



SLOVENSKI STANDARD

SIST EN 10016-1:1997

01-maj-1997

**Vročje valjana žica iz nelegiranega jekla za vlečenje in/ali hladno valjanje - 1. del:
Splošne zahteve**

Non-alloy steel rod for drawing and/or cold rolling - Part 1: General requirements

Walzdraht aus unlegiertem Stahl zum Ziehen und/oder Kaltwalzen - Teil 1: Allgemeine Anforderungen

Fil machine en acier non-allié destiné au tréfilage et/ou au laminage à froid - Partie 1:
Prescriptions générales

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Ta slovenski standard je istoveten z: **EN 10016-1:1994**

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ICS:

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

EN 10016-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 1994

ICS 77.140.70

Descriptors: Iron and steel products, unalloyed steels, wire drawing, cold rolling, wire rod, classifications, designation, specifications, inspection, marking

English version

Non-alloy steel rod for drawing and/or cold rolling - Part 1: General requirements

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This European Standard was approved by CEN on 1994-11-10. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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

CEN

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

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

Contents

	Page
FOREWORD	3
1 SCOPE	4
2 NORMATIVE REFERENCES	4
3 DEFINITIONS	5
4 CLASSIFICATION AND DESIGNATION	5
5 INFORMATION TO BE SUPPLIED BY THE PURCHASER	6
6 PRODUCTION PROCESS	6
7 REQUIREMENTS	7
7.1 General	7
7.2 Quality assurance	7
7.3 Method of delivery	7
7.4 Delivery condition	7
8 DIMENSIONS, MASS AND TOLERANCES	7
9 INSPECTION	7
9.1 Inspection and inspection documents	7
9.2 Extension of inspection	7
9.3 Acceptance unit and number of samples and test pieces	8
9.4 Test of chemical composition	9
9.5 Test of decarburization, surface defects, non-metallic inclusions and core segregation	9
9.6 Test methods	9
9.7 Invalidation of tests	10
9.8 Retests	10
9.9 Sorting or reprocessing	10
10 MARKING	10
11 COMPLAINTS AFTER DELIVERY	10
Annex A: Determination of core segregation (Normative)	11

FOREWORD

This European Standard EN 10016 is subdivided as follows:

- Part 1 : General requirements
- Part 2 : Specific requirements for general purpose rod
- Part 3 : Specific requirements for rimmed and rimmed substitute low carbon steel rod
- Part 4 : Specific requirements for rod for special applications

This European Standard has been drawn up by ECISS/TC 15 "Wire-rod - Qualities, dimensions, tolerances and specific tests" whose Secretariat is held by UNI/UNSIDER.

Part 1-2-3 and 4 of this European Standard replace:

EURONORM 16(1987): "Non alloy steel wire rod for cold drawing and/ or cold rolling".

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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 1995, and conflicting national standards shall be withdrawn at the latest by June 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.

1 SCOPE

1.1 This European Standard is applicable to rod of non-alloy steel intended for wire drawing and/or cold rolling. The cross-section of the rod may be round, square, rectangular, hexagonal, half-round or another shape and as a general rule of nominal size 5 mm or above (see EURONORM 17) : the surface is smooth.

1.2 It is not applicable to following products for which standards exist or are under study such as:

- steel rod intended for heat treatment (see EN 10083 and EURONORM 84, 85 and 86);
- rod of free-cutting steels (see EURONORM 87);
- steel rod for cold heading and cold extrusion (see EURONORM 119);
- steel rod intended for the production of electrodes and products for welding (see EURONORM 133);
- steel rod for welded fabric for reinforcement for concrete (see prENV 10080);
- steel rod for wire for high fatigue strength mechanical springs, such as valve springs.

1.3 In addition to the requirements of this standards the general technical delivery requirements specified in EN 10021 apply.

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).
- EURONORM 17(1) General purpose rod of non-alloy steel for drawing - Dimensions and tolerances
- EURONORM 18(1) Selection and preparation of samples and test pieces for steel and iron and steel products

(1) It may be agreed at the time of ordering, until this EURONORM has been adopted as a European Standard, that either this EURONORM or a corresponding national standard should be applied

EN 10020	Definition and classification of grades of steel
EN 10021	General technical delivery requirements for steel and iron and steel products
EN 10027/1	Designation systems for steel - Part 1 : Steel names; principal symbols
EN 10027/2	Designation systems for steel - Part 2 : Steel numbers
EN 10052	Vocabulary of heat treatment terms for ferrous products
EN 10079	Definition of steel products
EURONORM 104(1)	Determination of the depth of decarburization of non-alloy and low alloy structural steels
EN 10204	Metallic products - Types of inspection documents
ECISS IC 10	Designation systems for steel - Additional symbols for steel names.

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3 DEFINITIONS

For the purpose of this standard the following definitions apply in addition to the definitions in EU 18, EN 10020, EN 10021, EN 10052 and EN 10079:

- heat analysis: A chemical analysis representative of the heat determined by the steelmaker at his discretion in a manner of his choice
- product analysis: A chemical analysis carried out on a sample of the delivered product

4 CLASSIFICATION AND DESIGNATION

4.1 Classification

The classification of the steel grades covered by this European Standard according to EN 10020 is indicated in table 1 of EN 10016 part 2, 3 and 4 for the corresponding steel grades.

(1) It may be agreed at the time of ordering, until this EURONORM has been adopted as a European Standard, that either this EURONORM or a corresponding national standard should be applied

4.2 Designation

4.2.1 Steel names

For the steel grades covered by this European Standard, the steel names as given in table 1 of EN 10016 part 2,3 and 4 are allocated in accordance with EN 10027/1 and information circular ECISS IC 10.

4.2.2 Steel numbers

For the steel grades covered by this European Standard the steel numbers as given in table 1 of EN 10016 part 2,3 and 4 are allocated in accordance with EN 10027/2.

5 INFORMATION TO BE SUPPLIED BY THE PURCHASER

The following information shall be supplied by the purchaser at the time of enquiry and order, to enable the supplier to comply satisfactorily with the requirements of this European Standard :

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- a) quantity to be delivered;
 - b) product denomination (rod);
 - c) cross-section (round, square, hexagonal, etc);
 - d) reference to the dimensional standard EU 17;
 - e) nominal dimensions; [catalog/standards/sist/14d65cc6-7a1a-4c32-9617-1997](https://standards.iteh.ai/catalog/standards/sist/14d65cc6-7a1a-4c32-9617-1997)
 - f) reference to this European Standard; 1997
 - g) steel name or steel number (see 4.2); h) dimensions and mass of coils;
 - i) surface condition (where different from the as-rolled condition);
 - j) where applicable, indication of the type of descaling (chemical or mechanical);
 - k) where applicable, the type of inspection and inspection document in accordance with EN 10021 and EN 10204 respectively (see 9.1);
 - l) where applicable, the method of binding and labelling;
 - m) where applicable, if the steel grade shall be suitable for galvanization;
 - n) where applicable, suitable for direct drawing;
 - o) where applicable, suitable for patenting.

6 PRODUCTION PROCESS

The steelmaking and fabrication processes shall be made known to the purchaser.

Those processes that are specifically agreed shall not be changed without prior agreement of the purchaser.

7 REQUIREMENTS

7.1 General

The manufacturer is responsible, using the means he thinks fit, for inspecting his production from the point of view of the various quality criteria specified. In view of the fact that it is impossible in practice to inspect coils of rod apart from at the ends of the coils delivered, it cannot be proved that no value greater than the specified limits is to be found in the coil as a whole.

Statistical evaluation of performances applicable to all coils may be agreed between the purchaser and the manufacturer at the time of ordering.

7.2 Quality assurance

The products shall be supplied under a recognized quality assurance system.

7.3 Method of delivery

The products shall be delivered by heat or part of a heat.
The number of heat per delivery shall be minimized as far as possible.

7.4 Delivery condition

Rod shall be supplied in the as-rolled state, in coils of one continuous length with non-aligned turns, but capable of being unwound in a regular manner during subsequent processing.

The coils shall be cut back at both ends to provide a product of uniform shape and properties.

8 DIMENSIONS, MASS AND TOLERANCES

The dimensions, mass and tolerances of the products shall be in accordance with the requirements of EU 17.

9 INSPECTION

9.1 Inspection and inspection documents

The provisions of EN 10021 and EN 10204 shall apply.

9.2 Extension of inspection

If the order is accompanied by a request for an inspection certificate, the inspection shall be carried out in accordance with table 1.