

ICS 77.140.10
CCS H 40



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44155-2024

**Steel forgings - Testing frequency, sampling conditions and test
methods for mechanical properties testing**

钢锻件 力学性能试验的检测频次、取样条件和试验方法

(English Translation)

Issued on: June 29, 2024

Implemented on: January 1, 2025

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and definitions

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is modified to adopt ISO 15461:2018 "Frequency of inspection, sampling conditions and test methods for mechanical testing of steel forgings".

Compared with ISO 15461:2018, this document has many structural adjustments. Comparison table of structural number changes between the two documents See Appendix A.

This document has many technical differences compared to ISO 15461:2018.

A single line (|) is used to indicate these technical differences. A list of these technical differences and their reasons is given in Appendix B.

The following editorial changes were made to this document.

--- Deleted the references in ISO 15461:2018.

--- Replaced ISO 6508-1 with the informative reference GB/T 230.1, and replaced ISO 6508-1 with the informative reference GB/T 231.1 ISO 6506-1 replaces ISO 6507-1 (see 6.4) with the informative reference GB/T 4340.1.

1 Scope

This document specifies the inspection frequency, sampling conditions and test methods for the mechanical properties testing of steel forgings.

This document is applicable to the cutting, preparation and testing of specimens for mechanical properties tests of free forgings and die forgings.

Selection of tensile tests, high temperature tensile tests, impact tests and uniformity tests (hardness tests).

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 228.1 Tensile tests on metallic materials - Part 1: Test methods at room temperature (GB/T 228.1-2021, ISO 6892-1.

2019,MOD)

GB/T 228.2 Tensile tests on metallic materials Part 2: High temperature test methods (GB/T 228.2-2015, ISO 6892-2.

2011,MOD)

GB/T 229 Charpy pendulum impact test method for metallic materials (GB/T 229-2020, ISO 148-1:2016, MOD) GB/T 2975-2018 Sampling location and specimen preparation for mechanical property tests of steel and steel products (ISO 377:2017, MOD) GB/T 17505-2016 General technical requirements for delivery of steel and steel products (ISO 404:2013, MOD) GB/T 17600.1 Elongation conversion of steel Part 1: Carbon steel and low alloy steel (GB/T 17600.1-1998, ISO 2566-1:1984,IDT) GB/T 17600.2 Elongation conversion of steel Part 2: Austenitic steel (GB/T 17600.2-1998, ISO 2566-2.

1984,IDT)

GB/T 20832 Identification of the axis of metallic material specimens relative to the product texture (GB/T 20832-2007, ISO 3785.

2006, IDT)

3 Terms and definitions

The terms and definitions defined in GB/T 2975-2018 and GB/T 17505-2016 and the following apply to this document.

Test unit test unit

The number of pieces or quantities of products to be accepted or rejected at one time based on the tests performed on the sampled products according to the product standards or contract requirements.

Tonnes.

[Source. GB/T 17505-2016, 3.6, modified] 3.2 Sample to prepare one or more test

specimens, cut a sufficient amount of material from the sampled product.

Note: In some cases, the test material may be a sample product.