



SLOVENSKI STANDARD

SIST EN 10021:2007

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SIST EN 10021:1996

Splošni tehnični dobavni pogoji za jeklene izdelke

General technical delivery conditions for steel products

Allgemeine technische Lieferbedingungen für Stahlerzeugnisse

Conditions générales techniques de livraison des produits en acier

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ICS:

77.140.01	Železni in jekleni izdelki na splošno	Iron and steel products in general
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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
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English Version

General technical delivery conditions for steel products

Conditions générales techniques de livraison des produits
en acier

Allgemeine technische Lieferbedingungen für
Stahlerzeugnisse

This European Standard was approved by CEN on 25 November 2006.

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.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 10021:2006) has been prepared by Technical Committee ECISS/TC 9 “Technical conditions of delivery and quality control”, the secretariat of which is held by IBN/BIN.

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 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EN 10021:2006 (E)**1 Scope**

This European Standard specifies the general technical delivery conditions for all steel products covered by EN 10079 with the exception of steel castings and powder metallurgical products.

Where the delivery requirements agreed for the order or specified in the appropriate product specification differ from the general technical delivery conditions defined in this European Standard, then the requirements agreed for the order or specified in the appropriate product specification apply.

NOTE Inspection documents are covered by EN 10168 and EN 10204.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CR 10261, *ECISS Information Circular 11 — Iron and steel — Review of available methods of chemical analysis*

EN 10020:2000, *Definition and classification of grades of steel*

EN 10052:1993, *Vocabulary of heat treatment terms for ferrous products*

EN 10079:1992, *Definition of steel products*

EN 10204:2004, *Metallic products — Types of inspection documents*

EN ISO 377, *Steel and steel products — Location and preparation of samples and test pieces for mechanical testing (ISO 377:1997)*

ISO 31-0:1992, *Quantities and units — Part 0: General principles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10020:2000, EN 10052:1993, EN 10079:1992, EN 10204:2004 and the following apply.

3.1**cast (heat) analysis**

chemical analysis representative of the cast (heat) determined by the steelmaker at his discretion in a manner of his choice

3.2**inspection**

conformity evaluation by observation and judgment accompanied as appropriate by measurement, testing or gauging

3.3**inspection representative(s)**

one or more individual(s) who is/are either:

- a) the inspector(s) designated in any official regulation;
- b) the manufacturer's authorized inspection representative(s), independent from the manufacturing department;
- c) the purchaser's authorized inspection representative(s)

NOTE 1 The inspection representatives mentioned in a) and c) are referred to in the text as external inspection representatives.

NOTE 2 The inspection representatives validate the inspection and test results. Inspection and testing can also be carried out by the manufacturing department.

3.4

non-specific inspection

inspection carried out by the manufacturer in accordance with his own procedures to assess whether products defined by the same product specification and made by the same manufacturing process are in compliance with the requirements of the order or not

NOTE The products inspected may not necessarily be the products actually supplied.

3.5

product analysis

chemical analysis carried out on a sample of the product

3.6

rough specimen

part of the sample having undergone forming and/or machining, followed by heat treatment where appropriate, for the purpose of producing test pieces (see Figure 1)

3.7

sample

sufficient quantity of material taken from the sample product for the purposes of producing one or more test pieces (see Figure 1)

NOTE In certain cases, the sample can be the sample product itself or the rough specimen.

3.8

sample product

item (a sheet, for example) selected from a test unit for the purpose of obtaining test pieces (see Figure 1)

NOTE In certain cases the sample product can be the sample itself.

3.9

sequential testing

group or series of tests from which the average and individual results are used to demonstrate that the requirements of the order and/or product specification have been satisfied

3.10

specific inspection

inspection carried out, before delivery, according to the product specification on the products to be supplied or on test units of which the products supplied are part, in order to verify that these products are in compliance with the requirements of the order

3.11

testing

determination of one or more characteristics according to a procedure

3.12

test piece

part of the sample, with specified dimensions, machined or un-machined, brought to a required condition for submission to a given test (see Figure 1)

NOTE In certain cases, the test piece can be the sample itself or the rough specimen.

EN 10021:2006 (E)**3.13****test unit**

number of pieces or mass of products to be accepted or rejected together, on the basis of the tests to be carried out on sample products in accordance with the requirements of the product specification or order (see Figure 1)

4 Information to be supplied by the purchaser

4.1 The purchaser shall select the steel grade, the shape of the product and the dimensions, taking the intended processing and use into account. He may take the manufacturer's advice in making his choice.

The order shall provide all the information necessary for describing the required product and its characteristics and details concerning delivery, e.g.:

- a) mass, length, area, number of pieces;
- b) the product form (it may be a drawing number for example);
- c) the nominal/specified dimensions;
- d) the tolerances on the characteristics in a), b) and c);
- e) the steel designation;
- f) the delivery conditions (type of heat treatment, surface treatment etc.);
- g) the specific requirements for surface and/or internal quality (see 7.4);
- h) the type of inspection document (see EN 10204) if required;
- i) the inspection requirements when not specified in the product specification (see Clause 8);
- j) the requirements for marking, packing and loading;
- k) any optional (supplementary) requirements provided for by the specification to apply.

4.2 The information in 4.1 shall be specified either by reference to one or more standards or, in the absence of a standard, by stipulation of the required characteristics and conditions.

If, in an order, reference is made to a given standard without specifying its edition date, this reference shall be interpreted as being the latest edition at the date of the order acknowledgment.

5 Manufacturing process

The manufacturing process shall be left to the discretion of the manufacturer unless otherwise agreed at the time of enquiry and order or otherwise specified in the product specification.

NOTE The manufacturing process covers all operations up to the delivery of the product.

6 Supply by an intermediary

When a product is supplied by an intermediary, he shall submit to the purchaser, without any changes to it, the manufacturer's documentation.

This documentation from the manufacturer shall be accompanied by suitable means of identification of the product, in order to ensure the traceability between the product and the documentation (see Clause 10).

If the intermediary has changed the dimensions of the product, he shall supply an additional document of compliance for these particular new conditions. This also applies to all special requirements given in the order and not defined in the manufacturer's documentation.

NOTE Any organization which during processing changes the metallurgical state of the product is considered as a product or material manufacturer.

7 Requirements

7.1 General

The products shall comply with the requirements of the order. Consequently, the manufacturer shall carry out appropriate process control and inspection to ensure that the delivery complies with the requirements of the order, irrespective of the type of inspection document required (see Clause 8).

NOTE Examples for quality management systems can be found in appropriate documents, e.g. EN ISO 9001.

7.2 Chemical composition

Requirements concerning the chemical composition shall be considered to refer to the cast (heat) analysis unless they refer expressly to the product analysis.

7.3 Mechanical properties

7.3.1 Where, in the product specification, the mechanical properties are specified by dimensional categories e.g. based on thickness or diameter, the dimension to be considered is the nominal/specified dimension of the product at the prescribed location for taking samples for mechanical tests.

7.3.2 In the absence of any specification in the order or the product specification, the mechanical properties relate to the as-delivered condition of the products.

7.3.3 Where an impact energy value is specified, without any further information, it shall be interpreted as representing the average value of those individual tests which shall be assessed as described in 8.3.4.2.

7.4 Surface and internal quality

7.4.1 General

All products shall have a finish appropriate to the manufacturing route. Minor surface and internal discontinuities which may occur under normal manufacturing conditions shall not be a basis for rejection.

Detailed requirements referring to the surface and internal quality shall, where appropriate, be agreed at the time of enquiry and order, by reference to the appropriate European Standard or other relevant standard if no European Standard exists.

7.4.2 Detection of discontinuities

When special techniques (radiography, ultrasonics, magnetic detection etc.) are required to detect discontinuities, they shall, as well as the test frequency and the acceptance criteria, be as specified in the product specification or as agreed at the time of enquiry and order.

7.4.3 Removal of discontinuities

Surface discontinuities may be removed by appropriate means provided that the dimensions and properties of the product remain within the limits specified in either the order, product specification, dimensional standard or surface quality standard.