

Steel - Determination of yield strength increase by the effect of heat treatment [Bake-Hardening-Index]

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 10325:2006 sisaldab Euroopa standardi EN 10325:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 20.09.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 10325:2006 consists of the English text of the European standard EN 10325:2006.</p> <p>This document is endorsed on 20.09.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This document specifies the method for the determination of yield strength increase by the effect of heat treatment (Bake-Hardening-Index) for steel.</p>	<p>Scope: This document specifies the method for the determination of yield strength increase by the effect of heat treatment (Bake-Hardening-Index) for steel.</p>
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ICS 71.080.20, 77.040.10

Võtmesõnad: bake-hardening-index, definition, definitions, elongation, expansions, heat treatment, mechanical testing, proof stress, relief, resilience, sampling, sampling methods, steels, tensile testing, testing, testing conditions, yield strength

English Version

Steel - Determination of yield strength increase by the effect of heat treatment [Bake-Hardening-Index]

Aciers - Détermination de l'augmentation de la limite apparente d'élasticité due à un traitement thermique (index de durcissement à la cuisson [Bake-hardening])

Stahl - Bestimmung der Streckgrenzenerhöhung durch Wärmebehandlung (Bake-Hardening-Index)

This European Standard was approved by CEN on 7 July 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.

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Foreword

This document (EN 10325:2006) has been prepared by Technical Committee ECISS/TC 1 “Steel - Mechanical testing”, the secretariat of which is held by AFNOR.

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 February 2007, and conflicting national standards shall be withdrawn at the latest by February 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

1 Scope

This document specifies the method for the determination of yield strength increase by the effect of heat treatment (Bake-Hardening-Index) for steel.

NOTE This test is applied in particular, to steels showing a mechanism of bake hardening, which are specially intended for automotive industry.

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.

EN 10002-1:2001, *Metallic materials — Tensile testing — Part 1: Method of test at ambient temperature*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 10002-1:2001 and the following apply.

NOTE However it should be noted that in the context of this document, the term "yield strength" also covers 0,2 % proof strength in addition to its definition in EN 10002-1.

3.1 Bake-Hardening-Index

(BH_2) increase of yield strength between a reference condition after a 2 % plastic pre-strain and the condition obtained after a heat treatment simulating the usual industrial paint processes (see Figure 1)

NOTE The heat treatment of simulation is specified in 8.2.