TECHNICAL REPORT

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Mechanical testing of metals — Symbols and definitions in published standards

Essais mécaniques des métaux — Symboles et définitions figurant dans les normes publiées

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 25679 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*.

This first edition of ISO/TR 25679, together with ISO 23718[1)], *Metallic materials — Terms used in mechanical testing*, cancel and replace ISO/TR 12735-1:1996, *Mechanical testing of metals — Symbols used with their definitions — Part 1: Symbols and definitions in published standards*.

1) In preparation.

Introduction

This index of symbols and definitions in published standards has been prepared to provide an appropriate means for avoiding contradictions and misunderstandings and to standardize various kinds of symbols and their definitions generally used in this field. Wherever possible, the same symbol has been used to denote the same type of parameter in the different tests, but the differing types of test piece, product form and test have to be taken into account. This has not been universally possible and symbols should always be considered in the context of the specific method of test being used.

In the discussion of revising ISO/TR 12735-1:1996, common terms among the published standards were selected and a Draft International Standard covering terminology: ISO/DIS 23718, *Metallic materials — Terms used in mechanical testing,* was prepared. This Technical Report, which is an index of symbols and definitions, was separated from the terminology (ISO/DIS 23718) in order to be updated flexibly in future.

Mechanical testing of metals — Symbols and definitions in published standards

1 Scope

This Technical Report enumerates the symbols and definitions used in International Standards for specific methods of mechanical testing of metallic materials, which are the responsibility of ISO Technical Committee 164, *Mechanical testing of metals*. The data is indexed alphabetically and via a coding system. Annex A provides an additional cross-reference between the coding system and relevant International Standard numbers.

2 Designation system

To assist in indexing and cross-referencing symbols and definitions, a code number is used to identify test methods. The first digit of the code identifies the sub-committee of ISO/TC 164 that is responsible for preparing and reviewing International Standards for that test method. Subsequent digits are in ascending order of the ISO number for each International Standard or Draft International Sandard.

International Standards that relate to a common test method and which all share the same set of symbols and definitions are given a single code number.

If there existed both a valid International Standard and a document designed to replace it that had reached the DIS stage, then both the International Standard and the DIS (Draft International Sandard) or FDIS will have been assigned to the same code number.

Each test method for metallic materials is identified and designated as shown in Table 1. Annex A provides a rapid cross-reference to the coding system.

Table 1 — Identity and code of mechanical test

	Test Identity	Code	ISO standards
SC 1	Metallic materials — Uninterrupted uniaxial creep testing in tension — Method of test	1.01	204:1997 DIS 204:2005
	Metallic materials — Calibration of force-proving instruments used for the verification of uniaxial testing machines	1.02	376:2004
	Metallic materials — Tensile testing at elevated temperature	1.03	783:1999
	Metallic materials — Tensile testing at ambient temperature	1.04	6892:1998
	Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system	1.05	7500-1:2004
	Metallic materials — Verification of static uniaxial testing machines — Part 2: Tension creep testing machines — Verification of the applied load	1.06	7500-2:1996 DIS 7500-2:2005
	Metallic materials — Calibration of extensometers used in uniaxial testing	1.07	9513:1999
	Metallic materials — Tensile testing at low temperature	1.08	15579:2000
	Metallic materials — Tensile testing in liquid helium	1.09	19819:2004