SLOVENSKI STANDARD
SIST EN 10149-3:1998

01-avgust-1998

Vroče valjani ploščati izdelki za hladno preoblikovanje iz jekel z veliko napetostjo tečenja - 3. del: Dobavni pogoji za normalizirana ali normalizacijsko valjana jekla

Hot-rolled flat products made of high yield strength steels for cold forming - Part 3: Delivery conditions for normalized or normalized rolled steels

Warmgewalzte Flacherzeugnisse aus Stählen mit hoher Streckgrenze zum Kaltumformen - Teil 3: Lieferbedingungen für normalisierend gewalzte Stähle

Produits plats laminés a chaud en aciers a haute limite d'élasticité pour formage a froid - Partie 3: Conditions de livraison des aciers a l'état normalisé ou laminage normalisant

Ta slovenski standard je istoveten z: **EN 10149-3:1995**

ICS:

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

SIST EN 10149-3:1998 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 10149-3

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ICS 77.140.10; 77.140.50

Descriptors: iron and steel products, hot rolled products, high yield strength steels, cold-working, metal rolling, designation, classifications, grades:quality, chemical composition, mechanical properties, inspection, tests, marking

English version

Hot-rolled flat products made of high yield strength steels for cold forming - Part 3: Delivery conditions for normalized or normalized rolled steels

Produits plats laminés à chaud en aciers à haute limite d'élasticité pour formage à froid - Partie 3: Conditions de livraison des aciers à l'état normalisé ou laminage normalisant

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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.

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CEN

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

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

Contents

Foreword

This European Standard was prepared by the Technical Committe ECISS/TC 10 "Structural steels - Qualities" of which the secretariat is held by NNI.

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of an identical text or by endorsement, at the latest by March 1996, and conflicting national standards shall be withdrawn at the latest by March 1996.

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

Part 3 of this European Standard, in addition to part 1, specifies requirements for flat products made of weldable, hot-rolled, high yield strength steels for cold forming.
The grades are given in table 1 (chemical composition) and table 2 (mechanical properties) and are supplied in the normalized or normalized rolled delivery condition as given in 7.2.

The steels specified in this European Standard are applicable to hot-rolled flat products in the thickness range of ≥ 1,5 mm and ≤ 20 mm.

2 Normative references

The normative references as given in EN 10149-1 shall apply.

3 Definitions

The definitions given in EN 10149-1 shall apply.

4 Information to be supplied by the purchaser

4.1 General

The information to be supplied by the purchaser shall be in accordance with EN 10149-1.

4.2 Options

The options given in EN 10149-1 and clause 11 shall apply.

5 Dimensions, mass and tolerances

5.1 Dimensions and tolerances

The dimensions and tolerances shall be in accordance EN 10149-1.

5.2 Mass of steel

The calculated mass of steel shall be determined in accordance with EN 10149-1.

6 Classification and designation

6.1 Classification

6.1.1 Classification

All steel grades of Part 3 of this European Standard are alloy quality steels according to EN 10020.

6.1.2 Grades

The subdivision of steel grades shall comply with EN 10149-1.

6.2 Designation

The designation shall comply with EN 10149-1.

NOTE: For a list of corresponding former national designations and the former designation from EURONORM 149 (1980) see Annex B, table B.1.

7 Technical requirements

7.1 Steel manufacturing process

The steel manufacturing process shall be in accordance with EN 10149-1. See clause 11, option 1.

7.2 Delivery condition

The products shall be supplied in the normalized or normalized rolled delivery condition.
The delivery condition of descaled surfaces shall be in accordance with EN 10149-1.
See clause 11, option 2.

7.3 Chemical composition

The requirements of EN 10149-1 shall apply.

The chemical composition determined by ladle analysis shall comply with the specified values of table 1
See clause 11, option 3.

7.4 Mechanical properties

7.4.1 General

Under the inspection and testing conditions as specified in clause 8 and in the delivery condition as specified in 7.2 the mechanical properties shall comply with the values given in table 2.

7.4.2 Impact energy

If agreed at the time of the enquiry and order the verification of the impact energy value shall be carried out in accordance with EN 10149-1. See clause 11, option 5.

7.5 **Technological properties**

7.5.1 Weldability

Weldability shall be in accordance with EN 10149-1.

7.5.2 Formability

NOTE: Recommendations regarding hot and cold forming are laid down in ECSC IC 2.

7.5.2.1 Cold forming

Annex C contains indicative values for the inside bend radii for cold forming.

7.5.2.1.1 Flangeability

The products are suitable for flanging without cracking.

7.5.2.1.2 Roll forming

The suitability for roll forming shall be in accordance with EN 10149-1.
See clause 11, option 6.

7.5.3 Other requirements

If agreed at the time of enquiry and order all grades of this European Standard shall be suitable for hot-dip zinc-coating and shall comply with the relevant product quality requirements.
See clause 11, option 7.

7.6 **Surface finish**

The surface finish shall be in accordance with EN 10149-1.
See clause 11, option 8.

7.7 **Internal soundness**

The internal soundness shall be in accordance with EN 10149-1.
See clause 11, option 9.

8 **Inspection and testing**

8.1 **General**

The products shall be supplied in accordance with 8.1 of EN 10149-1.
See clause 11, option 10.

8.2 **Sampling**

Sampling shall be in accordance with EN 10149-1.

8.3 **Test units**

The test unit shall be in accordance with EN 10149-1.

8.4 **Verification of chemical composition**

The verification of the chemical composition shall be in accordance with EN 10149-1.
See clause 11, option 4.

8.5 **Preparation of samples and test pieces**

The preparation of samples and test pieces shall be in accordance with EN 10149-1.

8.5.1 Preparation of samples

The following samples shall be taken from one sample product of each test unit:

- one sample in the longitudinal direction in the case of product widths < 600 mm and in the transverse direction in the case of product widths ≥ 600 mm for tensile testing;
- one sample in the transverse direction for the bend test;
- one sample sufficient for one set of six impact test pieces (if an impact test is agreed at the time of the enquiry and order (see 7.4.2.1 in EN 10149-1).
  See clause 11, option 5.

(See Annex A).

8.6 **Test methods**

The test methods shall be in accordance with EN 10149-1.

8.7 **Retests and resubmission for testing**

The retests and resubmission for testing shall be in accordance with EN 10149-1.

8.8 **Inspection documents**

The inspection documents shall comply with EN 10149-1.

9 **Marking**

The marking shall comply with EN 10149-1.
See clause 11, option 11.

10 **Disputes**

In case of disputes EN 10149-1 applies.