SLOVENSKI STANDARD
SIST EN ISO 26203-2:2012

01-januar-2012

Kovinski materiali - Natezno preskušanje pri velikih hitrostih deformacije - 2. del: Servohidravlični in drugi preskusni sistemi (ISO 26203-2:2011)

Metallic materials - Tensile testing at high strain rates - Part 2: Servo-hydraulic and other test systems (ISO 26203-2:2011)

Metallische Werkstoffe - Zugversuch bei hohen Dehngeschwindigkeiten - Teil 2: Servohydraulische und andere Systeme (ISO 26203-2:2011)

Matériaux métalliques - Essai de traction à vitesses de déformation élevées - Partie 2: Systèmes d'essai servo-hydrauliques et autres systèmes d'essai (ISO 26203-2:2011)

Ta slovenski standard je istoveten z: **EN ISO 26203-2:2011**

ICS:

77.040.10 Mehansko preskušanje kovin Mechanical testing of metals

SIST EN ISO 26203-2:2012 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 26203-2

October 2011

ICS 77.040.10

English Version

Metallic materials - Tensile testing at high strain rates - Part 2: Servo-hydraulic and other test systems (ISO 26203-2:2011)

Matériaux métalliques - Essai de traction à vitesses de déformation élevées - Partie 2: Systèmes d'essai servo-hydrauliques et autres systèmes d'essai (ISO 26203-2:2011)

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Foreword

This document (EN ISO 26203-2:2011) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 101 “Test methods for steel (other than chemical analysis)” 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of an identical text or by endorsement, at the latest by April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

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INTERNATIONAL STANDARD

ISO 26203-2

First edition
2011-10-15

Metallic materials — Tensile testing at high strain rates —

Part 2: Servo-hydraulic and other test systems

Matériaux métalliques — Essai de traction à vitesses de déformation élevées — Partie 2: Systèmes d'essai servo-hydrauliques et autres systèmes d'essai

Reference number
ISO 26203-2:2011(E)

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Published in Switzerland

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Foreword

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ISO 26203-2 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 1, *Uniaxial testing*.

ISO 26203 consists of the following parts, under the general title *Metallic materials — Tensile testing at high strain rates*:

— *Part 1: Elastic-bar-type systems*

— *Part 2: Servo-hydraulic and other test systems*

Introduction

The deformation behaviour of many technical materials shows a positive strain-rate effect up to ductile failure, i.e. with increasing strain rate, an increase of yield stress and strain to failure can be observed. This information is of great importance for the reliable assessment of crashworthiness of automobile structures, which is increasingly determined by numerical methods to minimize the need for cost-intensive and time-consuming crash tests. For the numerical simulation of crash-type loads, stress-strain curves determined at higher strain rates are required. The quasi-static values determined according to ISO 6892-1, i.e. strain rates lower than or equal to 0,008 s^{-1}, are not suitable for the description of the behaviour of the material of a component under dynamic load, i.e. at strain rates higher than those in quasi-static tests.