



NSAI
Standards

Irish Standard
I.S. EN 10319-1:2003

Metallic materials - Tensile stress relaxation testing - Part 1: Procedure for testing machines

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I.S. EN 10319-1:2003

Incorporating amendments/corrigenda issued since publication:

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:

This document is based on:
EN 10319-1:2003

Published:
12 September, 2003

This document was published under the authority of the NSAI and comes into effect on:
12 September, 2003

ICS number:
77.040.10

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Údarás um Chaighdeáin Náisiúnta na hÉireann

ICS 77.040.10

English version

Metallic materials - Tensile stress relaxation testing - Part 1: Procedure for testing machines

Matériaux métalliques - Essai de relaxation en traction -
Partie 1: Mode opératoire pour machines d'essai

Metallische Werkstoffe - Relaxationsversuch unter
Zugbeanspruchung - Teil 1: Prüfverfahren für die
Anwendung in Prüfmaschinen

This European Standard was approved by CEN on 21 March 2003.

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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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 10319-1:2003) has been prepared by Technical Committee ECISS/TC 1 “Steel - Mechanical tests”, 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of an identical text or by endorsement, at the latest by December 2003, and conflicting national standards shall be withdrawn at the latest by December 2003.

This European Standard consists of the following parts under the general title *Metallic materials – Tensile stress relaxation testing*

— *Part 1: Procedure for testing machines*

— *Part 2: Procedure for model bolts*

Annexes A and B are for informative.

This document includes a bibliography.

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

1 Scope

This European Standard specifies the test method for the determination of relaxation of stress of metallic test pieces subjected throughout the test to nominally constant strain and constant temperature conditions.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 10002-4:1994, *Metallic materials - Tensile test - Part 4: Verification of extensometers used in uniaxial testing*.

EN ISO 7500-1:1999, *Metallic materials - Verification of static uniaxial testing machines - Part 1: Tension/compression testing machines (ISO 7500-1:1999)*.

3 Terms and definitions

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

3.1 gauge length

prescribed part of the test piece on which extension measurements are made

Distinction is made between:

3.1.1 original gauge length (L_0)

gauge length before the test piece is heated and strained

3.1.2 extensometer gauge length (L_e)

distance between the measuring points of the extensometer

NOTE In some cases, $L_e = L_0$.

3.1.3 reference length (L_r)

base length used for the calculation of the strain

NOTE See also Figure 2b.

3.2 parallel length (L_c)

length of the parallel reduced section of the test piece

3.3 original cross-sectional area (S_0)

cross-sectional area of the parallel length determined at ambient temperature prior to testing

3.4 extension

increase in the extensometer gauge length (L_e) or, if $L_r \neq L_e$, in the reference length (L_r)

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