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**Metallic materials — Tensile testing —
Part 2:
Method of test at elevated temperature**

Matériaux métalliques — Essai de traction —

Partie 2: Méthode d'essai à température élevée



Reference number
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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.

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 6892-2 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 1, *Uniaxial testing*.

This first edition of ISO 6892-2 cancels and replaces ISO 783:1999.

ISO 6892 consists of the following parts, under the general title *Metallic materials — Tensile testing*:

- *Part 1: Method of test at room temperature*
- *Part 2: Method of test at elevated temperature*

The following parts are planned:

- *Part 3: Method of test at low temperature*
- *Part 4: Method of test in liquid helium*

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Introduction

In this part of ISO 6892, two methods of testing speeds are described. The first, Method A, is based on strain rates (including crosshead separation rate) with narrow tolerances ($\pm 20\%$) and the second, Method B, is based on conventional strain rate ranges and tolerances. Method A is intended to minimize the variation of the test rates during the moment when strain rate sensitive parameters are determined and to minimize the measurement uncertainty of the test results.

The influence of the testing speed on the mechanical properties, determined by the tensile test, is normally greater at an elevated temperature than at room temperature.

Traditionally, mechanical properties determined by tensile tests at elevated temperatures have been determined at a slower strain or stressing rate than at room temperature. This part of ISO 6892 recommends the use of slow strain rates but, in addition, higher strain rates are permitted for particular applications, such as comparison with room temperature properties at the same strain rate.

During discussions concerning the speed of testing in the preparation of this part of ISO 6892, it was decided to consider deleting the stress rate method in future revisions.