SLOVENSKI STANDARD
oSIST prEN ISO 3887:2016

01-oktober-2016

Jekla - Določevanje globine razogličene plasti (ISO/DIS 3887:2016)

Steels - Determination of the depth of decarburization (ISO/DIS 3887:2016)

Stahl - Bestimmung der Entkohlungstiefe (ISO/DIS 3887:2016)

Aciers - Détermination de la profondeur de décarburation (ISO/DIS 3887:2016)

Ta slovenski standard je istoveten z: **prEN ISO 3887**

ICS:

77.040.99	Druge metode za preskušanje kovin	Other methods of testing of metals
77.080.20	Jekla	Steels

oSIST prEN ISO 3887:2016 **en,fr,de**

DRAFT INTERNATIONAL STANDARD

ISO/DIS 3887

ISO/TC **17**/SC **7**

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Steels — Determination of depth of decarburization

Aciers — Détermination de la profondeur de décarburation

ICS: 77.040.99

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five month enquiry.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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The committee responsible for ISO/DIS 3887 is ISO/TC 17, Steel, Subcommittee SC 7, Methods of testing (other than mechanical tests and chemical analysis).

This third edition cancels and replaces the second edition (ISO 3887:2003), which has been technically revised.

Steels — Determination of depth of decarburization

1 Scope

This International Standard defines the decarburization and specifies five methods of measuring the depth of decarburization of steel products.

2 Normative references

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

ISO 4545-1, *Metallic materials - Knoop hardness test - Part 1: Test method*

ISO 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 9556, *Steel and iron — Determination of total carbon content — Infrared absorption method after combustion in an induction furnace*

ISO 15349-2, *Unalloyed steel — Determination of low carbon content — Part 2: Infrared absorption method after combustion in an induction furnace (with preheating)*

ISO 14594, *Microbeam analysis — Electron probe microanalysis — Guidelines for the determination of experimental parameters for wavelength dispersive spectroscopy*

ISO 14707, *Surface chemical analysis — Glow discharge optical emission spectrometry (GD-OES) — Introduction to use*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
decarburization
loss of carbon from the surface zone of the steel where the loss is:

a) either partial decarburization, d_3;

b) or complete decarburization, also called ferrite decarburization, d_1, measured as the distance between the surface of the product and the point up to which carbon is below the solubility limit of carbon in ferrite so that only ferrite is present.

Note 1 to entry: The depth of complete decarburization as described in b) is determined by examination of the microstructure.

3.2
depth of functional decarburization
d_2
distance between the surface of the product and the point at which the carbon content or hardness is at the level where the performance of the product would be unaffected by a reduction in carbon (i.e., at the minimum level specified in the product standard)

3.3
depth of total decarburization
d_4
distance between the surface of the product and the point at which the carbon content is that of the unaffected core, the sum of the partial and the complete decarburization $d_3 + d_1$ being designated by the letters DD and expressed in millimetres, e.g., DD = 0,08 mm

Note 1 to entry: The various bands of decarburization are shown schematically in Figure 1. The boundaries separating the various types of decarburization are shown as hatched bands with the width of the band illustrating the practical variability in measurements due to the uncertainty of interpretation.

3.4
depth profile of carbon content
the curve indicating the relationship between the perpendicular distance from the surface of steel material and the carbon concentration

3.5
depth profile of hardness
the curve indicating the relationship between the perpendicular distance from the surface of steel material and the hardness