

ICS 77.140.60

CCS H 40



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

GB/T 17107-2025

Replacing GB/T 17107-1997

Structural steel bars for forgings

锻件用结构钢棒

Issued on: October 31, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

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1 Scope

GB/T 17107-2025 is the Chinese national standard on structural steel bars for forgings, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not

compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 October 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2026. Classification: ICS 77.140.60, CCS H 40. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the classification, ordering details, manufacturing process, technical requirements, test methods, inspection rules, packaging, marks, and quality certificate for high-quality carbon structural steel and alloy structural steel forgings. This document applies to forged round steel with a nominal diameter not exceeding 1,500 mm, forged square steel with a nominal side length not exceeding 1,300 mm, and forged flat steel with a nominal thickness not exceeding 1,000 mm and a nominal width not exceeding 1,700 mm. This document also applies to general forgings used in metallurgical, mining, shipbuilding, and engineering machinery equipment, where mechanical properties are measured after overall heat treatment.

2 Normative references

The following referenced documents are indispensable for the application 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.

GB/T 222, Permissible tolerances for chemical composition of steel products

GB/T 223 (all parts), Iron, steel and alloy

GB/T 224, Determination of the depth of decarburization of steels

GB/T 225, Steel -- Hardenability test by end quenching (Jominy test)

GB/T 226, Test Method for Macrostructure and Defect of Steel by Etching

GB/T 228.1, Metallic materials -- Tensile testing -- Part

3 Terms and definitions

This document does not contain any terms or definitions that need to be defined.

4 Classification

4.1 Steel bars are classified into the following 3 categories according to metallurgical quality.

a) High-quality steel;

- b) High-grade high-quality steel (with "A" added after the designation);
- c) Extra-high-quality steel (with "E" added after the designation).

4.2 Steel bars are classified into the following 3 categories according to their surface delivery condition.

4.3 Steel bars are classified into the following 5 categories according to their heat treatment state.

- b) High-temperature tempering;
- d) Normalizing + tempering;
- e) Quenching + tempering (including quenching and tempering).

4.4 Steel bars are classified into the following 2 categories according to their processing methods.

- a) Steel for pressure processing;
- b) Steel for cutting processing.

5 Ordering contents

The contract or order for the goods placed in this document shall include the following.

- a) Reference to this document;
- b) Product name;
- d) Smelting method;
- e) Delivery weight (or quantity);
- f) Dimensions, shape and permissible deviations;
- g) Processing method (unless otherwise specified, as for steel suitable for machining);
- h) Delivery condition;
- i) Mechanical properties (if any);
- j) Magnification;
- k) Non-metallic inclusions (if any);
- l) Grain size (if any);
- m) Special requirements.

6 Manufacturing process

6.1 Smelting methods Unless otherwise specified in the contract, steel is usually smelted in an electric furnace or converter and then refined outside the furnace.

6.2 Forging ratio

6.2.1 Steel bars The steel bars shall be forged on a forging press with sufficient capacity. The forging ratio shall conform to the following requirements.

- a) Steel bars used for heat pressure processing shall have a forging ratio of not less than 2.0;
- b) Steel bars that have undergone intermediate upsetting shall have a forging ratio of not less than 2.5;