN 10264- 2 - 1,8 - B(Zn/Al) - 1770

4 General conditions of manufacture

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The drawn wire shall be manufactured using wire rod in accordance with EN 10016-1 and EN 10016-2.

The finished wire shall show no surface defects or internal defects prejudicial to its use.

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When specified, drawn wire shall be supplied with zinc coating or Zn95/Al5 coating. Unless otherwise specified, the zinc used for the zinc coating shall have a purity of 99,9 %, other zinc alloys are subject to agreement.

NOTE If required by the purchaser, the quality of the zinc or zinc alloy used for the coating material should be certified by the manufacturer. Because of the reaction between the base material and coating material, which is inherent to the process, the composition of the coating on the wire is different to that of the coating bath.

5 Characteristics of wire

5.1 Tensile strength grades

The tensile strength grades are specified in Table 1.

SIST EN 10264-2:2003

Table 1 — Tensile strength grades and ranges of nominal diameters

Tensile strength grade - MPa[a]	Range of nominal diameters - mm	
	Bright and coated[b] – Class B	Coated[b] – Class A
	Class B	Zinc or Zn95/Al5 Class A
1 180	0,20 to 1,80	-
1 370	0,20 to 7,00	0,70 to 7,00
1 570	0,20 to 7,00	0,70 to 7,00
1 770	0,20 to 6,00	0,70 to 6,20
1 960	0,20 to 5,00	0,70 to 4,20
2 160	0,20 to 4,00	-

[a] 1MPa = 1 N/mm^2

[b] Coated means zinc or Zn95/Al5 alloy.

5.2 Requirements for wire characteristics

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The requirements for wire are specified in Table 2.

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Table 2 — Requirements for mechanical characteristics of wire

Nominal diameter *d* of wire	Diameter tolerances		Minimum number of reverse bends										Minimum number of torsions									Minimum mass of coating g/m²	
	Bright and coated[a] – Class B	Coated[a] – Class A	*R*	Bright and coated[a] – Class B					Coated[a] – Class A				Bright and coated[a] – Class B					Coated[a] – Class A					
				Tensile strength grade – MPa[b]									Tensile strength grade – MPa[b]										
	mm		mm	1180 & 1370	1570	1770	1960	2160	1370	1570	1770	1960	1180 & 1370	1570	1770	1960	2160	1370	1570	1770	1960	Class B	Class A
0,20 ≤ *d* < 0,25	± 0,008	-																				20	
0,25 ≤ *d* < 0,30	± 0,008	-																				30	
0,30 ≤ *d* < 0,40	± 0,01	± 0,025																				30	
0,40 ≤ *d* < 0,50	± 0,01	± 0,025																				40	85
0,50 ≤ *d* < 0,55	± 0,015	± 0,03	1,75	16	15	14	13	12					34	30	28	25	23					50	100
0,55 ≤ *d* < 0,60	± 0,015	± 0,03	1,75	14	14	13	12	11					34	30	28	25	23					50	100
0,60 ≤ *d* < 0,65	± 0,015	± 0,03	1,75	13	12	11	10	9					34	30	28	25	23					60	115
0,65 ≤ *d* < 0,70	± 0,015	± 0,03	1,75	12	11	10	9	8					34	30	28	25	23					60	115
0,70 ≤ *d* < 0,75	± 0,015	± 0,03	2,5	19	17	16	15	14		13	12	11	34	30	28	25	23		21	19	17	60	130
0,75 ≤ *d* < 0,80	± 0,015	± 0,03	2,5	18	16	15	14	13		12	11	10	34	30	28	25	22		21	19	17	60	130
0,80 ≤ *d* < 0,85	± 0,015	± 0,03	2,5	16	14	13	12	11		11	10	9	34	30	28	25	22		21	19	17	70	145
0,85 ≤ *d* < 0,90	± 0,015	± 0,03	2,5	15	13	12	11	10		10	9	8	34	30	28	25	22		21	19	17	70	145
0,90 ≤ *d* < 0,95	± 0,015	± 0,03	2,5	14	12	11	10	9		9	8	7	34	30	28	25	22		21	19	17	70	155
0,95 ≤ *d* < 1,00	± 0,015	± 0,03	2,5	13	11	10	9	8		8	7	6	34	30	28	25	22		21	19	17	70	155
1,00 ≤ *d* < 1,10	± 0,02	± 0,04	3,75	20	18	17	16	14		15	14	12	33	29	26	23	21		20	18	13	80	165
1,10 ≤ *d* < 1,20	± 0,02	± 0,04	3,75	19	17	16	15	13		14	13	11	33	29	26	23	21		20	18	13	80	165
1,20 ≤ *d* < 1,30	± 0,02	± 0,04	3,75	18	16	15	14	12		12	11	9	33	28	25	22	20		18	15	10	90	180
1,30 ≤ *d* < 1,40	± 0,02	± 0,04	3,75	16	14	13	12	10		10	8	7	33	28	25	22	19		18	15	10	90	180
1,40 ≤ *d* < 1,50	± 0,02	± 0,04	3,75	14	12	11	10	9		8	7	6	33	28	25	22	19		18	15	10	100	195
1,50 ≤ *d* < 1,60	± 0,02	± 0,04	5	16	15	14	13	12		11	10	9	33	28	25	22	19		18	15	10	100	195
1,60 ≤ *d* < 1,65	± 0,02	± 0,04	5	15	14	13	12	11		10	9	8	33	28	25	22	19		18	15	10	100	195
1,65 ≤ *d* < 1,70	± 0,02	± 0,04	5	15	14	13	12	11		10	9	8	33	28	25	22	19		18	15	10	100	205
1,70 ≤ *d* < 1,80	± 0,02	± 0,05	5	14	12	11	11	10		9	8	7	33	28	25	22	19		18	15	10	100	205
1,80 ≤ *d* < 1,85	± 0,025	± 0,05	5	13	11	10	10	8		8	7	6	32	27	24	21	18		17	14	9	100	205
1,85 ≤ *d* < 1,90	± 0,025	± 0,05	5	13	11	10	10	8		8	7	6	32	27	24	21	18		17	14	9	115	215
1,90 ≤ *d* < 2,00	± 0,025	± 0,05	5	12	10	9	9	7		7	6	5	32	27	24	21	18		17	14	9	115	215
2,00 ≤ *d* < 2,10	± 0,025	± 0,05	7,5	17	16	15	14	12		13	12	11	32	27	24	21	18		17	14	9	115	215
2,10 ≤ *d* < 2,15	± 0,025	± 0,06	7,5	16	15	14	13	11		12	11	10	32	27	24	21	18		17	14	9	115	215
2,15 ≤ *d* < 2,20	± 0,025	± 0,06	7,5	16	15	14	13	11		12	11	10	32	27	24	21	18		17	14	9	125	230

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