



SLOVENSKI STANDARD

oSIST prEN 10025-2:2018

01-september-2018

Vročje valjani izdelki iz konstrukcijskih jekel - 2. del: Tehnični dobavni pogoji za nelegirana konstrukcijska jekla

Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels

Warmgewalzte Erzeugnisse aus Baustählen - Teil 2: Technische Lieferbedingungen für unlegierte Baustähle

Produits laminés à chaud en aciers de construction - Partie 2 : Conditions techniques de livraison pour les aciers de construction non alliés

Ta slovenski standard je istoveten z: prEN 10025-2

ICS:

77.140.10	Jekla za toplotno obdelavo	Heat-treatable steels
77.140.45	Nelegirana jekla	Non-alloyed steels
77.140.50	Ploščati jekleni izdelki in polizdelki	Flat steel products and semi-products

oSIST prEN 10025-2:2018

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 10025-2

June 2018

ICS 77.140.10; 77.140.45; 77.140.50

Will supersede EN 10025-2:2004

English Version

Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels

Produits laminés à chaud en aciers de construction -
Partie 2 : Conditions techniques de livraison pour les
aciers de construction non alliés

Warmgewalzte Erzeugnisse aus Baustählen - Teil 2:
Technische Lieferbedingungen für unlegierte
Baustähle

This draft European Standard is submitted to CEN members for second enquiry. It has been drawn up by the Technical Committee ECISS/TC 103.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	4
1 Scope	6
2 Normative references	6
2.1 General standards	6
2.2 Standards on dimensions and tolerances	7
2.3 Standards on testing	8
3 Terms and definitions	8
4 Classification and designation	9
4.1 Classification	9
4.1.1 Main quality classes	9
4.1.2 Grades and qualities	9
4.2 Designation	9
5 Information to be supplied by the purchaser	10
5.1 Mandatory information	10
5.2 Options	10
6 Manufacturing process	10
6.1 Steel making process	10
6.2 Deoxidation and grain structure	10
6.3 Delivery conditions	11
7 Requirements	11
7.1 General	11
7.2 Chemical composition	11
7.3 Mechanical properties	12
7.3.1 General	12
7.3.2 Impact properties	12
7.3.3 Improved deformation properties perpendicular to the surface	13
7.4 Technological properties	13
7.4.1 Weldability	13
7.4.2 Formability and flame straightening	13
7.4.3 Hot-dip zinc-coating	14
7.4.4 Machinability	14
7.5 Surface properties	15
7.5.1 Strip	15
7.5.2 Plates and wide flats	15
7.5.3 Sections	15
7.5.4 Bars and rods	15
7.6 Internal soundness	15
7.7 Dimensions, tolerances on dimensions and shape, mass	15
8 Inspection	16
8.1 General	16
8.2 Type of inspection and inspection document	16
8.3 Tests to be carried out for specific inspection	16
9 Frequency of testing and preparation of samples and test pieces	17

9.1	Frequency of testing	17
9.1.1	Chemical analysis	17
9.1.2	Mechanical tests.....	17
9.2	Preparation of samples and test pieces.....	17
9.2.1	Selection and preparation of samples for chemical analysis.....	17
9.2.2	Location of samples and orientation of test pieces for mechanical tests.....	17
9.2.3	Preparation of test pieces for mechanical tests.....	18
9.3	Identification of samples and test pieces.....	18
10	Test methods.....	18
10.1	Chemical analysis	18
10.2	Mechanical tests.....	19
10.2.1	Tensile test.....	19
10.2.2	Impact test.....	19
10.3	Ultrasonic testing.....	19
10.4	Retests	19
11	Marking, labelling, packaging	20
12	Complaints	20
13	Options	20
Annex A (normative)	Location of samples and test pieces.....	36
Annex B (informative)	List of Options of EN 10025-2 to –6	39
Bibliography		41

prEN 10025-2:2018 (E)**European foreword**

This document (prEN 10025-2:2018) has been prepared by Technical Committee ECISS/TC 103 “Structural steels other than reinforcement”, the secretariat of which is held by DIN.

This document is currently submitted to the second CEN Enquiry.

This document will supersede EN 10025-2:2004.

This European Standard consists of the following parts, under the general title *Hot rolled products of structural steels*:

Part 1: General

Part 2: Technical delivery conditions for non-alloy structural steels

Part 3: Technical delivery conditions for normalized/normalized rolled weldable fine grain structural steels

Part 4: Technical delivery conditions for thermomechanical rolled weldable fine grain structural steels

Part 5: Technical delivery conditions for structural steels with improved atmospheric corrosion resistance

Part 6: Technical delivery conditions for flat products of high yield strength structural steels in the quenched and tempered condition

For a short transition period there will be a coexistence of EN 10025-1:2004 with EN 10025-2:2018 to EN 10025-6:2018, since the new EN 10025-1 has to fulfil the requirements of the CPR and will therefore be published later. For this short transition period up-to-the publication of the next edition of part 1 the following has to be taken into account for EN 10025-1:2004:

- a) all dated and undated references to EN 10025-1:2004 to EN 10025-6:2004 are unchanged to this version with following exception: In 9.2.2.1 the reference must be 8.3.1 and 8.3.2 instead of 8.4.1 and 8.4.2;
- b) Clauses 5, 12 and 13 of EN 10025-1:2004 are no longer relevant.

The main changes with respect to the previous edition are listed below:

- a) part 2 is now a stand-alone standard for technical delivery conditions including the preparation of samples and test pieces, the test methods, the marking, labelling and packaging and the drawings;
- b) for construction purposes this standard and part 1 must be used together;
- c) requirements for elements not defined were added to 7.2.1 and 7.2.2;
- d) Option 33 was added, Options 9 and 21 were deleted;
- e) Si-content in 7.2.5 was changed;
- f) 7.4.3 concerning hot-dip zinc coating was modified;
- g) key to Figure A.1 was updated;

- h) steel grade S450 was deleted and steel grades S460 and S500 were added;
- i) Annex B was deleted;
- j) references were updated and the document was editorially revised.

prEN 10025-2:2018 (E)**1 Scope**

This document specifies the technical delivery conditions for flat and long products as well as semi-finished products which are meant for further processing to flat and long products of hot rolled non-alloy quality steels in the grades and qualities given in Tables 1 to 5 (chemical composition) and Tables 6 to 8 (mechanical properties) in the usual delivery conditions as given in 6.3. Three engineering steels are also specified in this document (see Tables 2 and 4) (chemical composition) and Table 7 (mechanical properties). This document does not apply to structural hollow sections (see EN 10210-1 and EN 10219-1) and tubes.

The technical delivery conditions apply to:

- thicknesses ≥ 3 mm and ≤ 150 mm for long products of steel grade S460JR, J0, J2, K2 and S500J0;
- thicknesses ≤ 400 mm for flat products of qualities JR, J0, J2 and K2;
- thicknesses ≤ 250 mm for flat and long products of all other grades and qualities.

The steels specified in this document are not intended to be heat treated except products delivered in the delivery condition +N. Stress relieving is permitted. Products delivered in +N condition can be hot formed and/or normalized after delivery (see Clause 3).

Semi-finished products which are to be converted to rolled finished products conforming to this document should be the subject of special agreement at the time of the order. The chemical composition can also be agreed at the time of the order, however the values should be within the limits of Tables 1 and 2.

For certain grades and product forms suitability for particular applications may be specified at the time of the order (see 7.4.2, 7.4.3 and Table 9).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

2.1 General standards

EN 1011-2, *Welding — Recommendations for welding of metallic materials — Part 2: Arc welding of ferritic steels*

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

EN 10021, *General technical delivery conditions for steel products*

EN 10025-1:2004, *Hot rolled products of structural steels — Part 1: General technical delivery conditions*

EN 10027-1, *Designation systems for steels — Part 1: Steel names*

EN 10027-2, *Designation systems for steels — Part 2: Numerical system*

EN 10079, *Definition of steel products*

EN 10163-1, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections — Part 1: General requirements*