
**Steel forgings — Testing frequency,
sampling conditions and test methods
for mechanical tests**

*Pièces forgées en acier — Fréquence des essais, conditions
d'échantillonnage et méthodes d'essai pour essais mécaniques*





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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 10 *Steel for pressure purposes*.

This first edition of ISO 15461 is based on Technical Report ISO/TR 15461:1997, which has been withdrawn. The main changes are as follows:

- [Figures 3](#) a) and b) have been revised;
- [Table 3](#) has been revised;
- [Table 5](#) has been extended to steels for pressure purposes;
- the text of the document has been generally revised.

Steel forgings — Testing frequency, sampling conditions and test methods for mechanical tests

1 Scope

This document gives guidelines for the simplification and harmonization of the specifications for mechanical testing of open die and closed die forgings in International Standards and other technical delivery conditions for forgings of steel.

This document

- a) offers various options for
 - 1) the frequency of testing, and
 - 2) sampling conditions,
- b) introduces a designation system for the options, mentioned under (a), and
- c) specifies the test methods for
 - 1) room temperature tensile tests,
 - 2) elevated temperature tensile tests,
 - 3) impact tests, and
 - 4) uniformity checks by hardness tests.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

ISO 377:2017, *Steel and steel products — Location and preparation of samples and test pieces for mechanical testing*

ISO 404, *Steel and steel products — General technical delivery requirements*

ISO 3785, *Metallic materials — Designation of test specimen axes in relation to product texture*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 6892-2, *Metallic materials — Tensile testing at elevated temperature — Part 2: Method of test at elevated temperature*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at <https://www.electropedia.org/>